

**INFLUENCE OF SOCIO- ECONOMIC FACTORS ON INTERNAL  
EFFICIENCY IN EARLY CHILDHOOD DEVELOPMENT CENTRES IN  
MWINGI CENTRAL DISTRICT, KENYA.**

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the Award of the Degree of Master of Education in Economics of Education.**

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## **DECLARATION**

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

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## **DEDICATION**

This project is dedicated to my mother, Mrs Lucia Manywele Muli and my husband Vincent Kyalo Mutambu, children, Charity, Reginah and Angella.

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## **ABBREVIATIONS AND ACRONYMS**

<b>DICECE</b>	:	District Centre for Early Childhood Education
<b>ECDE</b>	:	Early Childhood Development Education
<b>ECE</b>	:	Early Childhood Education
<b>EFA</b>	:	Education For All
<b>MOE</b>	:	Ministry Of Education
<b>NGO</b>	:	Non-Governmental Organizations
<b>UNCRC</b>	:	United Nations Convention on the Right of the Child
<b>QASO</b>	:	Quality Assurance and Standard Officers

## ABSTRACT

*Early Childhood Development Education (ECDE) globally and Kenya in particular has been recognized as a child's holistic and integrated education that meets the cognitive, socio moral, spiritual, emotional, physical and developmental needs. The purpose of the study was to investigate the socio economic factors influencing internal efficiency at ECD centers in Mwingi Central District, Kitui County. The objectives were; to determine the extent to which school physical facilities influence enrolments at ECD centers in Mwingi Central District; to assess the extent to which teacher's level of training influences performance of children at ECD centers in Mwingi Central District; to establish the extent to which feeding programme influences school dropout rate at ECD centers in Mwingi Central District; to determine the extent to which parent level of income influences completion rate at ECD centers in Mwingi Central District. The study used descriptive research survey design. A total of 124 ECD centers were targeted. . To carry out the research, 19 ECD centers, 38 head teachers, 30 teachers, 186 school committee members and 633 parents were randomly selected. The analyzed data was presented in tables and graphs. The researcher found that the number of children in the schools per class was 21-40 children. Teacher turnover rate was average. Classroom management and teachers attitude affected performance at ECD centres to a very great extent as shown by 73% and 69% respectively. Free feeding programme helps to reduce school dropout rate as shown by 70% and parents feel more secure when their kids are provided with food at ECD centre. Ability to pay school fees helped to increase completion rate at ECD centres as shown by 76%. The researcher concludes that the ECD classes had a manageable population. The schools had physical facilities though they were not enough. There was minimal absenteeism and turnover among the teachers. This study recommends the CDF committee members to offer funds for developing ECD centers. The ministry of education needs to offer short courses and seminars for ECD teachers to help them change with time. The school committee needs to come up with a feeding programme which is cheap and affordable.*

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background to the study**

Early Childhood Development Education (ECDE) globally and Kenya in particular has been recognized as a child's holistic and integrated education that meets the cognitive, socio moral, spiritual, emotional, physical and developmental needs. The United Nations convention on the right of the child (UNCRC, 1989), African charter on the right of the child and welfare of the child (Republic of Kenya, 1998) recognizes the right of every child to physical mental, spiritual, moral and socio development. The Universal declaration of human rights adopted in 1948 also declared that everyone has right to education.

The new world conference of Education For All (EFA), held in Jomtien, Thailand 1990 sparked off a new impetus in basic education especially with its so called vision 2030 and renewed commitment (UNESCO, 2012). One among its goals that most countries in the sub-Saharan Africa are striving to achieve, is to expand and improve comprehensive early childhood care and education especially for most disadvantaged children. Studies conducted in the United States during the 1960s to the mid 1970s confirmed that early intervention in a child's life has lasting positive effects (Shultz, 1992). A few years of early schooling can substantially increase the economic value of an individual's skills (Psacharopolous, 1986).

Leeper and Silver, (1968) shows that availability of the physical facilities including drinking water, electricity, boundary wall, toilets, furniture, playgrounds, libraries, and dispensaries have a significant positive influence on the performance of the students and their achievement. The study undertaken by Shami and Hussain (2005) revealed that the availability of physical facilities in a school had a significance impact on students' performance. In the context to school facilities, environment in which the students learn is very crucial and without the suitable environment effective learning cannot take place. Bruce (2006) has rightly called the learning environment as the third teacher but it is important that the environment is not an end in itself; we have to look at the settings. Space is an important factor in providing a rich environment for learning, but it is only significant to the degree that it assists in providing a suitable climate for learning. He further investigated that environment should provide a rich range of resources which is always available to children. This gives them scope to build on developing interests and to practice and apply what they have learned. Children then make their own learning. The room should be on the ground floor and has no hidden areas so that it can be easily supervised. It should also be adjacent to toilet facilities, approximately 40 to 60 square feet per child is recommended (Schultz, 1993).

