PREDICTORS OF TRANSFER OF LEARNING FROM EDUCATION MANAGEMENT TRAINING TO THE WORKPLACE AMONG PRINCIPALS, HEAD TEACHERS AND DEPUTY HEAD TEACHERS IN KIAMBU COUNTY, KENYA

RACHEL NGESA MAINA
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DECLARATION

I declare that this Dissertation is my original work and has not been presented in any other university institution for consideration in any certification. This research has been complemented by reference sources duly acknowledged. Where text (including spoken words), data, graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited in accordance with anti-plagiarism regulations.

Signature ……. Date …….

Rachel Ngesa Maina
Department of Educational Psychology

This Dissertation has been submitted for examination with our approval as University Supervisors.

Signature:……. Date:…….

Prof. Frederick Okatcha
Department of Educational Psychology

Signature:……. Date: …….

Dr. Doyne Mugambi
Department of Educational Psychology

DEDICATION

To Wambugu and our dear children Joy Wamahiga, Ninah Nyaranga and Jomo Rutere for their love, patience, support and encouragement in the process of undertaking the doctoral study.

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ABBREVIATIONS AND ACRONYMS

ABK	Ability to use Knowledge
ADM	Appropriate Delivery Methods
BSR	Benefits such as Salary and Recognition
CEK	Coworkers Encourage use of Knowledge
CPA	Content has Practical Applicability
CPOM	Coworkers Prefer Old Methods
CWP	Curriculum Well Planned
EAW	Education and Work Experience
FUS	Follow up support
JFK	Joined For Knowledge
JFP	Joined For Promotion
KEMI	Kenya Education Management Institute
KIP	Knowledge has Increased Performance
KWTE	Knew What to Expect
LPW	Link between Program and Work
MOT	Motivated to Transfer
MPE	Met Personal Expectations
NIA	Notified in Advance
OCB	Overcome Obstacles at Work
ODFL	Open Distance Flexible Learning
PCA	Principal Component Analysis
PD	Program Design
PRA	Principal Regression Analysis

QM	Quality Material
RA	Resources Available
RWC	Relevant to Work Conditions
SAS	Sequence and Structure
SES	Supervisor Encourages and Supports
SITW	Similarity between Training and work
SOU	Sufficient Opportunity to Practice
SPF	Supervisor Provides Feedback
SPNA	Supervisor Pays no Attention
SPR	Supervisor Praises and Rewards
SRR	School Rewards and Recognizes
SS	Self Satisfaction
TOL	Transfer of Learning
WIB	Workplace Identified Barriers
WPS	Workplace Provided Support

ABSTRACT

Transfer of learning is critical to the success and relevance of management training programs. Despite the importance of transfer researchers indicates that significant transfer rarely occurs. There is also an increasing concern in identifying the key factors that influence positive transfer of learning. This study the learner characteristics, training program design and work environment factors influencing the transfer of learning from the Open Flexible Distance Learning Diploma in Education Management program to the work place. It developed a model on predictors of transfer of learning from the Diploma in Education Management program to the work place. The survey targeted 147 primary and 66 secondary public schools purposively selected from eight sub counties in the County Government of Kiambu, Questionnaires were administered to 213 respondents and 60 of them were randomly selected to participate in interviews. Simple random sampling was used to access 213 primary and secondary school principals, head teachers, deputy principals and deputy head teachers who were graduates of phase 1 of the Open Distance Flexible Learning diploma in education management training program conducted by the Kenya Education Management Institute. Quantitative data were analyzed using percentages, means, principal component analysis and principal regression analysis. Qualitative data was put under thematic areas that were consistent with the research objectives. The study established that the educational management training program was relevant with 74% the variance in transfer of learning being accounted for by variables four principal components, namely training program and workplace design, training delivery methods, quality of curriculum and motivation to transfer. The sequence, structure and quality of the training content were excellent; notifications for enrollment were done well in advance with a majority of the respondents joining to enhance knowledge, skills and competencies. However, training expectations were unclear and follow-up support after the training by was inadequate. The work environment provided opportunities to use knowledge but the rewards and recognition were inadequate. Coworker and organizational support as evident but supervisors support at the work place was inadequate**.** The key predictors of positive transfer were clear linkage between training and career progression; high quality of training material and joining to enhance knowledge. Improper program sequencing and structuring, low personal motivation to transfer and inadequate opportunities to use knowledge contributed to negative transfer. The study recommended that the training program was relevant but should be redesigned to incorporate learner characteristics, training program design and work environment factors which enhance positive transfer of learning to the workplace. Management training institutes should provide more follow up support to management trainees to increase positive transfer of learning.

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 Introduction

This chapter outlines the background to the study, the problem statement, research objectives and the postulated hypotheses. It describes the conceptual and theoretical framework, scope, limitations, delimitations and assumptions of the study. It also defines the key terms and concepts of relevance to the study.

1.2 Background to the Study

Transfer of learning is recognized as a significant issue fundamental to achieving educational and training goals. The ultimate goal of learning is achieved when positive transfer of learning takes place from training situations to similar work contexts. Transfer of learning occurs when learning in one context or with one set of materials impacts on performance in another context or with similar materials (Perkins and Salomon, 2012). Transfer of Learning is the extent to which learners effectively apply the knowledge, skills and competencies acquired in a training program to the work place (Baharim, 2008; Baldwin & Ford, 2006). Various definitions of transfer of learning suggest the need to provide learners with sufficient opportunities to use new knowledge, and having appropriate attitudes and individual abilities to know when it is appropriate to use learning gained from training programs (Aamodt, 2007; Werner & Desmone 2009; Domjan, 2010).

Educators and trainers assume that the knowledge and competencies acquired in training will be used at the work place. Organizations allocate large investments in management training hoping that it will ultimately translate into observable behavior changes and improved work performance. Employers, sponsors and training institutions expect learners to achieve significant behavior change, enhanced work performance and adequate transfer of knowledge, skills and competencies in future after they complete training programs (Kenya, Ministry of Education, 2004).

Education, behavioral psychology and management science have contributed to the conceptual and empirical understanding of transfer of learning to the workplace. However, most studies indicate that only 10-40 % of training expenditures result in transfer to the workplace (May & Kahnweiler, 2006). Saks and Belcort (2006) demonstrated that for an average training program, there is a gradual decline in the use of new skills on the job over time. Only about 35% of the skills gained in a training program are still in use 12 months after the training ends.

Classifications of the types of learning transfer are not mutually exclusive with transfer resulting from a mixture of all types of learning transfer. (Schunk, 2004; Barnard, Veldhius & Rooi, 2001; Blume, Ford, Baldwin, & Huang 2010; Haskell, 2001; Keiler, 2007; Meriam and Leahy, 2005 & Noe, 2005). Positive transfer occurs when learning in a training context facilitates future learning and translates into desired workplace outcomes, improved work performance, higher productivity and better quality of service.

Negative transfer tends to occur when learning in one context tends to inhibit future learning and subsequent work performance. (Salas, Wilson, Priest & Guthrie, 2006).

Negative transfer may result from shortcomings in the design of management training programs, personal learner characteristics and the work environments (Kromwell & Kolb, 2004; Broad, 2005; Yamnil & McClean 2001). The current study uses an effect-based perspective which distinguishes between positive transfer, negative transfer and zero transfer of learning. A literature review by Burke & Hutchins revealed that the following four factors were critical to effective transfer of learning. First the training inputs which included learner characteristics such as personal ability, personality and motivation). The second factor was the training program design which included aspects such as principles of learning, sequencing and the quality of the training content. The work environment related issues included organizational support, support by peers and supervisors and the provision of sufficient opportunities to use the learning in the work place. Finally training outputs such as the knowledge gained, ability to retain learning, generalization, and maintenance of suitable conditions of transfer. Training inputs affect learning and retention, which in turn influence generalization and maintenance of learning. Some primary and secondary schools may not provide sufficient opportunities to apply the skills and competencies learnt in training (Burke & Hutchins, 2007; Baldwin & Ford, 2006).

Most transfer measures assess the conditions for transfer which involves generalization or the extent to which knowledge can be applied and maintained in new settings.

There is an increasing focus on cataloging factors influencing transfer and describing situations that enhance positive transfer. Most studies focus on transfer in school settings and assessment relationships between isolated variables and the effectiveness of learning transfer. Recent training evaluations focus on measuring transfer as a system and assessing its antecedent factors in the workplace (Kirkpatrick, 1998, Kirkpatrick, 2005). Machin & Fogarty, 2004; Holton, Bates, Ruona, 2001).

There is still controversy on how to conceptualize, measure and explain the probability of transfer of learning (Helfenstein, 2005). Most global studies on the factors influencing transfer revealed inconsistent, contradictory empirical findings and varied theoretical interpretations. The few studies conducted in Africa revealed the use of small samples and a focus on the relationship between isolated variables and effectiveness of the learning transfer system. Identifying and prioritizing trainee related characteristics, management training program design and school work environment factors that contribute to positive transfer in African contexts remains an area of focus in contemporary research in education and management training. Transfer of learning is viewed as a system of interrelated factors relating to learner characteristics, training program design, and work environment conditions (Yaghi, Goodman, Holton & Bates, 2008; Holton, Bates & Ruona., 2000).

1.2.1 Preparation of Principals and Head teachers in Kenya

The Ministry of Education Science and Technology recognizes the need for teacher training and development in various policy documents.

The Teachers Service Commission Act, 2012, Article 35 requires registered teachers to undertake the prescribed career progression and professional development programmes. In January, 2016 the Teachers Service Commission introduced performance contracting in educational institutions in pursuit of the TSC Act, 2012 Section 11 (c) and (f). It is the duty of the Commission to keep under review the standards of education, training, recruit appropriate persons and to tender advice to the Minister. The act mandates the commission to monitor the conduct and performance of heads of institutions and teachers. Section 35 further empowers TSC to take all steps to ensure compliance with teaching standards.

Secondary school principals, primary head teachers play a major role in educational leadership and enhancement of school performance. The Ministry of Education Science and Technology recognizes the need for teacher training and capacity building in various policy documents. The Basic Education Act of 2013 indicates the need to prioritize decentralized decision-making authority. Sessional Paper No. 14 of 2012 acknowledges that principals and head teachers are the lead administrators in educational institutions charged with the responsibility of curriculum and policy implementation, ensuring optimal utilization of educational resources, maintaining quality and standards and promoting professional practices and synergy in the institution and the community, while executing the teaching function (Ministry of Education, Kenya, Sessional Paper No. 14 of 2012; The Basic Education Act of 2013).

The responsibilities and duties of principals and head teachers include organizing and managing curricula, controlling stores and finances, managing and maintaining human and physical resources, teaching and being the secretary to the School Board of management and the Parents Teachers Association. The deputy principals and deputy head teachers assist the head teachers and also chair the school procurement committee. School administrators have been faced with challenges especially inadequate training in managerial skills and competencies. The National Education Sector Plan also indicates that school performance depends almost entirely on the performance of the Heads of schools. Support services are weak in most schools and learning institutions. The plan recommends that the Parents Teachers Associations should be given more responsibilities in the management and administration of the institutions to enable head teachers to concentrate on their core functions. (Republic of Kenya, Ministry of Education, Science and Technology, National Education Sector Plan, 2014).

1.2.2 Role of the Kenya Education Management Institute in Capacity Building of Educational Managers

The mandate of the Kenya Education Management Institute is to develop the management capacity of all personnel involved in education management and training. The management development institute undertakes in service training and capacity building in the education sector as per the Legal Notice No.19/2010 of the Education Act (CAP 211). Paper No. 1 of 2005 requires KEMI to provide in-service training to all education managers.

The Institute with support from Ministry of Education, Science and Technology and the United States Agency for International Development (USAID) mounted the Diploma in Education Management program in 2012.

The program was developed to address training needs of school principals; head teachers, deputy principals, and deputy head teachers are effective and efficient in delivery of education services. KEMI developed a Diploma in Education Management which is aimed at empowering education managers with knowledge and skills in current educational management skills. The KEMI diploma modules delivered using the Open Distance Flexible Learning (ODFL) mode were designed to allow the participants to study in a flexible manner through distance and work-based learning. The program is also strengthened by tutor support and supplementary resources.

The key achievements of the program included the training of 87% of heads of primary and secondary schools and 50% of all primary and secondary deputy school heads. Approximately 28% of deputy heads of primary and secondary schools are dues to complete the training. By the year 2015 the program had also attracted 182 Education Officers and Quality Assurance Officers, 169 Heads of Youth Polytechnics and 663 Education Managers from the private sector.

The first phase of the program addressed the modules outlined in Table 1.

Table 1

Training Modules in the KEMI Diploma in Education Management Program

(i) Strategic Leadership	(viii) Project Management.
(ii) Building Top Performing Teams	(ix) Human Resource Management.
(iii) Integrity and Good Governance.	(x) Financial, Procurement and Stores Management.
(iv) Conflict and Disaster Management	(xi) Fraud and Credit Management.
(v) Customer Care and Public Relations.	(xii) Curriculum Implementation.
(vi) Introduction to Resource Management	(xiii) Mainstreaming Cross Cutting Issues
(vii) ICT Integration in Education Management.	(xiv) Result Based Management

The Ministry of Education Science and Technology in Kenya incurred high training expenditures to train 27,099 secondary schools principals, primary school head teachers, deputy principals and deputy head teachers in Phase I of the program. A total of 25,842 graduated of which 19833 were head teachers of primary schools and 6009 were principals of secondary schools. However, no study was cited that examined the extent to which learning in the ODFL Diploma in Education management program had been transferred to the workplace.

Furthermore, the KEMI end of training report had no evidence of having assessed the learning outcomes or impact assessment. Indeed like many management training programs the program had high trainee ratings on enjoyment, value and other criteria but failed to demonstrate evidence of increased work performance improvement (May & Kahnweiler, 2000). This study sought to assess and prioritize the learner characteristics, program design and work environment factors that influence transfer of learning to the workplace.

1.3 Statement of the Problem

Despite the importance of transfer of learning in education and training research shows that significant transfer of learning rarely occurs. There is an increasing concern over the "transfer problem". Stakeholders have raised concerns that despite having high educational qualifications and the frequent exposure to in service and general management training a majority of school principals and head teachers do not transfer learning to the workplace. Stakeholders complained about poor management of educational institutions with rising cases of interdictions of school principals due to unsatisfactory work performance. These factors prompted the Ministry of Education and Kenya Education Management Institute (KEMI) to mount the Open and Distance Flexible Learning (ODFL) Diploma in Education Management program in the year 2012 to enhance knowledge, skills and competencies in educational management. The ODFL Diploma in Education Management curriculum had also been criticized for being biased towards theory with minimal exposure to practical educational management tools with inadequate exposure to the contemporary educational management issues.

The ODFL approach was new since most management training programs involve face-to face interactions with facilitators. Although flexible, convenient, time and cost saving the approach may have limited opportunities for direct contact with facilitators. The dependence on technology and inadequate self-discipline may negatively impact on the transfer of learning

Knowledge gained is of little value if the learning is not transferred to the workplace, generalized and maintained over time. Positive transfer of learning from the diploma in education management training program to the workplace was desired to ensure that learning enhanced the work performance of school principals, head teachers, deputy principals and deputy head teachers. It was notable that KEMI proceeded to mount the phase II and III of the program in May, 2014 yet no documented evidence existed on the extent to which positive transfer of learning to the workplace was achieved in phase I of the training.

1.4 Purpose of the Study

The study investigated the extent to which learner characteristics, training program design and school work environment factors influenced transfer of learning from the Open Distance Flexible Learning Diploma in Education Management program to the workplace among school principals, head teachers, deputy principals and deputy head teachers. The survey also identified the key predictors of transfer of learning.

1.5 Objectives of the Study

The study sought to:

(i) Determine the learner characteristics influencing transfer of learning from the Diploma in Education Management program to the work place;

(ii) Find out the training program design factors influencing transfer of learning from the Diploma in Educational Management program to the work place;

(iii) Determine the influence of the work environment on transfer of learning from the Diploma in Education Management program to the work place; and

(iv) Develop a model on predictors of transfer of learning from the Diploma in Education Management program to the work place.

1.6 Research Hypotheses

The following hypotheses were postulated to guide the research study:

H_1: Learner characteristics do not influence transfer of learning from the Diploma in Education Management program to the workplace;

H_2: Training program design factors does not influence transfer of learning from the Diploma in Education Management program to the workplace;

H_3: Work environment factors do not influence transfer of learning from the Diploma in Education Management program to the workplace;

H_4: The selected independent variables do not predict a significant amount of variance in transfer of learning from the Diploma in Education Management program to the work place.

1.7 Significance of the Study

Similar studies in Kenya that evaluated the impact of learning had been conducted in school contexts set ups with most of them being descriptive in nature. The research findings on factors influencing transfer of learning in a management training program provided information that enhanced the conceptual and theoretical perspectives on transfer of learning among adult learners. The study contributed additional literature on the factors influencing transfer of learning in African contexts. The new knowledge on factors influencing transfer of learning will inform KEMI'S review of the program for greater effectiveness in subsequent phases of the program. The Kenya Education Management Institute and curricular developers will be able to review the ODFL Diploma in Education Management program and redesign the school work environment to increase the likelihood of positive transfer.

Other management training institutes will be able to incorporate learner characteristics, training program design and work environment factors that facilitate positive transfer into program designs. The findings will enable management trainers to deliver subject matter that is more meaningful to the work contexts of school administrators. Trainers and employers will be able to assist school administrators and program designers to focus on the critical learner characteristics, program design and work environments factors that were conducive for positive transfer of learning. Management training institutions, the Ministry of Education, School Boards of Management, Kenya Primary School Head Teachers Association (KEPSHA), Kenya Secondary School Heads Association (KESSHA) and other stakeholders will be aware of trainee characteristics, training

program design and work environment factors that need to be considered when redesigning future management training programs for to achieve higher positive transfer of learning.

The resulting evidence of positive transfer to learning the workplace will enable the Ministry of Education, Science and Technology and program sponsors to make informed decisions on investing in future management training programs for principals and deputy heads.