Having a high number of untrained teachers affect the quality of learning since the right skills and competencies may not be acquired. According to the recommendations by the task force report 2012 on alignment of education and training to vision 2030, education system should focus on child development, skills and competencies to be learnt, and the ultimate outcome at each level from early childhood care and development to the university. The competences and skills acquired enable the learners to meet the human resource aspirations of a nation. A report by Uwezo Kenya, 2012 indicates that a great number of children aged 3-4 are not in pre-school that is 61% percent 3 years and 36.1 percent 4 years. As per the report a number of class three (3) children cannot do class 1 numeracy, neither can they read a story in English. This indicates that there are some gaps in the children's education. Preschool children should be taught by qualified teachers who have undergone and successfully completed a certificate, diploma or degree course in ECD from a recognized institution. Untrained teachers should only act as teacher assistants and should have undergone the five week ECD short course on child care. This always is not the case in most of the ECD Centres (UNESCO, 2012).

The constitution of Kenya, 2010 chapter four states that every child has the right to free and compulsory basic education, basic nutrition, shelter and healthcare which are fundamental to the child's holistic developments. According to research carried out by Wawire, 2000 and Aila, 2005 indicates that pre-school education is



Kenya, is characterized by high number of untrained teacher levels, inadequate provision of health and nutrition services, poor access to schools for 3-6 years, and inadequate provision of physical facilities and learning materials (UNESCO, 2012).

The UNESCO report, 2010 which formed the basis for the first ever world conference on Early childhood Education (ECE) held in 2010 in Moscow showed that pre-primary education was in tatters in most countries with 50% of the countries having no program for children less than 3 years of age. In most of the Eastern African countries such as Burundi, Uganda, Tanzania access to quality pre-primary education in the region is poorly characterized by low enrolment rates, trained teacher shortages. Inadequate teaching and learning facilities and poor physical facilities (UNESCO, 2010).

Early childhood Development Education Interventions are significant to the socio and economic development of a country as they provide children aged between 3 and 5 with a strong start in life. Children who access ECDE services were more likely to enroll in primary schools at the right age and less likely to drop out of school or repeat grades. There was also a high probability that these children had improved school performance and cognitive abilities than those who do not attend ECDE (UNESCO, 2012).

Abagi and Odipo (1997) and Lerotholi (2001), point out that the internal efficiency of an education system is revealed by grade promotion, repetition and dropout rates. Lerotholi (2001), further asserts that the higher the promotion and completion rates, the better the system's efficiency.

Most of the developed nations have concerted a lot of efforts in provision of quality childhood education due to the benefits associated with it. For instance in the United states of America president Obama administration has proposed investments that will establish a continuum of high quality learning for children beginning at birth and continuing to age five. This includes providing access to infant and toddler care through Early Head start childcare partnership. It is clear that most of the ECD centres are dominated by a large number of untrained teachers which may lead to skill deficiency at this level whose inefficiency may be transmitted to the other levels of learning. This may also lead to low transition rates and high dropout rate for the learners when the right intervention is not done (Lerotholi, 2001).

Health and nutrition are fundamental aspects in the physiological development of the children. The link between health and learning is well established (WHO, 1997). Health affects attendance, retention, cognitive development and academic performance. There is strong evidence that poor nutrition and health in early childhood severely affects cognitive development in later years, (Children Act, 2001). Inadequate nutrition before birth and in the first years of life can seriously

interfere with brain development and lead to neurological and behavioral disorders as learning disabilities and mental retardation. Provision of better health care to the pre- schools will lead to better academic performance, fewer dropouts and repetition as a result of children having been exposed to stimulating learning experiences both at home and in the early childhood development centres. The money saved by families and the Government in health care and education services could be used in development programs (Schiwinhart and Weirlart, 1980).