1.8 Limitations and Delimitations

1.8.1 Limitations

The independent variables selected in the study may not be exhaustive since other extraneous factors may explain for the variance observed in the transfer of learning. The study mainly relied on self-reports from principals, deputy principals, heads teachers and deputy head teachers which may not be accurate. The study was limited to schools in the County Government of Kiambu since the national scope of 22,371 public primary and secondary school principals in phase I of the Diploma in Education Management program was too large.

1.8.2 Delimitations

The researcher used a large sample to minimize natural attrition effects resulting from work commitments, transfers, leave and unwillingness to participate. The researcher designed a questionnaire which was piloted to enhance its reliability and validity.

Triangulation of data collection tools involved the use of an interview guide to complement the questionnaire data. The findings should be interpreted with caution since results may not be generalized to private schools and other counties in Kenya.

1.9 Assumptions of the study

Training and work environment differences were assumed to be randomly distributed in the target population. Principals and head teachers from Kiambu County were deemed to be representative of administrators from other counties.

1.10 Theoretical and Conceptual Framework

1.10.1 Theoretical framework

The study made reference to Thorndike's Identical Elements Theory (Thorndike, 1932) and the Adult Learning Theory (Knowles, 1984). The main theory was the Identical Elements Theory while the adult learning theory complemented by providing a focus on the expectations of adult learners participating in the education management program.

(i) Identical elements theory.

Thorndike and Woodworth (1874-1949) originally introduced transfer of learning as "transfer of practice". According to the Identical Elements Theory the transfer of learning is dependent on the extent to which learning tasks and the transfer task is similar (Thorndike, 1932). This implied that transfer learning depends on the extent to which the training experiences and the work context are similar. Situations where identical elements or shared characteristics existed between the diploma in education management training context and the school work environment tended to enhance positive transfer of learning.

Hence, training should be structured with similar elements between training and work contexts to enable knowledge retention and effective transfer of learning. Learner characteristics and work experiences before, during and after training contribute to changes in observed work performance. Effective work performance can also result from the perceived rewards or sanctions at the workplace (Atkinson, 2009).

(ii) Adult learning theory.

The Adult Learning Theory complemented the Identical Elements Theory by making eclectic inference to humanistic, neo-behaviorism, constructivism and other learning theories. Knowles the pioneer of the field of adult learning defined andragogy as the "art and science of helping adults learn" (Knowles, 1984, p.43). Andragogy seeks to facilitate learning based on the assumption that adults are self- directed and draw upon concrete, practical work related experiences to enhance ability to transfer learning. The adult's readiness to learn is related to new expected social and work roles. The adult learners orientations shifting from theoretical postponed to practical and immediate application of the knowledge and competencies gained.

Hence the adult management trainees need to have opportunities to use learning and are more motivated by intrinsic rather than extrinsic factors. The adult learning theory had implications in determination of factors that influence transfer in an adult learning context. The theory informed the assessment of the extent to which the diploma in education management program took into consideration the adult learning principles, incorporated subject matter of immediate use and clarified reasons for learning.

1.10.2 Conceptual framework

The study used two conceptual frameworks that complemented each other. This enabled the identification and investigation of variables influencing the transfer of learning. The conceptual framework was developed by referring to an integrative review of literature by Burke and Hutchins (2007) which revealed a three factor model outlining l factors affecting learning and transfer of knowledge and skills from a training event to the workplace. The three categories of factors identified by Baldwin and Ford (1988) were: trainee characteristics (ability, personality, motivation); training program design (principles of learning, sequencing, training content) and work environment factors (support, opportunity to use).

This model was supported by Holton's human resource development conceptual evaluation and measurement model which provided a framework for diagnosing causal influences in individual and organizational learning outcomes. Holton's model viewed transfer of learning as a system of interrelated factors in three domains comprising of trainee characteristics, training program design and work environment influences on individual and organizational performance (Holton Bates & Bookter, 2007; Holton Bates & Rona, 2001; 2000). The study adapted a conceptual framework based on three domains of constructs derived from the two models. The inter-correlated independent variables were in the following three domains; learner characteristics, training program design and work environment. The learner characteristics were measured using variables relating to personal cognitive abilities, self efficacy and motivation to transfer learning.

Training design assessed learning goals, content relevance, structure, similarity between training and work environment and the extent to which adult learning principles were incorporated in training delivery. The third domain on work environment examined opportunities to use training, provision of resources, rewards and the extent to which peers and supervisors provided support in applying the knowledge, skills and competencies gained from the training program. Figure 1 shows the relationship between the dependent and independent variables in the study.

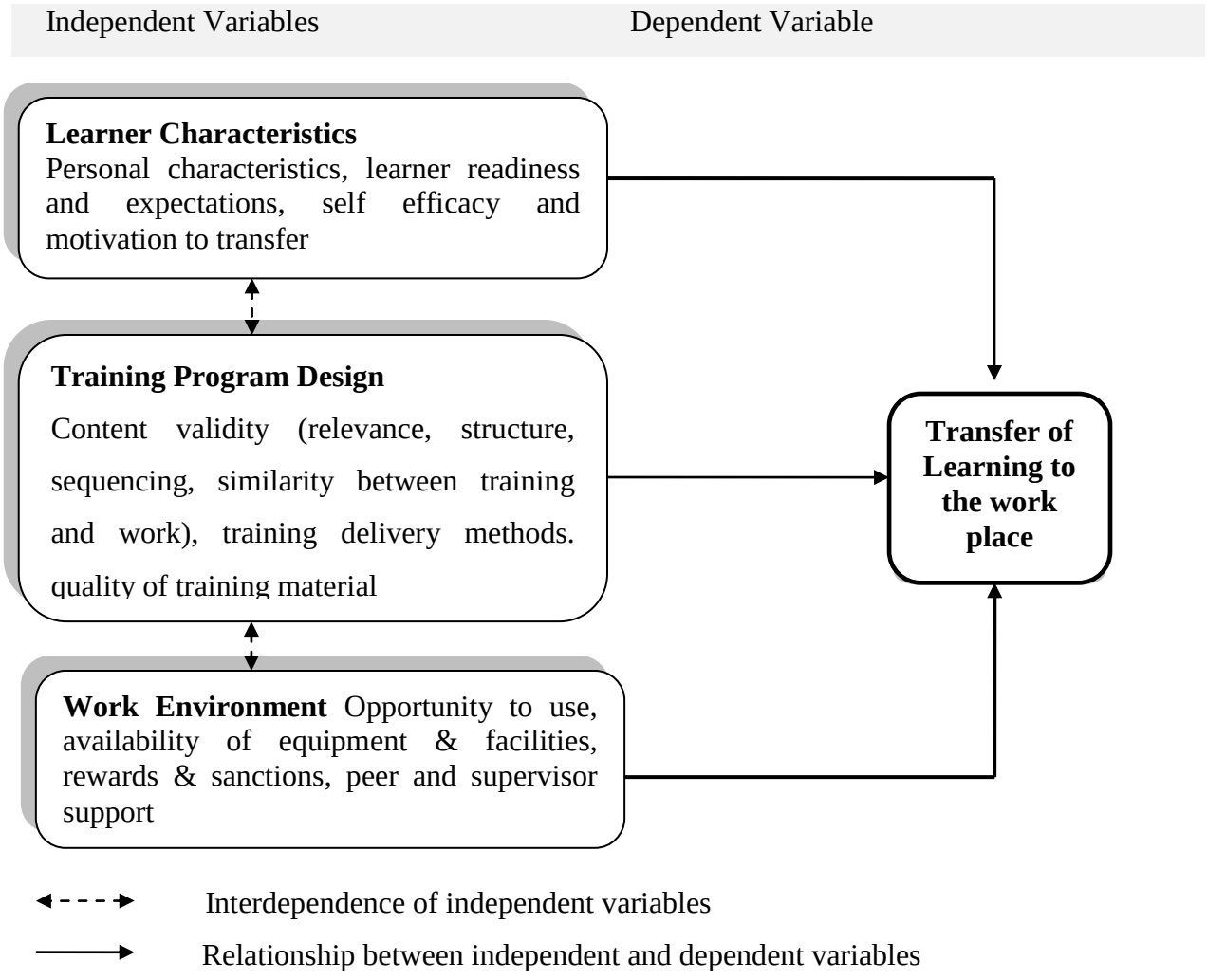

Figure 1. Conceptual Framework
Adapted from Baldwin and Ford (1988) and Bates, Holton & Hatala (2011)

Thirty three independent variables from the three domains were investigated to determine their influence on transfer of learning and subsequent individual performance at the work place. Transfer of learning was interpreted as positive or negative.

1.11.1 Operational Definition of Terms

The operational definitions of the pertinent terms and concepts used in the study are outlined in the following section.

Training content validity. The extent to which the school principals, head teachers and deputy head teachers felt that the training content, sequence and structure to accurately reflect work requirements.

Personal Motivation to transfer. The school principals and deputies transfer effort and performance expectations which led to positive or negative work performance outcomes.

Opportunity to use. The extent to which the public primary and secondary school principals, head teachers and deputy head teachers were provided with time, resources and tasks on the job that enabled them to use learning at the workplace.

Positive transfer of learning. Occured when the training facilitated the acquisition of new knowledge, skills and competencies that improve work performance.

Readiness to learn.	Psychological and emotional preparation that was given to school principals, head teachers and deputy head teachers prior to engaging in the Diploma in Education Management training conducted by KEMI.
Self-Efficacy.	School principals, head teachers and deputy head teachers self-belief in their ability to organize and execute learning that will result in a meaningful change in work performance.
Transfer of learning.	Extent to which present learning facilitates or hinders future learning or transfer of knowledge, skills and attitudes to individual work performance.
Transfer design.	Degree to which the diploma in education management training was designed and delivered to give school principals and deputies the ability to transfer learning to the work place.
Work environment.	The school climate and work situational constraints influenced by supervisor, peer, and opportunities to use learning, openness to change and perceived positive or negative outcomes.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter describes the concept of transfer and outlines theories on transfer of learning. It describes the conceptual, theoretical and empirical perspectives on the trainee characteristics, training program design and work environment factors influencing the transfer of learning from management training programs to the workplace.

2.2 Training and Capacity building Initiatives for Principals, Head Teachers, Deputy Principals and deputy Head Teachers

The strengthening of school-based management programs was initiated to enhance education outcomes, reduce teacher absenteeism, and improve service delivery at school level. Since 2000, MoEST has developed and implemented a number of program targeting teachers and school managers. Most of the capacity development activities for school leaders and managers have been undertaken through Kenya Education Management Institute targeting pedagogical and management leadership training for principals, deputy principals, head teachers and other mangers to support teachers in implementing effective and innovative classroom practices. KEMI has gradually increased the enrollment of primary and secondary school managers attending training from 1025 in 2006 to 25258 in 2013 (Republic of Kenya, National Education Sector Plan, 2014).

The other capacity building initiatives include programs on strengthening primary education, school-based teacher development, school empowerment programme and primary school management.

No study was cited assessing the transfer of learning from the KEMI Diploma in Education management program. However, using descriptive survey research design Mbesa (2016) sought to establish the influence of the KEMI diploma in education management training program for principals on management practices in public secondary schools in Matungulu Sub County, Kenya. The findings revealed that the KEMI diploma course predicts financial management, human resource management, curriculum implementation and project planning and implementation practices of principals ($p < .05$). The study recommended, that the management training be incorporated into the pre service training curriculum for teachers. The Ministry of Education, Science and Technology should extend the training certification beyond the diploma level to the degree level,

2.3 Transfer of Learning to the Workplace

2.3.1 Concept of Transfer of Learning

Most researchers infer about learning and acquisition of knowledge, skills and attitudes by observing behavior and noting how it changes over time. Werner & Desimone (2009) define learning as *"a relatively permanent change in behavior, cognition or affect that occurs as a result of one's interaction with the environment" (2009,* p.65). Domjan (2010) and Aamodt (2007) capture important aspects of learning in the statement.

*"Learning is an enduring change in the mechanisms of behavior involving specific stimuli and/or responses that results from prior experience with those or similar stimuli and responses"(2010. p.*17).

Performance is determined by many factors in addition to learning and care should be taken in deciding whether an aspect of performance reflects learning.

Behavior change may result from other mechanisms which produce changes that are too short lasting to be considered learning instances. Domjan, 2010).

The notion of transfer of learning was originally introduced as transfer of practice by Thorndike and Woodworth explored how individuals would transfer learning in one context to another context that shared similar characteristics to the learning situation. The "Identical Elements Theory" implied that the transfer of learning is dependent on the proportion to which the learning task and the transfer task are similar. Perkins & Salomon (2012) define transfer as a situation when learning in one context enhances or undermines a related performance in another context. Transfer of training is the degree to which trainees apply to their jobs the knowledge, skills, behaviors, and attitudes they gained in training (Holton, 2000). Most educational, industrial and organizational psychologists define transfer as the application of learned skills and competencies to the workplace.

2.3.2 Learner Characteristics Influencing Transfer of Learning

Behaviorist and cognitive learning theories viewed learning as an act influenced by the unique individual learner experiences, characteristics and abilities.

Key learner characteristics include cognitive ability to use learning at the workplace, prior experience, readiness to learn, personality traits, self-efficacy, ability to identify opportunity to use learning and the learner's personal capacity to try out new learning. Learner readiness encompasses individual attitudes and psychological readiness to attend learning. Hence, preparing learners beforehand enables meaningful participation in a training event. Learners should understand how training contributes to work performance and career progression to encourage transfer of learning (Chen, 2003).

A literature review by Burke & Hutchins (2007) found out that that the main learner characteristics influencing transfer of training include the intellectual ability, self-efficacy, self-motivation, personality traits, job and career variables. High achieving learners tend to be more motivated to perform well and transfer learning. (Holton, Bates, Seyler & Carvalho, 1997). Various studies indicate a positive relationship between transfer and pre-training high self-efficacy, the readiness to learn, mastery, task performance, transfer generalization and maintenance (Blume et al. 2010; Chiaburu and Marinova, 2005).

Low self-efficacy, poor motivation to learn and fear of failure may lead learners to avoid challenges associated with transferring skills and competencies to the workplace. Bandura's social learning theory defines self-efficacy as perceptions about ones capacity to organize and undertake actions in specific situations that contain u common, unpredictable and stressful features (McLeod, 2011). Individuals with high self-efficacy are more likely to exert additional effort to meet new challenges.

High self-efficacy and the learner's beliefs about their own ability significantly enhance or constrain what can be gained from observational learning (Bandura, 1986).

Gunawardena et al (2010) examined the predictors of the learner satisfaction and transfer of learning in a corporate online education program. Using a mixed method quantitative and qualitative design targeting 89 respondents he found that online self efficacy was the main predictor of transfer of learning. Motivation to transfer is a significant contributor to the transfer of training and encompasses motivation to learn, perform and transfer (Baldwin & Ford, 2006). It refers to the intensiveness and persistence made to utilize skills and knowledge learnt in a training setting for work performance improvement. The belief that expended effort will change work performance and lead to valued personal and organizational outcomes can lead to positive transfer of learning. Daffron and North (2006) reported that the trainee's motivation was high when the training was related to the trainee jobs and addressed personal and organizational expectations. Most government organizations nominate trainees at short notice or even force them to attend some types of training. Trainees who attend voluntarily tend to achieve better work performance.

Chiaburu and Lindsay (2008) investigated the relationship between the individual motivation to learn, the motivation to transfer and learning transfer among 495 employees in the United States of America. He found out that the motivation to transfer exhibited a stronger relationship with transfer of learning (0.43) than motivation to learn (0.07).

There was a positive relationship between motivation to learn and motivation to transfer (0.26). The findings indicated that it was critical that trainees remain motivated before, during and after the training process for positive transfer to occur. Saks and Belcort (2006) also show that for an average training and development program, there is a steady decline in the use of new skills on the job over time with only about 35% of the skills are still in use 12 months after a typical training event. Trainees must also believe that it is possible to learn and increase performance, and that such improvements will benefit them.

Lwanga (2009) sampled 98 officers from the Ministry of Public service in Uganda. He used a 64 item semi-structured self-administered questionnaire to examine transfer to the workplace based on the learning transfer system inventory developed by Holton (2001) & Noe (2005). Findings indicated a significant positive relationship between learner characteristics and trainee readiness, organizational transfer climate and trainee readiness and trainee readiness and learning transfer. Multiple regression analysis showed that only learner characteristics and trainee readiness significantly explained for learning transfer at the ministry.

None of the research studies reviewed on learner characteristics has been conducted in Kenyan contexts. There is still need to delineate and prioritize the influence of learner characteristics, training program design and work environment on transfer of learning.

This study examined the influence of the following characteristics on transfer of learning: personal characteristics, learner readiness to learn, training expectations, self efficacy and motivation to transfer

2.3.3 Training Program Design factors Influencing Transfer of Learning

According to Holton, Bates and Hatala (2011) most training program designs rarely provides for transfer of learning. Training objectives and content inappropriate to learner needs, inappropriately sequenced and structured tends to have low content validity making it difficult to relate it to work (Noe, 2005; Holton & Baldwin, 2003). Learning may occur, but trainees may not apply knowledge on the job or may lack opportunities to practice the learning. Training pograms' with a high transfer design and content structured around learner needs have a higher chance of transferring to the workplace.

Sufficient time should be provided for learning and practice to enable acquisition of sufficient cognitive skills and proficiency levels (Koome 2005; Meriam & Leahy, 2005; Haskel, 2001). Rote knowledge rarely transfers but the provision of concrete experiences and the use of varied training methods help to generalize learning from training contexts to the workplace. Training facilitators should use relevant workplace examples, link underlying theories, principles, patterns and relationships to work experiences (Donovan & Growe, 2004). Similarity between training and transfer situations provides retrieval cues that remind learners of things learnt (Caffarella, 2002).