The Kenya National ECD service standard Guideline of 2006 requires an ECD centre to have appropriate facilities for the safety of the children. There should be a well-ventilated classroom with proper roofing, windows, doors and flooring. The class should also have children size chairs and tables, teacher chair, table and a cardboard. Toilets and latrines should not be less than 6 meters or 20 feet deep and 15 meters away from boreholes. There should be a toilet for boys, girls, teachers and children with special needs. The ratio of toilet to children is 1:25. Play and learning materials which are adequate, safe and developmentally appropriate for children is a necessity at an ECD Centre. The materials and equipment need to be replaced and serviced appropriately. An ECD centre should have a large outdoor play space which is age and developmentally appropriate for the number of children in the centre to play and run around safely. Better quality, maintained facilities meet a child's need of learning through play and may lead to

high retention rate, high transition rate, performance and hence reduced wastage of scarce resources associated with these in efficiencies (ECD policy, 2006).

## **1.2 Statement of the problem**

In most of the ECD centres in Mwingi central District there is a high number of untrained teachers, poor health and nutrition programmes, poor physical facilities and low enrolment rates as per the data by the Ministry of Basic Education Training and Skill Development, Mwingi Central, 2014.

The Mwingi central District enrollment rate at ECD schools recorded increase from year 2011/2012 to 2013/2014. For instance Gross Enrollment Rate at ECD schools is 129.7% for Boys, 107.2% for Girls and 119.1% for both increased to 126.6% for boys, 113% for girls and 120.1% for both in 2011/2012 to 2013/2014 (Mwingi District Annual Statistics Report, 2014).

Similarly the Net Enrollment Rate is 79.6% for Boys, 70% for Girls and 75.1% for both in 2011/2012 increased to 92.5% for boys, 82.3% for girls and 87.7% for both in 2013/14 (GREB Annual statistics Abstract 2013/2014. For instances the district Enrollment Rate of primary schools has increased from 108.8% in 2011/2012 to 120.1% in 2013/2014. Similarly there has been substantial increase in Regional Enrollment Rate of primary schools, has risen from 75.1% in 2011/2012 to 87.7% in 2013/2014 document in Annual statistic abstract 2013/2014) (Mwingi District Annual Statistics Report, 2014).

In developing countries, like Kenya, there are many reasons why parents or the communities are discouraged to send their children to school. Even though many parents manage to send their children and make them enroll in schools, but in the meantime those enrolled children become drop outs or repeaters. According to Abigl (1997) house hold or community based factors that affects completion rate in education includes:-Household attitudes to education, Opportunity cost of education, Socio-cultural factors and traditions (example, early marriage), Gender issues, socialization and Religious factors.

Teachers character, physical facilities and school policies. Therefore it is against this background that this study sought to address the socio economic factors that have influenced the enrolment rate, retention rate, transition ration and dropout rate at the pre-school level hence limiting efficiency in these centres (Abigl, 1997).

The study was carried out in Mwingi central district to identify the socio economic factors that might have led to high inefficiency in our ECD centres as compared to what is realized in our neighboring counties of Kitui and Machakos. .

### **1.3 Purpose of the study**

The purpose of the study was to investigate the influence of socio-economic factors on internal efficiency in ECD centers in Mwingi Central District, Kitui County.

#### **1.4 Objectives of the study**

- i. To determine the extent to which school physical facilities influence enrolments at ECD centers in Mwingi Central District.
- ii. To assess the extent to which teacher's level of training influences performance of children at ECD centers in Mwingi Central District.
- iii. To establish the extent to which feeding programme influences school dropout rate at ECD centers in Mwingi Central District.
- iv. To determine the extent to which parent level of income influences completion rate at ECD centers in Mwingi Central District.

#### **1.5 Research questions**

This study was guided by the following research questions;

- i. To what extent did the school physical facilities influence enrolment at ECD centers in Mwingi Central District?
- ii. To what extent did teacher's level of training influence performance at ECD centers in Mwingi Central District?
- iii. To what extent did the feeding programme influence school dropout rate at ECD centers in Mwingi Central District?
- iv. To what extent did parent income level influence completion rate at ECD centers in Mwingi Central District?

## **1.6 Significance of the study**

The findings of the study may be significant to the county government of Kitui which is responsible for overseeing the operationalization of the ECDE programme in the country. It may be in a position to establish suitable structures to improve the internal efficiency at ECD Centres in the county. This may be done through quality assurance and standards officers (QASO'S) who may also realize the need to increase the number of trained teachers to improve transition rate, ensure health and nutrition programmes are available at the centres to improve the retention rate and also ensure quality physical facilities are available at the centres to improve the enrolment and retention rates.