Tumentsegtoo (2013) explored the impact of individual characteristics, program design and work environment on transfer using a self-administered questionnaire on a sample of 285 civil servants from the public service in Mongolia and in-depth interviews with 10 respondents. Multiple regression and path analysis findings indicated that the three factors significantly influenced positive transfer. Individual characteristics and training program design factors were positively interrelated. Age did not play a moderating role in the relationship between individual characteristics/ motivation and transfer of training. Motivation, training objectives, training content, peer support and opportunity to use was positively and directly related to transfer of training. However instructional method, feedback, supervisor support did not have direct effects on training transfer. Indirect causal effects on transfer depicted from individual motivation, training objectives, supervisor/peer support and opportunity to use. Only supervisor support had a negative direct effect on training transfer. Some of the findings on the role of program design factors are inconsistent. The following aspects of training program design were examined in the study content relevance and similarity to the work place, program structure and sequence and the quality of the training material

2.3.4 Work Environment factors Influencing Transfer of Learning

Work environment, organizational culture, good policies, resources, perceived utility value of the training peer, top management and supervisor support are critical factors that can influence individual ability and opportunity to transfer (Baldwin, 2006; Holton et al. 200l; Kromwell & Kolb, 2004).

Two categories of work environment factors are evident in studies on work environment factors affecting training namely work-system- and people-related factors. Work-system-related factors include open communication climate, change resistance climate, opportunity to use training, pace of workflow, match between training and department goals, availability of tools to apply training and reward for training. People-related factors include support from supervisor and co-workers.

Koome (2004) assessed the impact of a non-examinable four week supervisory management course on work performance. The study targeted civil servants in Nairobi, Embu and Thika who attended training in 2001, 2002 and 2003 at Government Training Institutes in Kenya. Findings indicated that too much content, lack of equipment and inadequate diversity training for supervisors created a work environment that did not enhance training impact in the workplace.

Learners' felt the program had poor instructional design and new skills learnt were impractical for use at their workplace. Discomfort with change, separation from the instructional source, and negative peer pressure reduced the impact of the program.

Kontoghiorghes (2001) found that intrinsic variables such as recognition at work were more influential on training retention (0.34) compared to extrinsic factors such as pay (-0.07) and promotions (0.05). Openness to experience allows trainees to explore, accept and adopt new knowledge and skills. Hence positive transfer is limited when trainees are not provided with rewards, time, job equipment, recognition and opportunities to use new learning in work settings (Gaudine & Saks, 2004).

Other work related factors include feedback opportunities, performance coaching, support for learning use; openness to change, and the extent to which supervisors and peers actively support learners in using new approaches and expertise. Life contexts, events or time may impede or enhance transfer of learning. The perceived usefulness of learning is defined by appropriateness of training to work and career goals (Meriam and Leahy, 2005). Learners who perceive the importance of the training are more likely to be prepared to effectively utilize the knowledge and skills gained from the training than those who did not perceive training as important (Wei Tao Tai, 2006).

Williams (2008) in a meta-analysis of 34 studies explored the influence of supervisor, subordinate, peers, transfer climate, relapse prevention, goal setting, continuous learning culture, task constraints, and frequency of skills use on training transfer. The variables were analyzed independently and when consolidated into a group called environmental support. The overall organizational support was compared to goal setting and relapse prevention. Moderator analysis compared the effect of the independent variables on transfer in management and non-management training; self-reporting versus supervisor or peer reporting; and training versus other development initiatives.

The results revealed that relapse prevention had the highest levels of correlation to training transfer($r=0.65$). Managerial training had higher levels of correlation to training transfer($r=0.32$) when compared to its correlation with non-managerial training ($r=0.20$). Self-reporting showed higher levels of correlation with training transfer ($r=0.28$) than supervisor or peer reporting ($r=0.16$). Training showed higher levels of training transfer ($r=0.30$) compared to the other development initiatives ($r=0.16$).

In a survey of 278 managers Longnecker (2004) indicated that to increase transfer it was imperative to enhance accountability for application by requiring trainees to prepare post-training reports. Holton's 16 factor Learning Transfer System Inventory popular in research conducted globally, has questionable reliability and validity in developing countries. Slightly different factor structures have been reported when the English LTSI version was used in the South African context, and Chinese/Thai and Jordan Arabic language translated versions (Chen, 2003).

Coetsee, Eiselen and Bason (2006) used a convenience sample of 240 bank employees to determine if an interpretable factor structure of latent transfer system constructs would be found in the South African context. Exploratory Factor Analysis and Principal Component Analysis identified latent variables with first order analysis revealing a 17 factor structure. Second order rotation resulted in four factor domains similar to the original ones in Holton's LTSI namely situational, intrapersonal, consequential and managerial and learner orientation indicators. Factor analysis in a study in Jordan validated 15 of the original 16 factors with factors explaining for about 65% of the common variance in transfer of learning (Khasawneh, 2004; Yaghi et al, 2008).

The Learning Transfer System Inventory had the ability to predict learning and post training knowledge retention, motivation to transfer and changes in job performance, organizational performance and organizational innovation as a result of transfer (Myers, 2004). The studies suggest that the LTSI may not be suitable for use in Africa and other developing countries.

Kromwell & Kolb (2004) examined the relationship between four work-environment factors (organization support, supervisor support, peer support, and participation in a peer support network) and transfer of training at one-month, six-month, and one-year points following supervisory skills training. Quantitative and qualitative aggregate data collected from trainees and their direct supervisors showed that trainees who reported receiving high levels of organization, supervisor, and peer support, and who also participated in a peer support network, reported higher levels of transfer of knowledge and skills. When data were segregated and examined according to length of time since trainees had completed training, findings were still significant for organization, supervisor, and peer support but only at the one-year point, not at one month or six months. Participation in a peer support network was not significant at any of the three points of time. In short-answer responses, trainees indicated that lack of time, lack of management support and buy-in was a significant barrier to transfer. A t-test indicated that trainees and their supervisors did not differ in their perceptions of level of transfer of skills or amount of organizational or direct supervisor support received by the trainees**.** Peers and supervisors in the workplace seem to play a key role in developing a positive climate for transfer of learning (Khasawneh, 2004). The study focused on investigating the influence of work environment based on the following opportunity to use, availability of equipment & facilities, rewards & sanctions, peer and supervisor support.

Kromwel and Kolb (2004) examined the relationship between organization support, supervisor support, peer support, and participation in a peer support network and transfer of training.

The assessment was conducted at one-month, six-month, and one-year points following the completion of a supervisory skills training program. Quantitative and qualitative data were collected from trainees and their immediate supervisors. An analysis of variance indicated that trainees who reported receiving high levels of organization, supervisor, and peer support, and who also participated in a peer support network, reported higher levels of transfer of knowledge and skills.

The data were disaggregated and examined according to length of time since trainees completed the training. The findings were still significant for organization, supervisor, and peer support but only at the one-year point, not at one month or six months. Participation in a peer support network was not significant at any of the three points of time. In short-answer responses, trainees indicated that lack of time and lack of management support and buy-in were significant barriers to transfer. T-test results indicated that trainees and their supervisors did not differ in their perceptions of the level of skill transfer of skills or the amount of organizational and direct supervisor support received.

A qualitative research undertaken by Clarke (2002) as part of a wider training evaluation strategy investigated factors which influenced the transfer of training within a UK social services department and also investigated how these factors compared or differed from those suggested within the literature on factors influencing training transfer. The findings suggest a range of specific factors pertaining to both the nature of the jobs and the workplace within such work settings as mediating training transfer.

However, a number of factors were closely associated with the dimensions of social support and opportunity to use as posited within Baldwin and Ford's (1988) transfer of training model. This suggested that the model can be generalized to human service organizations.

2.4 Summary of the Literature Review

Early research and experiments on transfer were influenced mainly by the work of the behaviourist psychologist Thorndike with emphasis on whether positive transfer of learning occurred or did not occur. Contemporary research in transfer of training is generally aimed at determining 'why' transfer of learning occurs and revelation of the main variables that influence transfer.

In this study the terms 'transfer of learning' and 'transfer of training' were used interchangeable with no fundamental distinction. Transfer of learning research problems fit into the following broad areas that focus on: research methodology and technical problems associated with the measurement of transfer, identification of the major variables influencing transfer of learning and how these variables influence transfer, development of conceptual models or theoretical frameworks for organising knowledge about transfer, and the development of an educational technology that is capable of translating to a variety of educational and training contexts.

The literature reviewed in this chapter reveals inconsistencies in the learner characteristics, training program design and work environment factors at the pre-training, during training and post training stages that promote or inhibit positive transfer of learning to the workplace. There were consistent findings on the positive role of high self- efficacy, but findings on the influence of some learner characteristics, training program design and work environment factors on transfer of learning were inconsistent. The inconsistencies may be attributed to the fact that varied measures were used to measure transfer of learning due to lack of a standardized transfer of learning measure.

Most studies have been undertaken in developed countries using varied research designs with few focusing on transfer of learning from educational management programs in the African context. Significantly fewer studies have been undertaken to understand the influence of work environment factors in the African context. The few studies cited in Africa were based on relatively small samples and data collection tools that had not been cross culturally validated. Hence there was need to profile the predictors of positive transfer of learning to the workplace and prioritize the training program design and work environment interventions that promote transfer.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter describes the research design, variables, study location, sampling, data collection and analysis procedures. The logistical, reliability, validity and ethical concerns are also outlined.

3.2 Research Design

3.2.1 Variables of the Study

The dependent variable, transfer of learning was interpreted as being positive or negative. This was based on the extent to which the knowledge, skills and competencies learnt in the training program were applied, repeated, maintained and generalized in the work environment. Transfer of learning was measured by estimating the percentage of positive transfer of learning. Selected independent factors influencing transfer of learning were classified into the following three domains namely; learner characteristics, training program design and work environment.

3.2.2 Research Methodology

The survey adopted an ex-post facto design since the learning transfer factors had already occurred and could not be manipulated by the researcher. The survey design was selected to provide a better understanding of the independent variables that influence the transfer of learning (Creswell, 2009).

In ex post facto research, the researcher investigated the dependent variable by examining the data on independent variables retrospectively to establish causes, relationships and their meanings.

The design enabled examination of how the independent variables, present prior to the study affected the dependent variable, in this case the transfer of learning. The categorization of the independent variable was based on learning events that had occurred in the past and the assignment of respondents was not based on randomization (Kothari, 2004; Mc Burney, 2010, Lammers & Badia, 2005).The quantitative data from a self-administered questionnaire was complemented by contextual details elicited from qualitative data in the unstructured questionnaire items and interview guides.

3.2.3 Location of the Study

Singleton (1993) noted that the ideal setting for an effective research is accessible to the researcher and should permit instant rapport with the informants. The study was conducted in offices and staff rooms in the targeted public primary and secondary schools located in the County Government of Kiambu, Kenya. One County was purposively selected to ease accessibility and enable the coverage of a wide geographical area. In addition, no similar research to the researcher's knowledge had been conducted in the County Government of Kiambu. Kiambu County covers an area of 2, 543, 42 kilometers and is a peri-urban zone with qualities of both rural and urban settings.

It was considered one of the wealthiest counties in Kenya with 61% of the population in the county is urban and it had the largest population (1,623, 282) among the counties located in the former Central Province. The County has twelve constituencies: Gatundu South, Gatundu North, Juja, Thika Town, Ruiru, Githunguri, Kiambu, Kiambaa, Kabete, Kikuyu, Limuru and Lari. In 2013 the county had 1133 primary and 313 secondary schools.

Figure 2 shows a map of the administrative sub counties in the County of Kiambu.

Figure 2: Map of Sub-Counties in the County Government of Kiambu

These sub counties guided the selection of primary and secondary schools from 6 of the sub-counties. However, for administrative reasons the county education office split Thika and Kiambu sub-counties into two areas each resulting in a total of 8 research localities.

3.3 Target Population

The study population consisted of 647 public primary and secondary Principals, Deputy Principals, Head teachers and Deputy Head Teachers from public schools in the County Government of Kiambu who graduated on 12th June 2013 from phase I of the Diploma in Education Management program held at the Kenya Education Management Institute.

3.4 Sampling Techniques and Sample Size

3.4.1 Sampling Techniques

Simple random sampling was used to select respondents from 8 localities in 6 of the 12 sub counties in the County Government of Kiambu. This was done to ease costs and minimize disparities in learner characteristics emanating from differences in the geographical locations of the schools.

Proportionate stratified sampling was used thereafter to obtain the sample of administrators representing the following strata; gender, designation and age. These were drawn to reflect the proportions in which they existed in the target population. The stratified sampling was used to sample males, females, primary and secondary public schools in the County Government of Kiambu. The researcher used simple random sampling to select 60 individual respondents out of the 216 who completed the questionnaires to participate in the one to one interviews.

3.4.2 Sample Size

The KEMI graduation list indicated that 647 principals head teachers, deputy principals and deputy head teachers had graduated from phase 1 of the ODFL Diploma in education management program conducted by KEMI.

Of these 204 were female and 443 were male graduates. The KEMI list had 213 respondents from secondary schools and 260 from primary schools. One hundred and seventy four (174) of the graduates had dropped out of the targeted sampling frame provided by KEMI due to natural attrition and transfers to other counties (County Government of Kiambu Education Office, 2015).

However, the list obtained from the Kiambu County Education office at the time of data collection consisted of 473 school head teachers and deputy head teachers who completed the KEMI program and were still working in the County Government of Kiambu. The final sample consisted of 40 public primary schools and 107 public secondary schools purposively selected from the 8 localities in 6 sub counties in the County Government of Kiambu.

The Yamane (1967) sample size formulawas used to obtain 216 principals, deputy principals, head teachers and deputy head teachers (Female=66; Male=147) from the targeted population of 473. The formula used is given as follows:

$$\text{Sample size (n)} = N/ \{1+Ne^2\}$$

where N was the population size, n the sample size and “e” the level of desired precision was0.05).Hence the resultant sample size that completed the self administered questionnaire was 216.

$$\text{Sample size (n)} = N/ \{1+Ne^2\}) = 473/ \{1+473\ (0.05)^2\} = 216$$

A randomly selected subsample of 60 out of the 216 Principals and Deputy Head Teachers responded to the interview guide. Interview **r**espondents were randomly selected from the 6 sub-counties resulting in the identification of 15 principals, 15 head teachers, 15 head teachers and 15 deputy head teachers. A summary of the targeted groups and sample sizes is outlined in Table 2.

Table 2

Target Groups and Sample Size

Target Group	Population size (N)	Sample sizes (n)
No. of respondents from public primary schools	260	147
No. of respondents from public secondary schools	213	69
Total	473	216 (Female149; Male 67)

NB: *Other Strata levels included age, school type, education level and designation.

It is worthwhile to note that 213 valid and completed questionnaires were analyzed out of the targeted 216 since 3 questionnaires were more than 60% incomplete.

3.5 Research Instruments

The main data collection tool was a self administered questionnaire targeting all the 216 respondents. The questionnaire was complemented by interview schedules. Details about each of the research instruments are provided in the following section.

3.5.1 Self Administered Questionnaire for Principals, Head Teachers, Deputy Principals and Deputy Head Teachers

A self- administered questionnaire was designed to assess the influence of learner characteristics, training program design and work environment factors on transfer of learning from the ODFL Diploma in Education Management program to the workplace.

The questionnaire was divided into two parts. Part I had eleven items which elicited the respondents personal profiles and demographic data. These data included the gender, designation, academic and professional qualifications. Part II had 30 structured items on a 5 point Likert scale assessing selected factors influencing transfer of learning to the workplace. The Likert Scale ranged from Strongly Agree (5), Agree (4), neither agree nor disagree (3), disagree (2) to strongly disagree (1). The items in this section focused on measuring independent variables in the following domains of interest:

(i) learner characteristics were measured by learner readiness, personal expectations, self-efficacy and motivation to transfer

(ii) training program design was assessed by training content validity, training delivery methods, and

(iii) work environment items measured the opportunity provided to use learning, organizational, supervisor and peer support.

Open ended items at the end of Part II of the questionnaire provided information on the barriers to positive transfer of learning and suggestions on improving positive transfer of learning in the management training program.

The questionnaire also elicited data on the extent of transfer and estimated the percentage of positive transfer of learning to the work place (Appendix I).

3.5.2 Interview Guide for Principals and Deputy Head Teachers

A semi-structured one to one interview schedule targeting 60 principals, deputy principals, head teachers and deputy head teachers elicited in-depth data that provided information on factors influencing transfer and barriers to transfer of learning from the ODFL diploma in management training to the work place (Appendix II).

Contextual cues on trainee characteristics, program design and work environment factors that influenced transfer of learning from the diploma in education management program to the work place were analyzed using interviews. The interview complemented and validated the feedback from the questionnaires.

3.6 Pre-Testing and Piloting Study

3.6.1 Validity

Management trainers in the Ministry of Education Science & Technology, Kenya Education Management Institute trainers, and Faculty of Education staff at Kenyatta University reviewed the data collection tools. They also suggested ways of enhancing the reliability and validity of the instruments. The tools were administered in school premises more than one year after principals and deputies had completed training. This duration was deemed adequate to reasonably assess the transfer of learning to the workplace.

3.6.2 Reliability

The data collection tools were pretested using thirty(30) ODFL Diploma in Education Management graduates from public primary and secondary schools in Nairobi County. This enabled the researcher to determine the reliability of data collection tools, appropriateness of items, suitability of the time allocations and modes of administration. The results of the pilot study were compared with research findings obtained using other standardized learning transfer measures. Items were asked in a standardized order and test-retest reliability indices obtained over a two week duration to test the stability of responses in the pilot sample. As a result, three questionnaire items were modified and the some of the sub-headings were removed since the principal component analysis procedure would generate the key latent constructs.

Cronbach Alpha (α), a common measure of internal consistency was used in the piloting phase to gauge whether all items reliably measured the same latent variable. This measure was ideal since the data had multiple likert scale items. Appendix III presents the item total statistics for the data collected using the likert scale "*Cronbach Alpha if item is deleted"*. The reliability statistics on the data indicated that Cronbach's **α**=0.83 while the Cronbach's Alpha Based on Standardized Items was **α**=0.85. These values indicated a high level of internal consistency for the likert scale since Devellis (2012) and Kline (2000) indicate that a reliability coefficient of 0.825 can be considered good. It was evident that the removal of the two variables, joined for promotion and resource availability would result in higher alpha values of **α**=0.85 and **α**=0.83 respectively.

However, these differences were not considered large enough to warrant removal of any of the items in the questionnaire. Hence all items were retained in the analysis since all values were greater than 0.80.

3.6.3 Pilot Study

Prior to visiting the schools for data collection, the researcher pre-tested the questionnaires using two schools in the County Government of Kiambu, which were not included in the actual study. The purpose of the piloting was to test the validity and reliability of the instruments by identifying items that were unclear or ambiguous.

The interview guide was piloted using 30 respondents resulting in the removal of two items that were similar to items in the questionnaire. The pilot study also enabled the researcher to familiarize with administration of the instruments.

3.7 Data Collection Techniques

A research permit was obtained from the National Commission for Science, Technology and Innovation (Appendix IV). Letters of authorization were obtained from the County Commissioner and the County Education Officer in the County Government of Kiambu before commencing the field data collection. Secondary data regarding the diploma in education management program was obtained from end of program and facilitator evaluation, job descriptions and relevant documents obtained from the Ministry of Education, Science and Technology, KEMI and the Kiambu County Education Office. Tools were administered in offices within the primary and secondary school premises.

The data collection was undertaken over a period of four months from May 2015 to August 2015. The researcher administered the questionnaire and conducted the interviews targeting principals and deputy head teachers. The researcher booked appointments for interviews and questionnaire administration through the County Education Office. The principals and head teachers were consulted to negotiate for appropriate days and timings for administration of the questionnaires and interviews. The written self-administered paper pencil/pen questionnaire took 20 to 30 minutes each to administer while interviews lasted for 15 to 45 Minutes. The detailed research work plan is given in Appendix V.

3.8 Data Analysis and Presentation

3.8.1 Scoring of the Data Collection Tools

Most of the quantitative data in the questionnaire was elicited on a five point Likert response scale that ranged from 1(Strongly Disagree) to 5 (Strongly Agree). Negative statements were reversed before scoring. Scale subtotals and overall total scores were generated from the quantitative data. The final analysis involved merging responses to control for social desirability effects. The Strongly Agree (SA) & Agree (A) categories were merged into an Agree category, while the Strongly Disagree (SD) and Disagree (D) were merged to form a Disagree Category. The neither agree or Disagree category was retained.

3.8.2 Quantitative Data Analysis

Data analysis was guided by the study purpose, objectives, hypotheses and the type of data collection tools. The Statistical Package for Social Sciences (SPSS version 21) generated the descriptive and inferential statistics. Descriptive statistics included percentages, arithmetic means and inter item correlations. Inter correlation matrices were generated to check the internal consistency and ascertain the correlation of items on subscales (Kaplan & Saccuzzo, 2009).

Inferential statistics involved the use of Principal Component Analysis (PCA) and Principal Regression Analysis (PRA). The PCA investigated the influence of the selected learner characteristics, training program design and work environment on the transfer of learning to the workplace. The quantitative findings were presented using tables, pie-charts, bar graphs, scree plots and other graphical forms. Independent variables in resulting key components were subjected to PRA resulting in a predictive model on key variables influencing the transfer of learning to the workplace.

Principal Component Analysis (PCA) required an analysis of several independent variables to explain for the variance in the dependent variable in terms of a few key latent components. The Orthogonal transformation was conducted to convert the set of 33 questionnaire items possibly correlated variables into a set of values of linearly uncorrelated variables called the principal components. The procedure involved obtaining a inter correlation matrix for all selected variables influencing transfer of learning to assess if items were correlated (Kaplan & Saccuzzo, 2009).

The resulting variables were grouped together into latent key components that had low correlations or no correlation. Orthogonal rotation using the oblique varimax method was used to rotate the correlation matrix's multivariate dataset resulting in the generation of a new configuration matrix that was easier to interpret. Patterns of correlations were identified and labeled to provide operational definition for the key components. The number of key components retained was guided by Kaiser's rule which recommends the retention of Eigen values greater than 1. Only the components with factor loadings greater than 0.5 were included in the analysis (Kaiser, 1974). Table 3 gives a summary of the key outputs at each stage in the PCA procedure.

Table 3

Key Outputs of Principal Component Analysis

Principal Component Analysis Concern		Key Data Output
(i)	Determination of important components in the data.	Correlation matrix, communalities, Eigen values and a scree plot
(ii)	Analysis of the extent to which the principal components explain the observed correlations between the independent variables influencing transfer of learning.	Un-rotated factor loadings
(iii)	Identification of the independent variables with high loadings on each of the rotated components.	Rotated Component matrix, total variance explained and a Component transformation matrix
(iv)	Labeling of the rotated principal components.	Factor name and labels

The subsequent Principal Component Regression (PCR) involved multiple regressions of the 11 variables in each of the four components resulting from the PCA. This resulted in identification and prioritization of the key predictors of transfer of learning (Bartholomew, Steele, Moustaki and Galbraith, 2008).The aim was to estimate individual and collective contributions of the independent variables in the principal components to the transfer of learning. The coefficient of multiple determinations (*R-squared)* and adjusted R-squared provided a statistical measure of how close the data fitted the regression line.

This established the amount of variance in transfer accounted for by the selected independent variables (Render, Staur & Hanna, 2006). The final output of the PCR was a multiple linear regression model predicting key independent variables influencing transfer of learning

3.8.3 Qualitative Data Analysis

The data emanating from the interview guide was analyzed using content analysis. The results were categorized into key thematic areas generated during the pilot phase. The deductive approach was used to group responses on open ended questions based on similarities and differences. The data were subjected to content analysis to identify recurrent themes and pattern. Emerging thematic areas were added and the data was presented in a tables and continuous prose. This qualitative data enriched the discussion of quantitative results from the self administered questionnaires (Smith, 2008; Howitt, 2010).

3.9 Logistical and Ethical Considerations

All the respondents completed an informed consent form prior to participating in the study. They were assured of strict confidentiality and anonymity during the data collection; analysis and reporting of the findings (Appendix VI). Informed consent forms were signed by the respondents who were willing to participate in the study. Setting of rules, briefing and debriefing sessions were held with the respondents to reduce stress emanating from anxiety and perceived inconveniences (Smith, 2008). The tools were administered at negotiated timings in school venues following prior booking of appointments. A research permit was obtained from the National Council for Science Technology. Respondents were adequately briefed and were assured of confidentiality in the signed informed consent form.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter describes the sample profile of public primary and secondary school principals, head teachers, deputy principals and deputy head teachers who participated in the study. The data analysis and interpretation procedures are presented with discussion of the key findings relating to the hypotheses which were tested at $\alpha = 0.05$ level of statistical significance.

4.2 Sample Profile

4.2.1 Distribution of respondents in by schools and sub-counties

The self-administered questionnaire targeted 216 the principals, deputy principals and head teachers and deputy head teachers but 213 valid questionnaires were used in data analysis since 3 questionnaires were incomplete. It should be noted that not all respondents who had graduated from the ODFL diploma in education management program were accessible at the time of data collection due to natural attrition effects and the large geographical area**.** The 99% questionnaire return rate was adequate.

A total of 147 public schools were randomly sampled from eight (8) out of the fourteen (14) sub counties in the County Government of Kiambu. The 8 sub-counties were purposively sampled. Forty (40) were secondary schools with 107 primary schools.

The number of questionnaire respondents sampled from the eight localities in the six sub-counties who completed the questionnaires is given in Table 4.

Table 4

Number of Respondents in Schools and Sub-Counties.

Sub- County locality	Primary School	Secondary School	Total	%
Kiambu	43	24	67	31
Thika East	32	17	49	23
Kiambu East	1	3	4	2
Gatundu North	33	7	40	19
Githunguri	0	6	6	3
Ruiru	1	2	3	1
Kabete	5	0	5	3
Thika West	30	9	39	18
Total	145	68	213	100%

Most of the respondents were drawn from Kiambu sub-county (32%), Thika sub-county (41%), and Gatundu North sub-county (19%).

Figure 3 shows the proportion of respondents drawn from public primary and secondary schools.

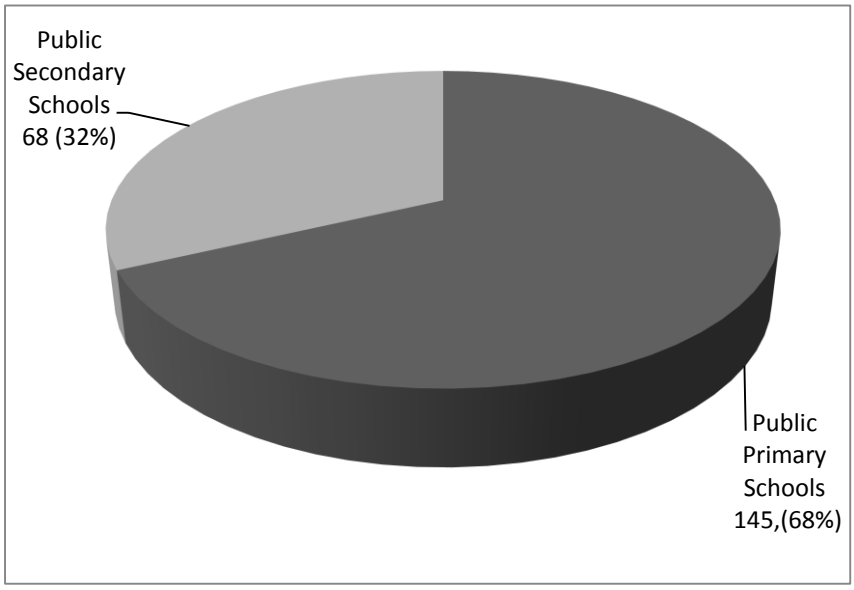

Figure 3. Sampled respondents in public primary and secondary schools.

Out of the 213 valid questionnaires returned by principals, deputy principals, head teachers and deputy head teachers, 51% were from day schools, 44% from boarding schools and 2% from schools that were for day and boarding students. A majority of the respondents were from public primary schools (68%) and fewer were from secondary schools (32%). School Principals and head teachers constituted 79% of the sample, while deputy principals and deputy head teachers represented 15% of the sample. Six per cent (6%) of the respondents did not respond.

4.2.2 Work experience, designation, gender and highest educational levels

Table 5 and Table 6 give the job groups, work experience, gender and highest educational levels of the respondents.

Table 5

Job Group, Designation and Work Experience

	Female		Male		Total	
Aspect	No.	(%)	No.	%	No.	%
Job Group						
Below job group L	12	6	42	20	54	25
L-N	39	18	96	45	135	63
P and above	15	7	5	2	20	9
No Response	0	0	4	3	4	3
Total	66	31	147	69	213	100
Designation						
Principal/Head Teacher	57	27	111	52	168	79
Deputy Principal/deputy Head	5	2	12	6	17	8
Teacher						
Any Other	4	2	16	7	20	9
No Response	3	1	5	3	8	4
Total	69	32	144	64	213	100
Work Experience						
Less than 15 years	0	0	5	2	5	2
16-20 years	8	4	50	23	58	27
31-40 years	12	6	12	6	24	11
More than 40 years	0	0	4	3	4	2
Total	66	31	147	69	213	100

Most of the respondents were principals and head teachers (79%), 8% were deputy principals and deputy head teachers while 6% did not indicate their designations. Most respondents were in Job Group L-N (63%) with almost half having cumulated a work experience of 21-30 years (53%).

Figure 4 illustrates the sampling distribution based on the gender of the respondents.

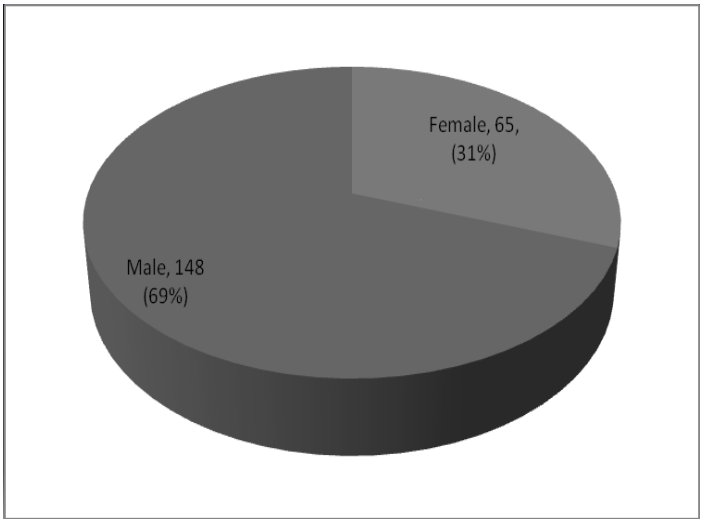

Figure 4. Distribution of male and female respondents.

The majority of respondents in the sample were male (69%). This was expected since the study population had a higher proportion of male principals, deputy principals, head teachers and deputy head teachers.

The gender distribution according to the highest educational level is shown in Table 6.

Table 6

Gender and Highest Educational Levels

	Female		Male		Total	
Aspect	n	(%)	n	%	N	%
Highest Educational level						
Secondary and below	4	3	12	6	16	8
College	16	8	63	30	79	37
Bachelors	33	15	59	28	92	43
Masters and Above	13	6	9	4	22	10
No Response	0	0	4	2	4	2
Total	66	31	147	69	213	100

Almost half had a bachelor's degree (43%) and 10% possessed a master's qualification and above. Hence, the majority had the minimum qualification of a bachelor's degree which was a prerequisite for being appointed as a school administrator.

The age profile illustrated in Figure 5 revealed that a majority of the respondents were aged 41-50 years.

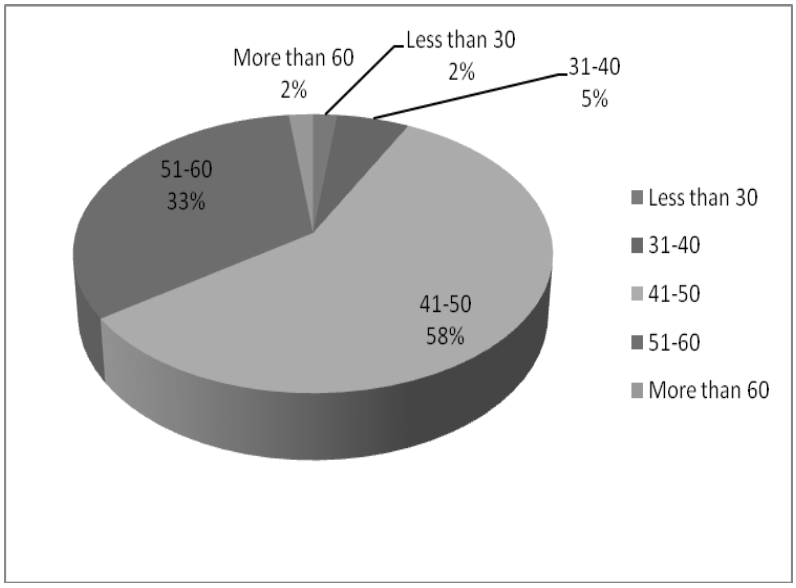

Figure 5. Age of respondents.

A cross tabulation of age and sex of the respondents shown in Table 7 illustrates that as expected, most respondents were between 41 to 60 years of age.

Table 7

Cross tabulation of sex and age of respondents

		Age in Years					Total
		Less than 30	31-40	41-50	51-60	More than 60	
Sex	Female	4	0	32	29	0	65
	Male	0	12	91	41	4	148
	Total	4	12	123	70	4	213

It should be noted that none of the females were in the 31-40 year age bracket. Most of the respondents were aged 41-50 years, with the majority of these being male.

4.2.3 Estimated positive transfer of learning to the workplace.

The extent of positive and negative transfer of learning from the ODFL diploma in educational management program to the workplace was established resulting in the findings illustrated in Figure 6 and Figure 7.

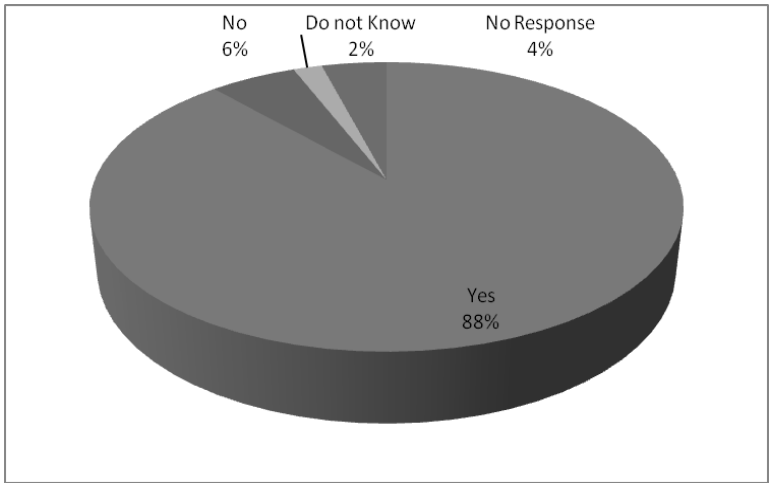

Figure 6. Positive transfer of learning.

It is evident that 88% of the respondents indicated that the Diploma in Education Management program resulted in positive transfer, with 6% feeling that the program had not resulted in positive transfer of learning. Figure 7 also confirms that 4% felt there was negative transfer of learning from the management program to the work place.

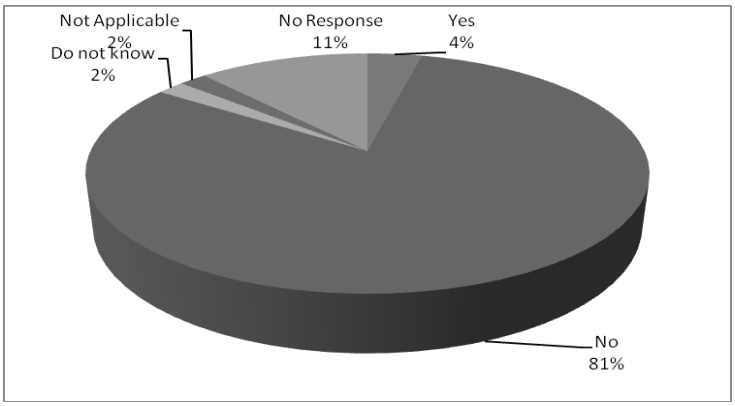

Figure 7. Negative transfer of learning.