Also provide greater insight to the administrators and managers of pre-schools on how the various socio-economic factors have influenced the performance of the ECD centres to undertake the necessary interventions.

The Ministry of Education (MOE) may use the findings to formulate relevant policies and come up with relevant guidelines targeted at improving the efficiency at the ECD centres in the country after understanding the potential influence of the socio-economic factors in provision of early childhood education. The non-governmental organizations (NGO's) may use the report to identify aspects of ECD centres requiring their intervention in terms of finance such as building classroom, latrines, provision of play materials/equipment, provision of support to the nutrition and health programmes among others.

### **1.7 Limitations of the study**

The study was limited due lack of adequate time as a result of commitments at the place of work and transport problems to access some schools which forced the researcher to hire boda boda's. The respondents also did not disclose actual facts about themselves or their centres especially in private sectors. Reliable and adequate data about the centres was not be available at the District Centre for Early Childhood Education (DICECE) in Mwingi central district. The officers manning the centres were not cooperative with the researcher.

### **1.8 Delimitations of the study**

The study focused on only the socio-economic factors influencing the internal efficiency in ECD centres in Mwingi Central District. It involved a sample of both private and public pre-primary schools in the District.

### **1.9 Basic assumptions of the study**

In this study;

- 1) The researcher assumed that the respondents and the officers in charge of the centres co-operated and provided correct information which led to the success of the study.
- 2) It was also assumed that the available DICECE Centres in the District provided reliable data which is essential for the study and the researcher was not limited by funds to ensure a thorough study is done.



### **1.10 Definition of terms**

**Dropout** refers to pupils who temporarily or permanently stop attending school before completing an education cycle, for example in this study, primary level.

**Educational Wastage** refers to a term used to describe the total number of years spent by repeaters and dropouts in the education system.

**Efficiency** refers to the ability to obtain maximum output from a given input in an education system.

**External Efficiency of Education** refers to the comparison of the costs of education to the benefits of education that are external to educational production, such as higher productivity and earnings in post schooling work.

**Internal Efficiency of Education** refers to the comparison of the costs of education to the outputs or effects within education, such as the acquisition of cognitive and non-cognitive skills.

**Net Enrolment Ratio** refers to the ratio of the number of students enrolled of official school age to the population of official primary age children.

**Rate of dropouts** refers to the number of dropouts per school.

**Socio-Economic Factors** refer to an individual's or group's position within a hierarchical social structure.

**Wastage** refers to learners who do not complete primary education in time or drop out of school.

### **1.11 Organization of the study**

The study was organized into five chapters. Chapter one; introduction consisted of background of the study, statement of the problem, the purpose of the study, objectives of the study, research questions, limitations of the study, delimitation of the study and organization of the study.

Chapter two; related literature reviewed consisted of concepts of educational efficiency, internal efficiency in education, influence of school physical facilities on enrolment, influence of teacher's level of training on performance, influence of feeding programme on dropout rate, influence of parent income level on completion rate, influence of teacher's character on performance, summary of the literature review, theoretical framework and conceptual framework.

Chapter three; research methodology consisted of research design, target population, sample size and sampling procedures, research instruments, validity of the instruments, reliability of the instruments, data collection procedure, data analysis techniques and ethical considerations.

Chapter four; data analysis data analysis presentation and discussion consisted of questionnaire return rate, demographic characteristics of respondents, presentation and analysis of the questions and regression analysis.

Chapter five; summary, conclusion and recommendations consisted of summary of the findings, research findings, conclusion, recommendations and suggestions for further studies.

## **CHAPTER TWO**

### **RELATED LITERATURE REVIEWED**

#### **2.1 Introduction**

This chapter covers concepts of educational efficiency, internal efficiency in education, influence of school physical facilities on enrolment, influence of teacher's level of training on performance, influence of feeding programme on dropout rate, influence of parent income level on completion rate, influence of teacher's character on performance, summary of the literature review, theoretical framework and conceptual framework.

#### **2.2 Concepts of educational efficiency**

Abagl (1997), notes that the conceptualization of school efficiency seems to access to education by increasing education opportunities to school-age population. Due to this many countries in Africa, including Kenya have focused attention on increasing resources to education sector. Thus, these countries are now faced with the problem of trade-off between enhancing the efficiency of the education sector and increasing access to ECD, primary, secondary and territory education (Abagl, 1997). This is to mean that educational expansion affects the efficiency of the education system. As substantial amount of resource is assigned for increasing educational access, the educational efficiency is facing a challenge, because the system is not getting adequate resources, solve problem in inputs, process and output of the education system.