Figure 8 shows the number of male and female respondents who indicated that there was positive transfer of learning.

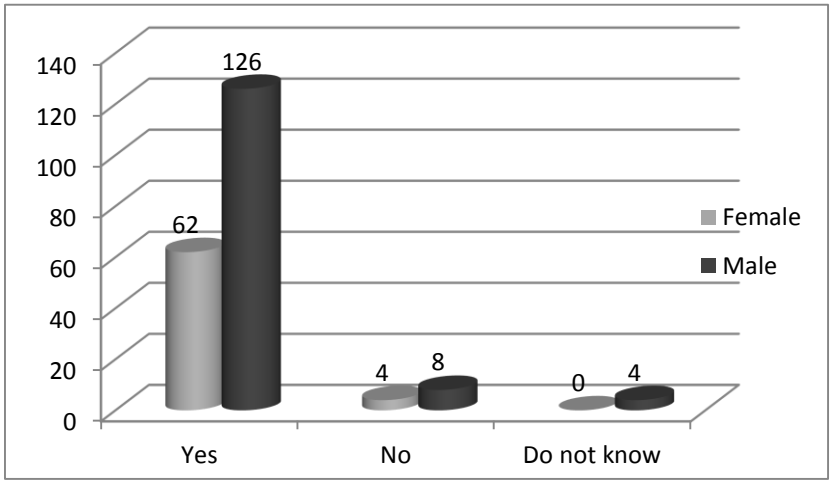

Figure 8. Gender differences in the No. indicating positive transfer of learning.

There was no notable sex difference in the numbers indicating that the program resulted in positive transfer of learning. A cross tabulation of sex and percentage of positive transfer of learning resulted in the findings given in Figure 9.

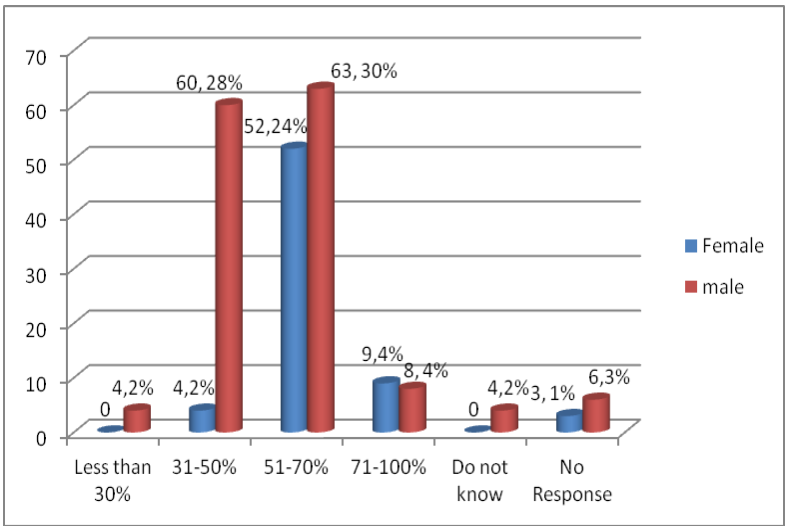

Figure 9. Percentage of females and males indicating positive transfer of learning.

The difference between the estimated transfer of learning for males and females was minimal, although males generally reported higher percentages of positive transfer compared to females. School principals had higher percentages of positive transfer than deputy head teachers as shown in Figure 10. This was not surprising since the number of principals and head teachers was higher in the sample.

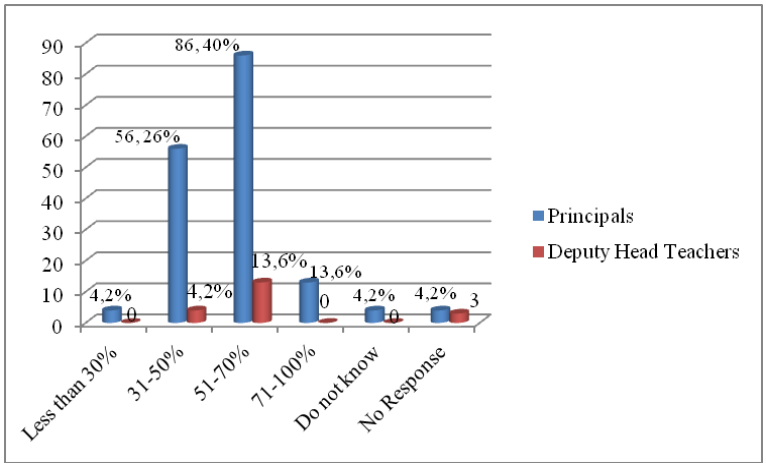

Figure 10. Comparison of the percentage of positive transfer of learning between principals and deputy head teachers.

Figure 11 shows the estimated percentage of positive transfer of learning from the ODFL Diploma Training program to the workplace among the respondents who indicated that there was positive transfer of learning.

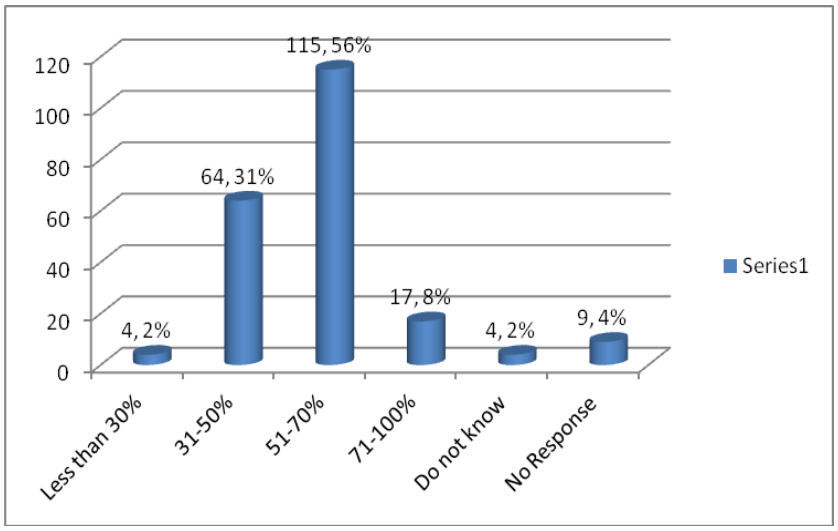

Figure11. Estimated percentage of positive transfer of learning to the work place.

Approximately half of the respondents estimated that the positive transfer of learning achieved was 51 to 70 % while 31% gave an estimate of 31 to 50%. Only 2% gave an estimate of less than 30 %.

4.3 Learner Characteristics Influencing Transfer of Learning to the Work Place

4.3.1 Means on learner characteristics.

Means scores were generated for the ten (10) variables used to measure learner characteristics on a likert scale ranging from Agree (1) to strongly disagree (5).

The overall mean of 3.8 represented a 75% level indicating that there was general agreement with the statements measuring learner characteristics. Inter item correlations for the 33 questionnaire items are given in Appendix VII.

Table 8 illustrates the percentages and means for each of the learner characteristics.

Table 8

Mean on Learner Characteristics (n=213)

	Rating				
	D	NAD	A	NR	Mean
(i) Notified well in advance of enrolment in the ODFL Diploma in Education Management program.	10(20%)	4 (8%)	35 (70%)	1 (2%)	3.6
(ii) Knew what to expect from the training prior to attending the program.	25 50%)	8(16%)	16 (32%)	1 (2%)	2.7
(iii)Joined the program to get promotion and salary increase.	22 (44%)	12 (24%)	15 (30%)	1 (2%)	2.7
(iv) Joined the diploma program to enhance my knowledge, skills and competencies.	3 (6%)	3 (6%)	44 (88%)	-	4.3
(v)Undertook the diploma training for self-satisfaction	16 (32%)	9 (18%)	25 (50%)	-	3.1
(vi) Believe I have the ability to use the skills and competencies gained from the diploma program in the workplace.	0 (0%)	1 (2%)	49 (98%)	-	4.5
(vii) Believe I can overcome obstacles at work that hinder use of new knowledge, skills and competencies.	0 (0%)	3 (6%)	47 (94%)	-	4.3
(viii) Diploma in educational management met my personal expectations and enhanced my work productivity.	1 (2%)	7 (14%)	42 (84%)	-	4.1
(ix) At the end of the ODFL Diploma in Educational Management program, I felt motivated to transfer learning to the	3 (6%)	5 (10%)	42(84%)	-	4.1

workplace.					
(x) My educational qualifications and work experience facilitated my ability to transfer learning to the workplace.	1 (2%)	5 (10%)	44 (88%)	-	4.1
				Overall Mean = 3.8	

D-Disagree NAD-Neither Agree nor Disagree A-Agree NR-No Response

Most of the principals, deputy principals, head teachers, and deputy head teachers joined the program to enhance knowledge, skills and competencies (88%). Approximately half (50%) undertook the program for self-satisfaction (50%), while a smaller proportion indicated they joined the program to get promotions (30%). It is evident that half of the respondents disagreed with the statement "I knew what to expect from the training prior to attending the program".

Seventy per cent (70%) of the respondents agreed that they were notified well in advance of enrollment into the ODFL diploma in education program. A majority agreed that their educational qualifications and work experience facilitated the ability to transfer learning to the workplace (88%). Most of them also believed they had ability to use the knowledge, skills and competencies gained in the workplace (98%).

4.3.2 Inter item correlations on learner characteristics.

Pearson's Product Moment Correlation Coefficients were computed to obtain the inter correlation matrix for the ten variables measuring learner characteristics shown in Table 9.

Table 9

Pearson Correlations between Variables Measuring Learner Characteristics (n=213)

	1	2	3	4	5	6	7	8	9	10
1. Notified well in advance for enrollment	1									
2. Knew what to expect	.41	1								
3. Joined for promotion	.07	.08	1							
4. Joined for knowledge skills and competencies	.33	.10	-.03	1						
5. Joined for self-satisfaction	.14*	.23	.16*	.22	1					
6. Believe I have ability to use knowledge, skills and competencies	.08	.08	-.50	.28	.00	1				
7. Believe I can overcome obstacles that hinder use of knowledge, skills and competencies	.13	.21	-.20	.20	.00	.36	1			
8. Training met my personal expectations and enhanced productivity	.26	-.01	-.27	.22	.09	.36	.19	1		
9. At end I felt the motivation to transfer learning to the workplace	.20	.28*	-.37	.29	.07	.38	.50	.50	1	
10. Educational qualifications and work experience facilitated transfer of learning	.12	.15*	-.01	.19	.04	.05	.06	.10	.37	1

*. Correlations > 0.14 were significant at the 0.05 level (2-tailed).

Variables were expected to inter-correlate highly since they were all measures of learner characteristics. The findings indicate that most variables measuring learner characteristics had positive inter-correlations as expected. Most variables had positive weak correlations except for the following learner characteristics that exhibited statistically significant moderately high correlations at α =.05 level of significance. These included; feeling motivated to transfer learning to the workplace and knowing what to expect from the training prior to attending the program (r=0.28); knowing what to expect from the training prior to attending the program and the individual education and work experience (r=0.15);

joining for promotion and joining for self-satisfaction (r=0.16) and being notified well in advance of enrolment in the program and undertaking the program for self- satisfaction" (r=0.14).

4.4 Influence of Training Program Design on Transfer of Learning to the Workplace

4.4.1 Means on training program design factors.

An analysis of the variables measuring training program design revealed an overall mean score of 3.53. Table 10 indicates that most respondents agreed that the ODFL Diploma in Educational management program was valid and relevant to their work.

Table 10

Means on Training Program Design (n=213)

	Rating				
	D	NAD	A	NR	Mean
(i) Curriculum was well planned and organized.	5 (10%)	7 (14%)	38 (76%)	-	3.8
(ii) Sequence and structure of training content was excellent.	8 (16%)	17 (34%)	25 (50%)	-	3.4
(iii)Learning was relevant to conditions in my workplace.	4 (8%)	4 (8%)	42 (84%)	-	4.0
(iv) Training content had practical applicability to my work.	1(2%)	6 (12%)	43 (86%)	-	4.1
(v) There was similarity between training and work environment	3(6%)	9(18%)	38 (76%)	-	3.9
(vi) The quality of the KEMI training material used was excellent.	6 (12%)	11 (22%)	33 (66%)	-	3.6
(vii) Trainers provided sufficient opportunities to practice behaviors related to the work place.	10 (20%)	19 (38%)	21(42%)	-	3.2
(viii) Trainers used appropriate training delivery methods.	9 (18%)	16 (32%)	25 (50%)	-	3.3
(ix) KEMI provided follow-up support after the program ended	36 (72%)	6 (12%)	7 (14%)	1 (2%)	2.1
(x) The ODFL Diploma in education management program design enhances positive transfer of learning to the workplace.	2 (4%)	9 (18%)	39 (78%)	-	3.9
					Overall Mean= 3.53

D-Disagree NAD-Neither Agree nor Disagree A-Agree NR-No Response

Half of the principals and deputy head teachers agreed that the sequence and structure of the training content was excellent. Seventy eight (78%) of the principals and deputy head teachers agreed that the diploma program design enhanced positive transfer of learning to the workplace. Most respondents agreed that quality was excellent (66%) with 42% indicating that sufficient opportunities were provided to apply the training at work.

A majority disagreed that the Kenya Education Management Institute (KEMI) provided follow-up support after training (72%).

4.4.2 Inter item correlations on training program design factors.

The Pearson's correlations among training program design variables relating to the ODFL Diploma in Educational Management are given in Table 11.

Table 11

Pearson Correlation between Variables Measuring Training Program Design (n=213)

	1	2	3	4	5	6	7	8	9	10
1. Curriculum was well planned	1									
2. Content sequence and structure excellent	.70*	1								
3. Learning relevant to workplace conditions	.30	.20	1							
4. Content had practical applicability to workplace	.40	.40	.65	1						
5. Similarity between training and work environment	.53*	.39	.63	.69	1					
6. Quality of training material excellent	.54*	.43	.31	.32	.34	1				
7. Trainers provided sufficient opportunities to practice	.42	.33	.18	.05	.23	.49	1			
8. Trainers used appropriate training methods	.30	.27	-.41	.00	.02	.47	.76	1		
9. KEMI provided follow up support	-.86	.10	-.08	-.15	-.13	.02	.28	.25	1	
10. ODFL program design enhanced transfer of learning	.24	.19	.23	.27	.14*	.26	.37	.33	.07	1

.*. Correlations > 0.14 were significant at the 0.05 level (2-tailed).

Statistically significant positive correlations were obtained for the following situations. A well planned and organized curriculum correlated positively with excellent sequencing and structuring of the training content (r=0.70); quality of training material (r=0.54); and similarity between the training and work environment (r=.53).

Notably, a well-planned and organized curriculum had a significant positive relation with all variables (r>0.30) except for a statistically non-significant negative relationship with KEMI's provision of follow up support after the training program having (r= -0.86)

4.5 Influence of the Work Environment on Transfer of Learning to the Workplace

4.5.1 Means on work environment factors.

Table 12 illustrates mean scores variables assessing the opportunity to use training at the workplace.

Table 12

Means on Opportunities to Use Learning at the Work Place (n=213)

	Rating				
	D	NAD	A	NR	Mean
(i) Clear link between the diploma in education management training and career progression of school principals.	9 (18%)	4 (8%)	37 (74%)	-	3.7
(ii)Work environment provides opportunities to use knowledge, skills and competencies gained from the diploma training.	3 (6%)	3 (6%)	44 (88%)	-	4.2
(iii) Equipment, facilities and other resources required to apply newly acquired skills and competencies are available at my workplace.	16 (32%)	12 (24%)	22 (44%)	-	3.1
(iv) Knowledge, skills and competencies learned in the diploma program have increased my work performance.	1(2%)	10 (20%)	39 (78%)	-	4.0
				Overall Mean =	3.75

D-Disagree NAD-Neither Agree nor Disagree A-Agree NR-No Response

The overall mean score of 3.75 provides evidence that there were opportunities to use training in the work place with 88% agreeing that the school work environment seemed to provide adequate opportunities to use knowledge skills and competencies. Most agreed that there was clarity on the link between the diploma in education management training and the career progression of school principals (74%).

Findings regarding the extent of support by supervisors, co-workers and organizational support are given in Table 13.

Table 13

Means on Supervisor, Co-worker and Organizational Support (n=213)

	Rating				
	D	NAD	A	NR	Mean
(i) School/ministry rewards and recognizes those who apply skills and competencies learnt in training at work	24 (48%)	14 (28%)	9 (18%)	-	2.4
ii) Supervisor and I identified potential barriers to applying new competencies after the diploma training.	27 (54%)	10 (20%)	12 (24%)	1(2%)	2.5
(iii) Supervisor encourages and supports me to use the skills and competencies gained from the training.	23 (46%)	4(8%)	22 (44%)	1(2%)	3.0
(vi) Supervisor praises and rewards those who demonstrate effective application of what was taught in the training.	29 (58%)	13 (26%)	6 (12%)	2(4%)	2.3
(v) Supervisor pays no attention to how I transfer learning to the workplace.	26 (52%)	13 (26%)	10 (20%)	1(2%)	2.6
(vi) Co-workers encourage me to use the knowledge, skills and competencies learned at the workplace.	23 (46%)	13 (26%)	10 (20%)	4(8%)	2.6
(vii) Co-workers prefer that I use old method rather than new methods learnt in the diploma training program.	34 (68%)	6 (12%)	6 (12%)	4(8%)	2.0
(viii) I get benefits such as salary increase and recognition when I apply learning to the workplace.	41 (82%)	6 (12%)	2 (4%)	1 (2%)	1.7
				Overall Mean =	2.39

D-Disagree NAD-Neither Agree nor Disagree A-Agree NR-No Response

The findings indicate that approximately half felt that the schools and the Ministry of Education, Science and Technology did not sufficiently reward and recognize those who apply at work skills and competencies learnt in training (48%). The overall mean score was 2.39 on the work environment variables represented the lowest extent of agreement among the three domains of constructs influencing transfer of learning.

Table 14 illustrates that most coworkers preferred that the trainees continue to use old methods rather than new methods learnt in the Diploma training. This variable had negative non-significant correlations with all work related variables except the link between training and career progression of school principals and rewards and recognition of application of skills and competencies at work by the Ministry and school.

4.5.2 Inter item correlations on work environment factors.

The inter item correlations between variables assessing the work environment are given in Table 14.

Table 14

Pearson Correlations between Variables Measuring Work Environment (n=213)

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Link between training and career progression	1												
2. Work environment provided opportunities to use learning	.49	1											
3. Resources were provided at work	.09	.32	1										
4. Knowledge learnt has improved work performance	.28	.41	.25	1									
5. School/ Ministry rewards those who apply learning at work	.46	.28	.11	.10	1								
6. Supervisor and I identified potential barriers to applying new knowledge	.26	.10	.05	-.07	.73	1							
7. Supervisor encourages and supports use of skills and competencies	.35	.37	.21	.27	.47	.63	1						
8. Supervisor praises and rewards those who demonstrate effective application	.27	.24	.18	.16*	.70	.75	.62	1					
9. Supervisor gives positive constructive feedback about application of training to work	.28	.32	.25	.14*	.57	.72	.79	.77	1				
10. Supervisor pays no attention to how I transfer learning to the workplace	-.06	-.16*	-.23	-.29	-.06	-.27	-.29	-.32	-.30	1			
11. Co-workers encourage me to use the knowledge learned at the workplace	.33*	.26	.08	.14*	.32	.39	.36	.33	.34	.04	1		
12. Co-workers prefer that I use old method rather than new methods	-.08	-.33	-.33	-.28	-.21	-.35	-.34	-.44	-.38	.45	-.30	1	
13. I get benefits such as salary increase and recognition when I apply learning to the workplace.	.02	-.12	-.01	-.04	.14	.19	.15*	.11	.14*	.01	.06	-.06	1

*. Correlations > 0.14 were significant at the 0.05 level (2-tailed).

There were low but significant correlations between the following supervisor related situations: supervisor encourages and supports use of the skills and competencies gained from the training and getting benefits such as salary and recognition (r= 0.15);

Supervisors giving positive constructive feedback and getting benefits such as salary and recognition (r= 0.14) and the link between program and work and coworkers encouraging the use of knowledge (r = 0 .33). The supervisor's failure to pay attention to how they transferred learning to the workplace had negative correlation with all other variables but this was only significant for situations where the work environment provided opportunities to use knowledge, skills and competencies gained from the training.

4.6 Prioritization of Factors Influencing Transfer of Learning to the Work Place

4.6.1 Factor loadings, communalities and principal components.

The PCA procedure simplified data by reducing the 33 independent variables to a few underlying constructs influencing transfer of learning (Gall et al., 2003). The key assumptions required for principal component analysis were met since the independent variables were on the interval and ratio scales of measurement with evidence of normality and a linear relationship between variables. An analysis of the factorability of the 33 independent variables revealed that17 out of the 33 items correlated positively with at least one other item. This suggested reasonable factorability (Appendix VII).

Variables that contributed to negative zero order correlations and those with Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) values of less than 0.5 were excluded from the PCA. The resulting KMO measure of sampling adequacy was significant since the resultant value of 0.63 was above the recommended value 0.60 (Kaisser, 1977).

Table 15 illustrates the findings on the KMO and Bartlett's test of sphericity.

Table 15

Kaiser-Meyer-Olkin and Bartlett's Test[a]

Test		
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy.		.63
Bartlett's Test of Sphericity	Approx. Chi-Square	964.01
	Df	55
	Sig.	.00

α=0.05

a. Only cases for which positive transfer of learning occurred were used in analysis.

Bartlett's test of Sphericity results indicated that the original correlation matrix was not an identity matrix since the significant value for this test (.000) was less than the alpha level (α =0.05; df =136; significance= 0.00). This ensured that the inter-item correlation matrix used in PCA had no significant negative correlations with the majority of values were greater than 0.05. The data set of 17 variables was appropriate for the PCA, no significant outliers were evident and the sampling was adequate. All questionnaire items showed positive non trivial loadings on the first non rotated component and the rotated component pattern showed no substantial negative loadings. The inter component correlation matrix exhibited no significant negative correlations and each component was positively correlated with two or more of the other components.

Eleven (11) variables were used in the PCA after eliminating six items which either created a principal component on their own or had a loading of less than 0.60 on the initial component matrix. Only cases for which positive transfer of learning occurred were used in the PCA. Table 16 shows the communalities extracted and variances extracted from the 11 independent variables. The table displays variables for which the extractions were 0.6 or higher.

Table 16

Communalities Extracted Using Principal Component Analysis

Variable	Initial	Extraction
a. Curriculum was well planned	1.00	.82
b. Sequence and structure was excellent	1.00	.77
c. Quality of material was excellent	1.00	.75
d. Sufficient opportunities for practice were provided	1.00	.81
e. Appropriate delivery methods were used	1.00	.87
f. Joined to enhance knowledge	1.00	.75
g. The ODFL program design enhanced transfer of learning	1.00	.67
h. Workplace provides opportunities to use knowledge and skills	1.00	.60
i. Knowledge gained has increased work performance	1.00	.71
j. I have motivation to transfer	1.00	.67
k. Clear link between the ODFL program and my career	1.00	.81

Extraction Method: principal Component analysis

The eleven variables in Table 16 had extractions exceeding 0.60 indicating that variables were well represented in the common factor space. The Kaiser Eigen value I criterion was used for determining the number of component to retain (Kaiser, 1960). Based on this criterion four principal components WITH Eigen values greater than 1 were retained.

Table 17 shows the percentage of total variance accounted for by each of the 11 factors, and the cumulative variance for the factors influencing transfer of learning.

Table 17

Total Variance Explained by the Factors Influencing Transfer of learning

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.24	38.56	38.56	4.24	38.56	38.56
2	1.59	14.42	52.98	1.59	14.42	52.98
3	1.38	12.58	65.56	1.38	12.58	65.56
4	1.02	9.25	74.81	1.02	9.25	74.81
5	.71	6.44	81.24			
6	.60	5.44	86.69			
7	.48	4.38	91.07			
8	.36	3.28	94.35			
9	.29	2.61	96.96			
10	.22	1.99	98.95			
11	.12	1.05	100.00			

Extraction Method: Principal Component Analysis.
4 components Extracted. 4 iterations required

The Cattell scree plot in Figure12 illustrates the graphic display plotting the Eigen value (y axis) against each key component (x axis).

Figure 12: Scree plot of key components.

The findings in Table 17 and Figure 12 indicate that the 11 variables in the key components measured four latent factors which accounted for 74% of the total variance observed in the transfer of learning. Notably all variables except curriculum sequence and structure loaded positively on the first principal component.

The first principal component appeared to measure *"training program and workplace design"* and accounted for 39% of the variance in transfer of learning with an Eigen value of 4.24. This component strongly correlated with the following four of the eleven independent variables: joining to enhance knowledge, knowledge gained has increased work performance, the ODFL training program design enhanced transfer of learning and the workplace provides opportunities to use knowledge and skills.

The second principal component interpreted as *"training delivery method"* accounted for 14% of the variance with an Eigen value=1.59 while the third principal component labeled *"Quality of the curriculum and training material"* accounted for 13% variance and had an Eigen value=1.3. The factors loading positively on the second component were: appropriateness of delivery methods used and provision of sufficient opportunities for practice.

Variables that loaded heavily on the third component were: a well planned curriculum, excellent sequencing and structuring and the quality of training material. The final and forth principal component was labeled *"motivation to transfer*" which accounted for 9% of the observed transfer of learning and had an Eigen value= 1.02. Having the motivation to transfer and clarity of the link between raining and the career progression loaded heavily on this component.

The correlation between the four principal components and each of the 11 independent factors influencing positive transfer of learning is illustrated in the component matrix in Table 18

Table 18
Component Matrix for Factors Influencing Transfer of Learning

Variable	Principal Components			
	1	2	3	4
a. Curriculum was well planned	.54	.61	.32	
b. .Sequence and structure was excellent	.47	.69		
c. Quality of material was excellent	.52	.31	-.30	.54
d. Sufficient opportunities for practice were provided	.69		-.56	
e. Appropriate delivery methods were used	.63		-.66	
f. Joined to enhance knowledge	.58	-.54	.34	
g. The ODFL Program design enhanced transfer of learning	.74			
h. Workplace provides opportunities to use knowledge and skills	.58	-.30	.41	
i. Knowledge gained has increased work performance	.65	-.42	.80	.34
j. I have motivation to transfer	.66			-.48
k. Clear link between the ODFL program and my career	.73			-.43
Eigen value(variance)	4.24	1.59	1.3	1.02
Total % of Variance	38.56	14.42	12.58	9.25
Cumulative % of Variance	38.56	52.98	65.56	74.81

Extraction Method: Principal Component Analysis.
4 principal components were extracted
Values less than 0.3 were suppressed

Table 19 shows the rotated component matrix which converged after seven (7) iterations.

Table 19
Rotated Component Matrix for Factors Influencing Transfer of Learning

Rotated Component Matrix					
	Variable	Principal Component			
		1	2	3	4
a.	The curriculum was well planned			.88	
b.	The sequence and structure was excellent			.81	.34
c.	Quality of material was excellent		.53	.55	-.34
d.	Sufficient opportunities for practice were provided		.85		
e.	Appropriate delivery methods were used		.90		
f.	I joined to enhance my knowledge	.83			
g.	The ODFL program design enhanced transfer of learning	.69	.37		
h.	Workplace provides opportunities to use knowledge and skills	.66			.40
i.	Knowledge gained has increased work performance	.80			
j.	I have motivation to transfer		.40		.67
k.	Clear link between the ODFL program and my career			.38	.74

Note:
Extraction Method: Principal Component Analysis.
Rotation Converged after 7 iterations
Rotation Method: Varimax with Kaiser Normalization.
4 principal components were extracted

Values less than o.3 were suppressed leaving the independent variables with loadings higher than 0.55 that contributed to each of the key components.

Table 20 shows the results from the components transformation matrix based on the four principals components.

Table 20

Component Transformation Matrix

Component	1	2	3	4
1	.61	.54	.43	.40
2	-.61	.03	.79	.04
3	.37	-.84	.29	.27
4	.36	-.01	.32	-.88

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Only cases for which positive transfer occurred were used in the analysis phase.

4.6.2 Model on Predictors of Transfer of Learning to the Work Place

The principal regression analysis resulted in the generation of a multiple regression equation with 11 predictors produced where R^2= 0.45; F (11, 192) =16.16; and $p<0.05$. The correlation and multiple regression analysis were conducted to examine the relationship between the eleven variables in the four components and transfer of learning. This multiple coefficient of determination showed that variables in the four principal components accounted for 45% of the variance in transfer of learning from the Diploma in Education Management program to the workplace.

Table 21 summarizes the statistics.

Table 21

Model Summary for the Independent Variables in Principal Components

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693[a]	0.481	0.451	0.26536

11 Predictors: (Constant), KIP, SAS, ADM, WPS, JFK, LPW, QM, MOT, PD, CWP, SOU

The multiple regression model with 11 predictors produced R^2= 0.45; F(11, 192) =16.16; p<0.05. This multiple coefficient of determination showed that variables in the four principal components accounted for 45% of the variance in transfer of learning. The Analysis of Variance (ANOVA) results based on the 11 predictors shows that the F-statistic is statistically significant at the =0.05. Table 22 illustrates the ANOVA results.

Table 22

Analysis of Variance for the 11 Independent Variables in the Principal Components

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	12.52	11	1.138	16.16	.000[b]
Residual	13.52	192	.07		
Total	26.04	203			

a. Dependent Variable: PTW

b. Predictors: (Constant), KIP, SAS, ADM, WPS, JFK, LPW, QM, MOT, PD, CWP, SOU

Table 23 indicates that coefficients were significant for all predictors except sequence and structure.

Table 23

Standardized Coefficients for Predictors of Transfer of Learning

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	2.16	.15		14.56	.00
a. Joined to enhance my knowledge	.12	.03	.33	3.87	.00
b. I have motivation to transfer	-.17	.03	-.42	-5.51	.00
c. The curriculum was well planned	-.12	.04	-.30	-3.52	.00
d. The sequence and structure was excellent	.00	.03	.01	.08	.94
e. Quality of Material was excellent	.10	.03	.26	3.31	.00
f. Sufficient opportunities for practice were provided	-.03	.04	-.07	-.72	.47
g. Appropriate delivery methods were used	-.04	.04	-.10	-1.08	.28
h. The program design enhanced transfer of learning	-.01	.04	-.03	-.28	.78
i. Clear link between the ODFL program and my career	.12	.03	.35	3.98	.00
j. Workplace provides opportunities to use knowledge and skills	-.23	.03	-.52	-6.72	.00
i. Knowledge gained has increased my work performance	.00	.04	.00	.04	.97

Dependent Variable: Percentage of transfer with 11 predictors

The program design enhanced transfer of learning and knowledge gained had increased respondents work performance. The table shows that the key predictors of transfer of learning form the ODFL management training program derived from the eleven variables in the key components were represented(were proved or confirmed) by following equation:

Transfer of learning

$= -0.52_{WPS} - 0.42_{MOT} + 0.35_{LPW} + 0.33_{JEK} - 0.30_{CWP} + 0.26_{QM} \ldots\ldots + 0.15$(error term).

A clear linkage between the management training program and individual careers, joining the program to enhance knowledge and excellent quality of training material had positive weightings on the transfer of learning. The lack of opportunities to use knowledge and skills at work, inadequate motivation to transfer and poor curriculum planning weighed negatively on transfer of learning.

4.6.3 Barriers to Positive Transfer of Learning to the Workplace

The qualitative data from the open ended items in the questionnaire and interview guide were analyzed to determine barriers to transfer of learning from the ODFL Diploma in Education Management program to the work place. Responses were summarized into four thematic areas depending on whether the response was related to trainee characteristics, training program design, work environment and other reasons. The findings are given in Table 24.

Table 24

Barriers to Positive Transfer of Learning

Category of barriers to transfer	Number	%
Trainee characteristics	4	1.9
Training program designs	31	14.6
Work environment	70	32.9

Most of the barriers identified by the principals, deputy principals, head teachers and deputy head teachers were related to the work environment (33%) and training program design (15%). Table 25 shows the suggestions by respondents on how to improve transfer of learning from the ODFL Diploma in Education Management program to the work place.

Table 25

Suggestion to Improve Positive Transfer of Learning

Category of Suggestion	Number	%
Learner characteristics	41	19
Training program designs	48	22.5
Work environment	46	21.6
Any other	64	30
No response	14	6.6
Total	213	100.0

The program was relevant but the time allocated for delivery was considered inadequate. Most respondents indicated that the number of trainees per class was too high and the training curriculum covered too much content inhibiting effective learning. Some of the school administrators were not highly motivated to undertake the training since the linkage to their career progression was not clarified when the program commenced.

It was evident that the suggestions for improving transfer of learning to the work place related mainly to work environment and the training program design aspects. Hence, all the three categories were significant to transfer of learning to the work place. Respondents recommended wider stakeholder consultations in design of programs targeting school managers for higher buy in and commitment. They indicated a need for clarification of the linkage between the program and career progression of school managers.

The other responses from the interviews included the need to link the ODFL program to promotion and career progression, improve the administration of examinations and increase the duration taken to deliver the ODFL Diploma in Education management training content.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter provides a summary of the study findings, conclusions, implications and recommendations arrived at. The Chapter also gives suggestions on areas for further research. The general objective was to investigate key predictors of transfer of learning from the Open Distance Flexible Learning educational management training program to the work place among principals, deputy principals, head teachers and deputy head teachers.

5.2 Summary

5.2.1 Sample Characteristics

The 213 principals, deputy principals, head teachers and deputy head teachers were sampled from 147 public primary schools located in eight purposively selected sub counties in the County Government of Kiambu. Most of the respondents were drawn from the following sub counties: Kiambu, Thika East, Gatundu North and Thika West. Of the 147 respondents 107 were from primary and 40 from secondary public schools.

A majority was from public primary schools consisting of 38 females and 107 males and had the minimum qualification a bachelor's degree required to be appointed as a school head teacher. Most of the respondents were males from public primary schools and were 41-50 years of age. A majority were in Job Group L-N with a cumulated work experience of 21-30 years.

5.2.2 Estimated Positive Transfer of Learning from the ODFL Diploma in Education Management program to the work place

Eighty eight per cent indicated that the ODFL educational management training had resulted in positive transfer of learning. Few respondents indicated that the program had not resulted in positive transfer. Most respondents indicated that the ODFL Diploma in Education Management training program resulted in positive transfer with approximately half of the principals and deputy head teachers estimating that 51% to 70% positive transfer of learning was achieved. This was notably higher than the 10-40 % result reported by May and Kahnweiler (2006) for most studies.

Only four per cent of the school managers felt there was negative transfer of learning from the management program to the work place with male respondents generally reporting higher percentages of positive transfer compared to females. School principals and head teachers reported a slightly higher percentage of positive transfer compared to deputy principals and deputy head teachers. This was not surprising since the principals and head teachers had more work experience and the number of principals and head teachers was higher in the study sample.

5.2.3 Learner Characteristics Influencing Transfer of Learning to the Workplace

The findings indicated that learner characteristics, training program design and work environment factors all play a critical role in enhancing positive transfer of learning to the work place. The study established that most management trainees were notified well in advance of enrollment into the ODFL Diploma in Education management program.

Higher educational qualifications and work experiences facilitated the ability to transfer learning to the work place. The overall mean of 3.8 indicated that there was general agreement with statements measuring learner characteristics. As expected all the 10 variables measuring learner characteristics were highly inter-correlated. A majority joined the diploma program to enhance their knowledge, skills and competencies. Approximately half undertook the training for self-satisfaction. There were high levels of agreement on statements describing self-efficacy and motivation to transfer. However, approximately half did not know what to expect from the training prior to attending the program. It was notable that more than 1/3 of the respondents joined the program to get promotion and salary increments. A majority agreed that educational qualifications and work experience facilitated the ability to positively transfer learning from the ODFL Diploma in Education Management training program to the workplace.