Secondly, the knowledge about what education efficiency entails is limited. That is, very little is known about the efficiency with which various schools raise pupils learning and/or achievement. But as the official budgetary allocation to education shrinks inefficiency is a problem that needs to be understood and solved. Thirdly, as poverty increases and the level of investment in education declines, policymakers are looking for innovative and feasible strategies for improving the operation of the education system and making education promote national development a question facing policy makers is how can available resources be used more efficiently in a proposal to make education achieve its objectives at house hold and national level.

Abagl (1997), defines internal efficiency as the amount of learning achieved during the school age attendance, compared to the resources provided. And take the percentage of entering students who completed the course as its measure. Thus, internal efficiency refers to the measurement of performance of the education system by showing the proportion of students successfully completing a given level of the Education system without wastage.

Internal efficiency addresses the question of how funds within the Educational sector should be best allocated. It is concerned with obtaining the greatest Educational outputs for any given level of spending. Economists have a simple Conceptual rule to determine how resources should be allocated among alternative Educational activities: The improvement in educational performance

that results from the last amount of funds spent on an educational activity should be equal across each possible activity. For example, consider a school that is deciding between buying new Workbooks for students and hiring a part-time teacher to tutor individual students (Lockheed and Hanushek, 1987). Clearly, the school should spend the funds on the one that increases performance the most--say workbooks in this example. In fact it should continue spending money on Work books until the educational value of the two choices are the same (After the Initial purchase of workbooks, the value of added workbooks is probably lessened so that at some level of spending the appropriate decision is to purchase a tutor instead of more workbooks). The same logic holds for all of the inputs that a school Purchases, leading to the previously stated rule. Internal efficiency is also sometimes referred to as "allocative efficiency" or "price efficiency" (Lockheed and Hanushek, 1987).

In a nutshell, internal efficiency of any educational system is believed to have high co-relation with educational inputs, processes and outputs of the system. Sanothimi and Bhaktapur (2001) argue the question of educational quality is also a question of internal efficiency in education system. Therefore, internal efficiency and quality of the education system can be indicated by calculating the promotion, repetition and dropout rates, at various grade levels. Furthermore efficiency also includes cycle completion and survival rates at certain grade level and cycle to cycle transfer rates. To put it differently, improving internal

efficiency of the school system is by default improving quality of education because both of them focus on relationship of educational inputs, processes and outputs of the system (Sanothimi and Bhaktapur, 2001).

Scheerens (1999), presented his views that the efficiency is the sufficient productivity at the lowest possible cost. He also stated for the effectiveness of efficiency, inputs that are readily expressed in monetary terms, such as teacher's salary, teacher's experience, and teacher-student ratio, teacher's qualifications and per student expenditure. Visscher (1999), noted that educational expenditure is not consistently related to achievement. He also suggested that it would take greater variation in inputs to expect important effects. Judging from Hanushek's research synthesis, some of the input variables could be considered for inclusion in indicator system that teacher experience would be the most likely candidate. Hanushek (1979 and 1986) also stated that when one wishes to construct educational indicators for international comparison, it would be wished to include variables like per student expenditure and teacher/student ratio, since these might show significant variance between countries.

Educational efficiency is divided into two broad categories. In this context, Coombs (1968) believed that efficiency was determined by a combination of many factors. He divided efficiency into two categories: external efficiency and internal efficiency. External efficiency which means that benefits accruing to the students and to the society from earlier investments. In another way, internal

efficiency, this was interpreted as the relationship between the system's outputs to its inputs. IIEP (1994) mentioned that the external efficiency of an education system involves the interface between academic and vocational education and between school and work. It looks at education as a tool rather than an end in itself, as a feeder into the economic stream rather than a reservoir of knowledge, in terms of earning potentials. In another way, in the case of internal efficiency, the problem of efficiency deals with the flow of students through the system with minimum wastage and the quality of learning achieved within the classroom. Wastage in the flow of students is manifested quantitatively in the form of dropouts and repetition, while the quality of learning is determined by the inputs and outputs of the education system.

Psacharopoulos and Woodhall (1995) stated their views on external efficiency in their own views that the external efficiency of schools may be judged by how well schools prepare pupils and students for their role in society, as indicated by the employment prospects and earnings of students. Such measures depend on external criteria rather than on results entirely within the school. In the same way, Psacharapoulous and Woodhall (1995: 205) expressed their views that internal efficiency is concerned with the relationship between inputs and outputs within the education system or within individual institutions. They also stated that output in this case is measured in relation to internal institutional goals rather than the wider objectives of society. Since internal efficiency is measured in relation to the

objectives of education, judgments about efficiency will depend on the way educational output is defined and measured. (Psacharopoulos and woodhall, 1995). These views are related to Pradhan's (1981) opinions, which he has expressed in his dissertation entitled "Planning of Higher Education: An Analysis of Resource Allocation at Tribhuvan University".

### **2.3 Internal efficiency in education**

Internal efficiency is viewed as the capacity of the educational system to turn out graduates at any level in the most efficient or best way, which is without wastage, stagnation and repetition. It is also seen as the ability of the educational system to meet educational goals and objectives. Internal efficiency deals with the relationship between input and out puts within the education system or within individual institution. Output in this case is measured in relation to internal institutional goals rather than the wider objectives of the society. Internal and external efficiency of educational institutions are closely linked because the skills and attitudes developed must be of value to the society as a whole for the education system to be efficient (Psacharopoulos and Woodhall, 1985).

The internal efficiency of the school system is measured through the student flow analysis method, as explained in IIEP (2000). It analyses mainly the three things that happen once a cohort enters the school cycle: Students may be promoted to the next grade; students may repeat a grade; and Students may drop out of the school system completely. These data can further be treated to yield wastage



ratios. In the ensuing paragraph various indicators of internal efficiency are looked at.

#### **2.4 Influence of school physical facilities on enrolment**

School physical facilities include school buildings, furniture, equipment's of laboratory pedagogical center, library, textbooks etc. Many writers have tried to study the effect of school physical facilities on academic achievements of students in particular and internal efficiency in general. For instance, Shiundu (1999) indicates that shortage of physical resources and facilities at school level cause wastage of education, by raising the repetition and dropout rates. Similarly as stated in Harrison and Hanusheck (2003) on the relationship between facilities and student achievement in developing countries 22 out of 34 studies showed increase of facilities lead to increased student achievement. However, three studies showed inverse relationship and nine studies found that it was insignificant (Nebiyu, 1999). This review of studies indicates that the school facilities and academic achievement of students are associated directly. In other words, other things being equal ,as school facilities increase the number of good achievers or promoted children increases, and vice versa.

It is true that many educationalists give emphasis to the availability of school facilities, which affect the quality of teaching. Physical facilities provide and maintain, safe, clean, and creative educational environments that are conducive to high achievements of the students. Physical facilities strive to give students a

comfortable atmosphere in which they work and learn. All facilities must be provided to the schools for the students' better, concrete, and real experiences. Leeper and Silver. (1968) claim that the child learns through concrete rather than abstract experiences. Physical facilities help to enhance the learning of the students. Research shows that availability of the physical facilities including drinking water, electricity, boundary wall, toilets, furniture, playgrounds, libraries, and dispensaries have a significant positive influence on the performance of the students and their achievement (Shami and Hussain, 2005).

Poor school facilities may affect pupils' performance. Availability of physical facilities in schools play a major role in influencing students' retention. Mwangi (2005) found out that lack of physical and learning facilities in teaching of mathematics in teachers colleges had a negative impact on student's participation in schools. A study by Macharia (1994) also found out that lack of physical facilities in teacher training colleges contributed to poor performance of students and students drop out. The above study was conducted among teachers training colleges, this study will be conducted in ECD Centre's and establish whether similar results will be obtained. Though studies were conducted in public teacher training colleges, ECD Centre's were not included in the studies hence this study proposes to fill this gap. The management of material resources entails planning, acquisition, allocation, distribution and controlling the use and maintenance of the materials. Onyango (2008), states that planning for material resources involves

the identification of the resource requirements, assessing quality in terms of the needs, establishing criteria for standards, determining the cost per unit and the use of the materials whether by individuals or groups. With the introduction of free primary Education, ECD Centre's could have registered over-enrolment, which means that the resources available in Centre's are constrained leading to children's drop out of schools.