Positive but weak significant correlations were obtained for the following sets of independent variables at $\alpha=0.05$ level of significance. “I was notified well in advance of enrolment in the ODFL Diploma in Education Management program" and "I undertook the Diploma program for self- satisfaction"; “I felt motivated to transfer learning to the workplace” and “I knew what to expect from the training prior to attending the program”, and “I knew what to expect from the training prior to attending the program” and education and work experience.

5.2.4 Training Program Design Factors Influencing Transfer of Learning to the Work Place

Most of the principals, deputy principals, head teachers and deputy head teachers agreed that the program design enhanced positive transfer of learning to the workplace with most respondents agreeing it was relevant. The sequence, structure and quality aspects of the program and training content were excellent. However, a majority reported that the Kenya Education Management Institute did not provide adequate follow-up support after the training ended. More than half agreed that the quality aspect of the program was excellent with less than half feeling that sufficient opportunities were provided at work to apply training.

Seven out of the ten selected training design factors had a significant relationship with transfer of learning. Curriculum planning and organization had a significant positive relation with all variables except for a statistically non-significant negative relationship with KEMI providing follow up support after the training. Non significance was also evident with regard to the relationship between transfer of learning and trainers used appropriate training delivery methods. A statistically significant high positive correlation was obtained for "practical applicability of training content to work and similarity between the training and work environment. A well planned and organized curriculum had a significant positive relation with all variables ($r>0.30$) except for a non-significant strong negative relationship with KEMI provision of follow up support after the training.

5.2.5 Work Environment Factors Influencing Transfer of Learning to the Work place

The work environment provided opportunities to use the knowledge, skills and competencies gained in training but approximately half indicated that their schools and the Ministry of Education Science and Technology did not offer rewards or recognize those who applied skills and competencies learnt at work. Benefits such as salary increase and recognition were also not sufficiently provided when the ODFL Diploma graduates applied learning to the workplace.

Coworkers and organizational encouragement and support were provided at the workplace but the immediate supervisors did not seem to have provided adequate support needed to transfer learning to the workplace. There were low but significant correlations between the following supervisor related situations. Supervisor encouragement and support in the use of skills and competencies gained from the training and getting benefits such as salary and recognition; supervisors giving positive constructive feedback and getting benefits such as salary and recognition, and linkage between program and work and coworkers encouraging managers to use the knowledge gained.

The supervisor's failure to pay attention to how they transferred learning to the workplace had a negative correlation with all other variables but this was only significant for situations where the work environment provided opportunities to use the knowledge, skills and competencies gained from the diploma training.

The coworkers preference for the use old methods rather than new methods learnt in the training had negative significant correlations with all work related variables except the link between training and career progression of school principals, rewards recognition of those who applied competencies at work.

5.2.6 Principal Components Analysis and Predictor of Transfer of Learning

All the original 33 independent variables accounted for 88% of the observed variance in transfer of learning. The 11 independent variables in the resultant four principal components accounted for 74% of the variance in transfer of learning.

The first latent variable measured “training program design and workplace design “and accounted for 39% of the variance in transfer of learning. The four independent variables loading positively on this latent component were: I joined to enhance my knowledge, knowledge gained has increased work performance, the Open Distance Flexible Learning program design enhanced transfer of learning and the workplace provides opportunities to use knowledge and skills.

The second principal component “training delivery method” accounted for 14% of the total variance in transfer and included as aspects of the training delivery. The key factors loading positively on this component were the appropriateness of delivery methods used and the provision of sufficient opportunities for practice. The third component labeled “quality of curriculum and training material” accounted for 13% of the total variance observed in the transfer of learning.

Variables loading on this component were a well planned curriculum with excellent sequencing and structuring and high quality of material was excellent. The final component labeled" motivation to transfer" accounted for 9% of the transfer of learning. Having high motivation to transfer and clarity of the link between training and the progression loaded heavily on the fourth component.

Principal regression analysis was conducted for the 11 variables in the four principal components resulting from the principal component analysis. The resulting prediction equation prioritized learner characteristics, training program design and work environment factors influencing the transfer of learning to the work place. The prediction model revealed that the factors key in predicting positive transfer of learning were; clarity of the linkage between the ODFL Education Management training program and an individual's career, joining to enhance knowledge and the use of quality training material. The main predictors that weighted negatively on transfer of learning included lack of opportunities to use knowledge and skills at work, inadequate motivation to transfer and poor curriculum planning.

5.2.7 Strategies for Enhancing Positive Transfer of Learning to the Work Place

Most of the barriers identified by principals and deputy head teachers were related to the work environment and training program design. The key suggestions for enhancing positive transfer of learning included the need for the Kenya Education Management Institute to follow up trainees after the program ended and clarity on how the program links to the promotion and career progression of principals, deputy principals,

head teachers and deputy head teachers. The respondents also recommended longer program durations and wider stakeholder consultations in training needs assessment and design of educational management training programs for greater buy in and commitment.

5.3 Conclusions

5.3.1 Influence of Learner Characteristics on Transfer of Learning to the Work Place

Based on the findings of the study it was concluded that the ODFL Diploma in Educational management training program resulted in positive transfer of learning and the estimated levels of positive transfer was higher in comparison to the levels reported in similar studies. The analysis of learner characteristics revealed that the trainees were notified well in advance of enrollment into the program. There is need to effectively communicate to potential nominees and let them know in advance what to expect prior to attending management training programs. When training objectives and content are inappropriate to learner needs, and sequence and structure are lacking the program tends to have low content validity making it difficult for the learners to relate it to work (Noe, 2005; Holton & Baldwin, 2003).

A majority joined the program for self-satisfaction, to enhance knowledge, skills and competencies and for promotion and salary increment. These findings were consistent with previous finding on the need for learners to understand how training contributes to work performance and career progression in order to encourage positive transfer of learning (Chen, 2003).

Blume et al. (2009), Burke & Hutchins (2007) and Chiaburu and Marinova (2005) also indicated a positive relationship between transfer and pre-training high self-efficacy, readiness to learn, training mastery, task performance, transfer generalization and maintenance.

5.3.2 Influence of Training Program Design on Transfer of Learning to the Work Place

The ODFL Diploma in Educational Management training program design was relevant and enhanced positive transfer of learning to the workplace. The overall quality, sequencing and structure of the training program content were excellent. However, the Kenya Education Management Institute should device strategies for following up management trainees after training ends. Learning may have occurred but trainee's rarely apply the knowledge, skills and competencies gained at work due to lack of practical applicability of training content to work and low similarities between the training and work environment.

Training objectives and content may be inappropriate to learner and organizational needs or the design may be inappropriately sequenced and structured reducing content validity and making it difficult to relate the training to work (Bates and Hatala,2011; Noe, 2008; Holton & Baldwin, 2003).

5.3.3 Influence of Work Environment on Transfer of Learning to the Work Place

The Ministry of Education, Science and technology, Teachers Service Commission and school Boards of Management should enhance the work environment by providing more opportunities to use knowledge, skills and competencies gained in training.

School managers who utilize the skills and competencies gained from management training need recognition, encouragement and support. Coworker and organizational support was evident but and should continue to be provided at the workplace. However, supervisors should be encouraged to provide adequate support, give more positive constructive feedback and help trainees to link training to work.

There was evidence to suggest that the ODFL program design enhanced transfer of learning to the workplace and provided sufficient opportunities to use the knowledge and skills. Similar studies reported that learners who received high levels of organizational, supervisory, and peer support, and participated in a peer support network, reported higher levels of transfer of knowledge and skills (Kromwel & Kolb,2004: Gaudine & Saks, 2004).

5.3.4 Predictors of Transfer of Learning from the ODFL Diploma in Education Management Program to the Work Place

The following principal components were derived from the principal component analysis; training program and workplace design, training delivery method, quality of curriculum and training material and motivation to transfer. The key learner characteristics predicting positive transfer of learning from the ODFL Diploma in Education Management program were joining the program to enhance knowledge, quality training material and a clear linkage between training and career growth of principals, deputy principals, head teachers and deputy head teachers. Poor program design, improper sequencing and structuring can inhibit positive transfer of learning to the work place.

The learner's lack of personal motivation to transfer, poor curriculum planning and lack of opportunities to use new knowledge and skills contributed to negative transfer of learning.

5.4 Recommendations

5.4.1 Policy Recommendations

The study recommended that the Ministry of Education, Science and Technology and Kenya Education Management Institute sponsors and other stakeholders should continue implementing the ODFL Educational Management training program since it was perceived to be valid and generally resulted in positive transfer of learning. They should take into consideration of the key predictors relating to learner characteristics, training program design and work environment in designing pre training, during training and post training phases of future programs targeting school managers.

Program developers and reviewers need to ensure balance between the training content and the duration taken to deliver the ODFL Diploma in Education Management program.KEMI and other management training providers should continue providing high quality training material while incorporating the learner characteristics, training program design and work environment factors that enhance positive transfer of learning. Learners need to be encouraged to join programs for knowledge enhancement. The nomination criteria should consider individual self-efficacy, motivation to transfer high educational qualifications and work experience to increase the probability of positive transfer of learning.

The learners should explore strategies for heightening motivation to transfer learning and ppersonal ability to use the knowledge. The programs should establish clear linkages between training programs and the career progression of principals, deputy principals, head teachers and deputy head teachers.

The school work environment should be designed to provide sufficient opportunities to practice the skills and competencies acquired in the ODFL Diploma in Management program.The quality of the curriculum, sequence, structure and quality of material needs to be sustained since these were perceived to significantly influence transfer to the work place. The appropriateness of training delivery methods used and the provision of sufficient opportunities for practice are critical factors that can be enhanced in future to increase the probability of achieving positive transfer of learning to the work place. Since transfer of learning focuses on the assessment of training outcomes, KEMI and curricular developers can redesign the training program and make recommendations on the redesign of workplaces to increase the likelihood of transfer.

It is recommended that the Teachers Service Commission reviews the training policy to include more strategies that seek to link the ODFL program to the promotional criteria and the career progression of principals, deputy principals, head teachers and deputy head teachers.

The school managers who utilize the skills and competencies gained from management training programs should be recognized, encouraged and supported by the immediate supervisors.

A review of the performance management system is needed to reward and recognize principals, head teachers, deputy principals and deputy head teachers who transfer skills and competencies learnt in management training programs to the work place.

Coworkers and organizational support was provided at the workplace. However, supervisors should be encouraged to provide adequate support needed to transfer learning by recognizing, encouraging, giving positive constructive feedback and supporting employees who use skills and competencies gained from training.

New knowledge on factors influencing training transfer will inform the initiatives of primary and secondary School Boards of Management, Kenya Primary School Head Teachers Association (KEPSHA), Kenya Secondary School Heads Association (KESSHA) in capacity building for school managers.The Kenya Education Management Institute should collaborate with stakeholders for technical and financial support to conduct follow up programs and training impact assessments for subsequent phases of the diploma in educational management program.

5.4.2 Recommendations for Further Research

Researchers should focus on other independent variables that account for 26% of the variance not accounted for by variables in the current study. Pre training and post training factors that impact on transfer of learning in management training programs need to be explored using more rigorous statistical and qualitative research methods.

Future researchers should use qualitative approaches to provide more in depth information on the specific supervisor related factors that contribute to the perceived lack of support upon return to the work environment. Comparative studies targeting school managers in varied professional cadres and the analysis of differences between managers in public and private schools will improve the extent to which the results can be generalized. Cross cultural validation of transfer of learning measures will help to establish standardized tools for assessing learning and impact of management training programs.

REFERENCES

Aamodt, M.G. (2007). *Industrial and organizational psychology: An applied Approach* (6th Ed.). Wardsworth; Cengage Learning.

Atkinson, H. (2009). *Introduction to psychology* (15th Ed.). Wadsworth: Cengage Learning.

Baharim, S.B. (2008). *The influence of knowledge sharing on motivation to transfer training*: A Malaysian public sector context. Unpublished doctoral dissertation, University of Melbourne, Australia.

Baldwin, T.T., & Ford, J.K. (2006). Transfer of training: A review and directions for future research. *Personnel Psychology*, *41*, 63-105

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Clinical and Social Psychology*, *4*, 359-37

Barnard, Y. F., Veldhuis, G. J., Van Rooi, J. C.G.M. (2001). Evaluation in practice: Identifying factors for improving transfer of training in technical domains. *Studies in Educational Evaluation*, *27*, 269-290.

Bartholomew, D. J., Steele, F., Moustaki, I., & Galbraith, J.I. (2008). Analysis of multivariate social science data, (2nd ed.).CRC press.

Bates, R. & Khasawneh, S. (2005).Organizational learning culture, learning transfer Climate and perceived innovation in Jordanian Organizations. *International Journal of Training and development*, *9*(2), 96-109.

Blume, B.D., Ford, J.K., Baldwin T.T. & Huang, J.L. (2010). Transfer of learning. A meta-analytic review. *Journal of Management*, *36*(4), 1065-1105.

Broad, M.L. (2005). *Beyond transfer of training: Engaging systems to improve performance*. San Francisco; John Wiley & Sons.

Burke L.A. & Hutchins H.M. (2007). Training Transfer: An integrative literature review and implications for future research. *Human Resource Development Review, 6* (3), 263-296.

Caffarella, R.S. (2002). *Planning programs for adult learners: A practical guide for educators, trainers, and staff developers*. San Francisco: Jossey-Bass.

Cerny, C.A., & Kaiser, H.F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrices. Multivariate Behavioral Research, 12(1), 43-47.

Chen, H. C. (2003). *Cross-cultural construct validation of the learning transfer system inventory in Taiwan*. Unpublished doctoral dissertation, Louisiana State University, Baton Rouge.

Chiaburu, D.S., & Marinova, S.V. (2005). What predicts skills transfer? An exploratory study of goal orientation, training self efficacy and organizational support. *International Journal of Training and Development*. *9*(2), 110-123.

Chiaburu, D.S. & Lindsay, D. (2008). Leaders influences on training effectiveness: Motivation and outcome expectation processes. *International Journal of Training and Development, 12(3), 158-170.*

Clarke, N (2002). Job/work environment factors influencing training transfer within a human service agency: some indicative support for Baldwin and Ford's transfer climate construct, International Journal of Training and Development,Vol 6 (3), pages 146–162,

Coetsee, W.J., Eiselen, R. & Basson, J. (2006). Validation of the LTSI in the South African context: Part I. *Journal of Industrial Psychology , 32* (20), 46-55.

Creswell, J.W. (2009). *Research design: qualitative, quantitative and mixed methods approach*. Thousand Oaks, CA, London, Sage Publications.

Cromwell, S. E., & Kolb, J. A. (2002).The effect of organizational support, management support and peer support on transfer of training. *Academy of Human Resources Development (AHRD) Conference Proceedings, Honolulu, Hawaii, Development Quarterly, 15*(4) 449-470.

Daffron, S.R., & North, M.W. (2006). Learning transfer: Lesson learnt from software Company professionals. *Journal of Lifelong Learning, 15*, 51-67.

Devellis, R.F. (2012). Scale Development: Theory and applications. Los Angeles: Sage.pp.109-110.

Domjan, M. (2010). *The principles of learning and behavior*. Wardsworth: Cengage Learning.

Donovan, P., Growe, D. (2004).The learning transfer system approach to estimating the benefits of training: Empirical evidence. *Journal of European Industrial Training,* 25(2, 3, 4), 221-228.

Gaudine, A.P. & Saks, A.M. (2004). A longitudinal quasi-experiment on the effects of post-training interventions. *Human Resource Development Quarterly. 15*(1), 57-76

Gunawardena, C., Jennifer, A.L., LaPointe, D.K. & Rao, L. (2010). Predictors of learner satisfaction and transfer of learning in a corporate online education program. *American Journal of Distance Education, 24(4), 207-226.*

Haskell, R. E. (2001). *Transfer of learning: cognition, instruction, and reasoning*. San Diego: Academic Press.

Helfenstein, S. (2005). *Transfer review, reconstruction, and resolution. Unpublished Doctoral dissertation,* University of Jyvaskyla, Finland. Jyvaskyla, Studies in Computing, 59.

Holton, E.F., & Baldwin, T.T. (2003). *Improving learning in organizations.*USA: Jossey-Bass.

Holton, E. F. III, Bates, R. A., & Hatala, J.P. (2011). *Revised learning transfer systems inventory: Factorial replication, item reduction and validation.* Unpublished technical report, Louisiana State University.

Holton, E.F.III, Bates, R.A, Bookter, A. (2007).Convergent and Divergent validity of the Learning Transfer System Inventory (LTSI). *Human Resource Development Quarterly, 18*, 385-419.

Holton, E. F., Bates, R. A., Rona, W.E.A. (2001). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly, 8(4) 33.*

Holton, E.F. III, Bates, R.A., Ruona, W.E.A. (2000). Development and validation of a Generalized learning transfer system inventory", *Human Resource Development Quarterly*, *11* (4), 333-60.

Holton, E.F.III, Reid, A., Bates, D.L., Seyler, M., Carvalho, M.B. (1997). Towards construct validation of a transfer climate instrument, Human *Resource Development Quarterly, 8(2), 95-113.*

Howitt, D. (2010). *Introduction to qualitative methods in psychology*. London: UK, Pearson Education Limited.

Kaplan R.M & Saccuzzo D.P. (2009). *Psychological testing: Principles, applications and issues (*7th ed.). Wards worth, Cengage Learning.

Keiler, L (2007) Students' Explanations of their data handling: Implications for transfer of learning. *International Journal of Science Education*, *29*(2), 151–172.

Khasawneh, S.A. (2004). *Construct validation of the Arabic version of the LTSI for use in Jordan.* Unpublished PHD Dissertation Louisiana State University.

Kirkpatrick, R., (1998). *Evaluating training programs*: the four levels.San Fransisco,CA:Berrett-Kohler Publishers.

Kirkpatrick, R. (2005). Transfering learning to behaviour. *Training and Development, 59(*4),19-20.