Lack or inadequate facilities in schools have been found to affect quality education. Eshiwani (1987), found that in all levels of learning availability of physical facilities such as classrooms, desks, chairs had a positive relationship to quality education. Availability of these facilities contributed to conducive learning environment hence enabling students to perform well in examinations hence provision of quality education (Earthman and Lemasters, 2006). Verspoor (2008) argues that increases in public spending will be inadequate to generate increases in education attainment and learning achievement unless accompanied by reforms that aim at a more efficient use of available resources and find sources of additional funding. He advises that well-structured Public-Private Partnerships (PPPs) can help diversify the sources of financing and provision. Mbugua (1987) says that one of the duties of the head teachers in Kenya is to develop the school's physical facilities. She argues that in dealing with physical facilities, a headteacher has to bear in mind where to house the educational program, the

population to be served by the facility and ensure that financial resources are readily available for the school expansions.

## **2.5 Influence of teacher's level of training on performance**

Generally the qualities of teaching staff in schools affect the internal efficiency of schools. The characteristics that are related with quality of teachers include teachers attitude, qualification, experience, motivation, classroom management and their interaction with pupils' academic achievement in particular and school repetition rate in general (Bishop, 1989). For instance the effect of teachers input on cognitive achievement was studied by many researchers and the summary of the results of the study are reported as follow. As Nebiyu (1999), summarized 96 studies conducted in developing countries they reported that among 63 studies conducted on the relationship between teacher education and 23 students' academic achievements 35 of them showed positive relationship. However the studies were found to have insignificant relationship. On the other hand studies conducted regarding teachers experience, salary and teacher-pupil ratio on academic achievement, over half of the studies were found to have insignificant effect. In contrast the above mentioned fact (Simmons and Alexander, 1986). Reviewed many research findings and stated the following conclusion: Teachers experience and salary tends to have positive influence on academic achievement. Smaller teacher-pupil ratios have little effect on students' achievement.

Similarly studies carried out in Asian countries confirmed that schools which have increased class size had yet shown reduced wastage in terms of dropout and repetition (Bishop, 1989). On the other hand, few class observations in Kenya indicate that there are cases where teachers negative attitudes —Push pupils, out of schools. These pupils are those who are neglected, abused, and miss-handled and sent out of class during teaching learning periods. The results of all the above cases are absenteeism, hate of schooling poor academic performance, and non-completion of the education cycle (Bishop, 1989).

Several studies have compared teacher training programs and students' academic achievement. Ngala (1997), other factors held constant, there exists a positive correlation between teacher training and student academic achievement in final examinations. In a separate study carried out by Ngala and Odebero (2010) in Rift Valley and Nyanza provinces on staff development programs as it relate to teacher effectiveness, it was discovered that teachers in high performing schools took more interest in staff training programs compared to their colleagues in the average and low performing schools. Atsenga (2002), in his study of the English language revealed that effective teaching methods have high influence on learning. Teacher training programs, which promote knowledge on choice and use of effective teaching methods, influence the teachers' effectiveness thus high student academic achievement.

Morgan (2010) revealed that training provide knowledge and skills to improve and encourages better performance and quality output. Studies done in the US by Little and Harrison (1994), Darling-Hammond (1998), Smylie, Allensworth, Greenberg, Harris and Luppescu (2001) and National Staff development Council (2001), both agreed that training had visible influence in student academic achievement. Wested, Ashton and Crocker (2000) noted that training had a positive influence on the accountability and student results. Porter, Birman, Desimone and Garet (2000) also agreed that teacher training was a key factor in performing schools. Wenglinsky (2000), worked with special populations of students and discovered that there was a positive relationship between higher students test scores in Mathematics and Science and teacher training. Nyangarora (1996) concurred that mastery of content area facilitated effective teaching and therefore enhances student academic achievement. In a separate study carried out by Rivers and Sanders (1996), on influence of trained teachers on future student academic achievement, it was discovered that a trained teacher receiving students from untrained teacher can facilitate excellent academic gain for his/her students during the school year.

Ferguson (1991), suggested that teacher training may play an important role in student academic achievement. In the US, greater attention has been given to the role teacher training plays in student achievement (National Commission of Teaching and America's Future, 1996; National Education Goals Panel, 1998). In

order to improve student achievement, more than twenty five states have enacted legislation to improve teacher development (Darling-Hammond, 1997). Sanders and Rivers (1996) observed that teacher effectiveness is highly influenced by teacher training. By reviewing the above, the research study ascertained the truth about the same in Gem district.