Kline, P. (2000).The handbook of psychological testing (2nd ed.). London: Routledge, page 13

Knowles (1984). *Andragogy in action: applying modern principles of adult Learning.* San Fransisco, C.A.: Jossey-Bass.

Kontoghiorghes C. (2004). Reconceptualising the learning transfer conceptual framework; empirical validation of a new systemic model. *International Journal of Training and Development. 8* (3), 210-221.

Kontoghiorghes, C. (2001). A holistic approach towards motivation to learn. *Performance Improvement Quarterly, 14(4),* 223-241).

Koome, M. (2004).*The impact of the supervisory management course on performance of supervisors trained in Government Training Institutes*, Unpublished Master's Thesis Kenyatta University.

Kothari, C.R (2004). *Research methodology: methods and techniques.* New Delhi, New Age Publications.

Kromwell, S.E., & Kolb, J.A. (2004). An examination of work-environment support factors affecting transfer of supervisory skills training to the workplace**.** *Human Resource Development Quarterly, 15 (4), 449-471***.**

Lammers, W. J., and Badia, P. (2005). *Fundamentals of behavioral research*. California: Thomson and Wadsworth.

Longenecker, C.O. (2004). Maximizing transfer of learning management education programs. *Best practices for retention development and learning in organization*, *18*(4), 4-6.

Lwanga. F. (2009). Learner characteristics, organizational transfer climate, trainee readiness and

learning transfer: A case of Ministry of Public Service Uganda.

Machin. M.A., & Forgarty, G.J. (2004). Assessing the antecedents of transfer intentions in a training context. *International Journal of Training and Development, 8*(3), 222-236.

May, G.L. & Kahnweiler, B. (2006). The effect of mastery practice design on learning and transfer of behaviour modelling training, Personnel Psychology 53(2); 353-373,

Mbesa, P.M. (2016).The influence of KEMI education management training Course on management practices of public secondary schools in Matungulu Sub County, Master's Thesis, Kenyatta University.

McBurney, D.H. (2010). *Research methods.* Wardsworth, Belmont: Cengage Learning.

McLeod, S. A. (2011). Bandura - Social learning theory. Retrieved from http://www.simplypsychology.org/bandura.html.

Meriam, S.B., & Leahy, B. (2005). Learning transfer. A review of the research in adult education and training. *Journal of Lifelong Learning, 14*, 1-24.

Ministry of Education: *National Conference on Education and Training Report*, March, 2004.

Myers, G. (2004). *Matters of opinion: Talking about public issues.* UK: Cambridge University Press.

Noe, R. A. (2005). Training transfer. In R. Noe. (4th ed.). Employee training and development. Boston, MA: Mc Graw Hill.

Perkins, D.N & Salomon, G. (2012). Knowledge to go: A motivational dispositional view of transfer, Educational psychologist, 47 (3), 248-258.

Render, B., Staur, R.M., Hanna M.E (2006). *Quantitative analysis for management*. Madrid: Prentice Hall.

Republic of Kenya 2014. Sessional Paper No. 14 of 2012: Reforming Education and Training Sectors in Kenya. Nairobi: Government Printer.

Republic of Kenya. 2005. Sessional Paper No.1 of 2005 on a Policy Framework for Education, Training and Research. Nairobi: Government Printer.

Republic of Kenya. 2005. Kenya Education Sector Support Programme, Nairobi: Government Printer.

Saks, A. M., & Belcourt, M. (2006). An investigation of training activities and transfer of training in organizations. *Human Resource Management, 45*(4), 629-648.

Salas, E., Wilson, K., Priest, H. and Guthrie, J. (2006), 'Design, delivery, and evaluation of training systems', in G. Salvendy (ed.), *Handbook of human factors and ergonomics*, (3ed.).Hoboken, NJ: John Wiley & Sons, pp. 472–512.

Schunk, D. (2004). *Learning theories: An educational perspective* (6th ed.). N.J: Pearson Prentice Hall.

Smith J. A (2008). *Qualitative Psychology: A practical guide to research methods*. (2nd ed.). London: Sage Publications Ltd.

Thorndike, E.L. (1932). *The fundamentals of learning.* New York: Teachers College, Columbia University.

Tumentsegtoo, T. (2013). *Factors affecting training transfer of civil servants in Mongolia.* Unpublished Doctoral Dissertation, National Institute of Development Administration, Mongolia.

Wei-Tao Tai, (2006). Effects of training framing, general self-efficacy and training motivation on trainees' training effectiveness, Personnel Review, Vol. 35 No.1, pp.51-65.

Werner, J.M. & Desimone, R.L. (2009). *Human resource development* (5th ed.).USA: Cengage Learning.

Williams, D. J. (2008). *An analysis of factors affecting transfer of training within the work environment*. Thesis air force institute of technology, USA.

Yaghi, A., Goodman, D., Holton, E., Bates, R.A. (2008). Validation of the learning transfer system inventory: A study of supervisors in the public sector in Jordan. *Human Resource Development Quarterly, 19*(3), 241-262.

Yamane, T. (1967). *Statistics: An Introductory Analysis (*2nd ed.), New York: Harper and Row.

Yamnill, S., & McLean, G. N. (2001). Theories supporting transfer of training. *Human Resource Development Quarterly*, *12*(2), 195–208.

Yamnill, S., & McLean, G. N. (2005). Factors affecting transfer of training in Thailand. *Human Resource Development Quarterly*, *16*(3), 323–344.

APPENDIX I

Questionnaire for School Principals, Head Teachers,

Deputy Principals and Deputy Head Teachers

Refer to the Kenya Education Management Institute (KEMI) Open Distance Flexible Learning (ODFL) Diploma in Education Management program you graduated from in 2013.

PART I: GENERAL INFORMATION

Write in the space(s) provided and/or tick (√) the appropriate response.

1(a) **Name of Schoo**l:……

(b) **School Category:** Primary ☐ Secondary☐ Any Other (Specify)……

(c) **School Type**: Boarding☐ Day ☐ Day & Boarding ☐ Any Other (Specify)……

(d) **Your Designation**: Principal ☐ Deputy Principal☐ Any Other specify☐……

(e) **Sex:** Female ☐ Male☐

(f) **Age in Years:** Less than 30☐ 31-40☐ 41-50☐ 51-60☐ More than ☐ 60

(g) **Work Experience in years:** Less than15☐ 16-20☐ 21-30☐ 31-40☐ More ☐ than40

(h) **Highest educational level:**

Secondary school or below ☐ College ☐ Bachelor's Degree ☐ Master's Degree and above ☐

(i) **Job Group:** L & below ☐ Job group L-N ☐ Job Group P & above ☐

(j) How long have you worked at the current school……. Years.

2a Have you attended any other **education management training** program

(i) Before the KEMI Diploma in Education Management Course? Yes ☐ ☐ No

(ii) After attending the KEMI Diploma in Education Management Course? Yes ☐ No ☐

If YES specify the program title……

Part II: Factors Influencing Transfer of Learning to the Workplace

3. Indicate the extent to which you agree with the statements in by circling ○ the selected number to the right of each item that most closely reflects your opinion about the training. Use the following rating scale: **Strongly disagree SD(1) Disagree D(2) Neither agree nor disagree NAD(3) Agree A(4) Strongly agree SA(5).**

(a) Learner Characteristics

Learner Readiness and Expectations	**SD**	**D**	**NAD**	**A**	**SA**
(i) I was notified well in advance of enrolment in the ODFL Diploma in Education Management program.	1	2	3	4	5
(ii) I knew what to expect from the training prior to attending the program.	1	2	3	4	5
(iii)I joined the program to get promotion and salary increase.	1	2	3	4	5
(iv) I joined the diploma program to enhance my knowledge, skills and competencies.	1	2	3	4	5
(v) I undertook the diploma training for self-satisfaction.	1	2	3	4	5
Self –efficacy and Motivation to transfer	**SD**	**D**	**NAD**	**A**	**SA**
(vi) I believe I have the ability to use the skills and competencies gained from the diploma program in the workplace.	1	2	3	4	5
(vii) I believe I can overcome obstacles at work that hinder use of new knowledge, skills and competencies.	1	2	3	4	5
(viii) The Diploma in educational management met my personal expectations and enhanced my work productivity.	1	2	3	4	5
(ix) At the end of the ODFL Diploma in Educational Management program, I felt motivated to transfer learning to the workplace.	1	2	3	4	5
(x) My educational qualifications and work experience facilitated my ability to transfer learning to the workplace.	1	2	3	4	5

(b) ODFL Diploma in Education Management Training Program Design

Content Validity	**SD**	**D**	**NAD**	**A**	**SA**
(i) Curriculum was well planned and organized.	1	2	3	4	5
(ii) Sequence and structure of training content was excellent.	1	2	3	4	5
(iii)Learning was relevant to conditions in my workplace.	1	2	3	4	5
(iv) Training content had practical applicability to my work.	1	2	3	4	5
(v) There was similarity between the training and work environment.	1	2	3	4	5
Training Delivery Methods	**SD**	**D**	**NAD**	**A**	**SA**
(vi) The quality of the KEMI training material used was excellent**.**					
(vii) Trainers provided sufficient opportunities to practice behaviors related to the work place.	1	2	3	4	5
(viii) Trainers used appropriate training delivery methods.	1	2	3	4	5
(ix) KEMI provided follow-up support after the program ended.	1	2	3	4	5
(x) The ODFL Diploma in education management program design enhances positive transfer of learning to the workplace.	1	2	3	4	5

(c) Work environment

Opportunity to Use	**SD**	**D**	**NAD**	**A**	**SA**
(i) There is a clear link between the diploma in education management training and career progression of school principals.	1	2	3	4	5
(ii) My work environment provides me with opportunities to use knowledge, skills and competencies gained from the diploma training.	1	2	3	4	5
(iii) Equipment, facilities and other resources required to apply newly acquired skills and competencies are available at my workplace.	1	2	3	4	5

(iv) Knowledge, skills and competencies learned in the diploma program have increased my work performance.	1	2	3	4	5
(v)My school/ministry rewards and recognizes those who apply skills and competencies learnt in training at work					
Supervisor and Peer(coworker) Support	**SD**	**D**	**NAD**	**A**	**SA**
(vi) My supervisor and I identified potential barriers to applying new competencies after the diploma training.	1	2	3	4	5
(vii) My supervisor encourages and supports me to use the skills and competencies gained from the training.	1	2	3	4	5
(viii) My supervisor praises and rewards those who demonstrate effective application of what was taught in the training.	1	2	3	4	5
(ix) My supervisor gives positive and constructive feedback about application of training to job performance.	1	2	3	4	5
(x) My supervisor pays no attention to how I transfer learning to the workplace.					
(xi) Co-workers encourage me to use the knowledge, skills and competencies learned at the workplace.	1	2	3	4	5
(xii) Co-workers prefer that I use old method rather than new methods learnt in the diploma training program.					
(x) I get benefits such as salary increase and recognition when I apply learning to the workplace.	1	2	3	4	5

4 (a) Outline **TWO** barriers to positive transfer of learning from the **ODFL Diploma in Education Management** program to the workplace.

(i) ……

(ii) ……

(b) Suggest **TWO** ways of improving positive transfer of learning from the **ODFL Diploma in Education Management** program to the workplace.

(i) ……

(ii)……

5(a) In your view the ODFL Diploma in Education Management program resulted in

(i) Positive transfer to the workplace: Yes ☐ No ☐ Do not know ☐

(ii) Negative Transfer to the workplace: Yes ☐ No ☐ Do not Know

(iii) ☐

(b) Estimate the percentage of learning in the **ODFL Diploma in Education Management** program that you have transferred to your work place.

Less than 30% ☐ 31-50% ☐ 51-70% ☐ 71-100% ☐ Do not know ☐

5. Any other Comment……..

……

……

……

-THANK YOU –

APPENDIX II

Interview Guide for School Principals, Deputy Principals, Head Teachers and Deputy Head Teachers

Refer to the Kenya Education Management Institute (KEMI) **Open Distance Flexible Learning (ODFL) Diploma in Education Management** program you graduated from in 2013.

1. Explain how the following factors have contributed to inadequate transfer of learning to the workplace? (Probe the following aspects)

(a) Learner Characteristics

……

Training Program Design

……

(c) Work environment

……

(a) Identify individuals/ groups of people who supported you to enhance positive transfer of learning from the **ODFL Diploma in Education Management** program to your workplace?

……..

(b) Explain the type of support you got from them……..

-THANK YOU-

APPENDIX III

Item Total Statistics for Cronbach Alpha

Item	α if item is deleted	Item	α if item is deleted
Notified in Advance	0.82	Appropriate delivery methods	0.82
Knew what to expect	0.82	KEMI provided follow up support	0.82
Joined for promotion	0.85	Program design enhances positive transfer	0.82
Joined for knowledge	0.82	There is a link between ODFL training and career progression	0.81
Joined for self-satisfaction	0.83	Work environment provides opportunities to use learning	0.82
Have ability to use knowledge	0.82	Resources and equipment are available at work place	0.83
Can overcome obstacles at work	0.82	Knowledge, skills and competencies have increased my work performance	0.82
Met personal expectations	0.82	School recognizes and rewards those who apply learning	0.81
Motivated to transfer	0.81	Supervisor and I identified barriers to transfer of learning	0.82
Education and work experience	0.82	Supervisor encourages and supports	0.82
Curriculum well planned	0.82	Supervisors praises and rewards those who transfer	0.81

Sequence and structure excellent	0.82	Supervisor gives positive feedback	0.81
Relevant to work conditions	0.82	Supervisor pays no attention to how I transfer	0.84
Content had practical applicability	0.82	Co-workers encouraged me to use knowledge	0.81
Similarity between training and work	0.82	Co-workers preferred old methods	0.84
Quality of training material excellent	0.82	Get benefits such as salary increase and recognition	0.83
Sufficient opportunity to practice	0.81		

APPENDIX IV

Research Permit

APPENDIX V

Research Work Plan and Budget

Start Date: Jan 2013								**End Date: October 2016**
Activity	**Jan-Apr 2013**	**May-Dec 2013**	**Jan-Apr 2014**	**May-Aug 2014**	**Sept –Dec 2014**	**Jan-July 20l5**	**Apr-Dec 2015**	**Jan- Oct 2016**
Preparation & Planning -Proposal Development & Reconnaissance								
Development & Piloting of Data Collection Tools - Design of data collection tools & Sampling								
Administration of Data Collection Tools - Piloting of Data Collection tools -Questionnaire and Interview administration								
Data Analysis and Interpretation - Data Preparation & Organization - Data Analysis & Interpretation								
Research Report Writing and Documentation - Preparation of Draft Dissertation - Editing & Documentation of Final Dissertation,-								
Submission of Dissertation -Final Corrections & Submission to Faculty -Dissemination in presentations and Publications								

Research Budget

Activity	Sub-total (ksh)	Total (ksh)
Preparation & Planning		
• Development of Concept paper and proposal	30,000	
• Reconnaissance Field Visit for expert Opinion	20,000	50,000
Development & Piloting of Data Collection Tools		
• Design of data collection tools	20,000	
• Sampling, Piloting , finalization of tools	10,000	
• Proposal review, submission & presentation	10,000	50,000
Administration of Data Collection Tools		
• Field transport to Respondents	150,000	
• Selection of sub-sample for interview follow up & Data Collection	30,000	180,000
Data Analysis and Interpretation		
• Data Entry Preparation & Organization	30,000	
• Data Analysis and Interpretation	65,000	95,000
Research Report Writing and Documentation		
• Preparation of Draft I Dissertation	55,000	
• Finalization, Editing & Documentation of Dissertation	25,000	80,000
Submission, Dissemination & publication of Dissertation	100,000	100,000
Grand Total		**Ksh 555,000**

Appendix VI

Informed Consent Form

You have been chosen to participate in this PHD research study as a graduate of the Diploma in Education Management program ran by the Kenya Education Management Institute (KEMI. The study seeks to elicit your perceptions on learner characteristics, training program design and work environment factors influencing transfer of learning to the workplace.

You may also be randomly selected to participate in follow up interviews. The data provided will be treated with utmost confidentiality, research tools will not identify you by name and results will be used for research purposes only. Please answer all questions.

Your participation is voluntary and if you change your mind you have the right to withdraw at any time. There are no known significant risks of participating in the study. For any clarification use the following contact: Mobile No:…….

Your cooperation will be greatly appreciated.

……

Rachel Ngesa Maina- PHD Student, Kenyatta University

Please Complete this Consent Form
I hereby accept to participate in the research study. Respondents Signature …… …… Date: …….....

APPENDIX VII

Inter Item Correlation Matrix

	NIA	JFK	ABK	MOT	EAW	CWP	SAS	RWC	QM	SOU	ADM	PD	LPW	WPS	KIP	SRR	CEK
NIA	1.00	.38	.07	.20	.09	.45	.19	.31	.32	.24	.25	.36	.38	.17	.30	.25	.23
JFK		1.00	.30	.29	.14	.06	.09	.25	.06	.13	.23	.57	.27	.51	.54	.28	.35
ABK			1.00	.35	.06	.31	.20	.17	.26	.19	.19	.11	.08	.35	.17	.012	.09
MOT				1.00	.35	.20	.33	.13	.22	.40	.47	.28	.52	.30	.35	.431	.39
EAW					1.00	-.03	.03	.08	.32	.30	.29	.06	.24	.35	.06	.29	.44
CWP						1.00	.61	.44	.42	.27	.07	.32	.47	.16	.19	.11	.05
SAS							1.00	.34	.30	.20	.08	.22	.47	.09	.02	.22	.06
RWC								1.00	.46	.14	.02	.33	.26	.43	.53	-.10	.26
QM									1.00	.40	.37	.34	.11	.24	.31	.06	.22
SOU										1.00	.75	.49	.45	.23	.32	.29	.29
ADM											1.00	.38	.35	.14	.30	.19	.24
PD												1.00	.47	.29	.58	.37	.36
LPW													1.00	.45	.27	.38	.26
WPS														1.00	.42	.18	.35
KIP															1.00	.11	.26
SRR																1.00	.27
CEK																	1.00

NB: See the list of abbreviations