Teachers get involved in training which lets them try out new instructional approaches and get immediate feedback. In the District of Columbia teachers are granted five in-service days during the school year which takes place in August. When teachers participate in training, it can improve teacher quality (Hanushek, Kain and Rivkin, 1998).

A national study of over 1,000 mathematics and science teachers found similar results. Therefore sustained and intensive training is more likely to have an influence on enhanced teacher knowledge and skills and consequently student achievement than short training activities (Porter, Birman, Desimone and Garet, 2001).

Guskey and Clifford (2003) noted that the ultimate goal of teacher training is improving student outcomes. It is also worth noting that teachers who are well prepared and trained are more effective teachers in the classroom and therefore have the greatest influence on the student achievement (Killion and Shulman, 1999).

## **2.6 Influence of feeding programme on dropout rate**

Food for education programs (FFE), including meals served in school and take-home rations conditional on school attendance, have recently received renewed attention as a policy instrument for achieving the Millennium Development Goals of universal primary education and the reduction of hunger in developing countries. These programs attract children to school by providing nutritious meals in exchange for school participation. If children are undernourished, the programs may also boost learning and cognitive development by improving attention spans and nutrition. The attraction of these programs is their potential to improve both school participation and learning and cognitive outcomes by increasing the consumption of nutritious food by undernourished children (Adelman, Jennifer, Agüeros, Marcel, Allam, Sahar, Prieto, 2008).

Adelman Jennifer, Agüeros, Marcel, Allam, Sahar, Prieto (2008), in-school meals programs may also have an impact on cognitive development, though the size and nature of the effect vary greatly by program, micronutrient content of the food, and the measure of cognitive development used.

Most empirical findings suggest that school feeding programs have a positive impact on learning achievement, as measured by increases in test scores and on drop-out rates. Furthermore, the subject of the achievement test seems to matter. In general, school feeding does not seem to have the same impact on all subjects, even within a given study. Ahmed (2004), using an econometric specification to



isolate the effects of the program in Bangladesh, found that students in program schools score 15.7 percent higher than did students in the control schools. He further decomposed this increase into the three subjects that make up the total score and found that the improvement was due mainly to an increase in the Mathematics test score. Tan, Lane, and Lassibille (1999) evaluated the impact of the school feeding program in the Philippines, and they found that the impacts of the school feeding program were not significant at the school level. Kremer and Vermeersch (2004) found that the treatment impact alone was not significantly different from zero. However, school meals increased test scores in schools where the teacher was experienced. This result was found by regressing the test score on both a treatment variable as well as a treatment variable interacted with the teacher's experience. The evidence of the impact of school feeding on dropout rates is inconclusive.

Several studies have found a positive effect of school feeding programs, both in-school meals and take-home rations, on reducing the dropout rate (Ahmed, 2004; Ahmed and Del Ninno, 2002). Unfortunately, these studies have problems in the approach used to identify causal impacts. On the other hand, Tan, Lane, and Lassibille (1999) have pre- and post-intervention data for these schools, as well as for ten randomly selected control schools. The authors computed estimates of the impact of the school feeding program—the difference in the change in drop-out rate over time between the treatment groups and the control group at the school

level. In this case, they could not identify any impact of either program on the probability of a student dropping out.

## **2.7 Influence of parent income level on completion rate**

Poverty and economic challenges of the time contribute to lack of motivation, negative self-concept in terms of academic abilities, failures at school, domestic violence, delinquency and higher drop outs (Abagi and Odipo, 1997). The income level is usually determined by the occupation of parents' hence it is a factor that determines access to education. In Mexico, education expanded significantly between 1970-2000. Enrolments rose from 9.7 million in 1970 to 21.6 million in 2000. The poorest states like Nayarit and Chiapas continued to have low below average enrolment and attendance in schools, hence Mexican government introduced several programs and the main one was 'Oportunidades' formerly known as PROGRESSA which provided grants to low income families so that children could attend school and health services (Abagi and Odipo, 1997).

Research has indicated that children of wealthier households are less likely to drop out of school than their counterparts from poorer households. It has been observed that the wealth effect is significant for both boys and girls, urban and rural children. The economic constraints emerge as an important barrier to school attainment. The impact of economic constraints is not always immediate but cumulative, and can eventually lead to children dropping out of school (Koech Report, 1999).

In Latin America, Africa and South Asia, wastage is prevalent among the pupils or students from low socio-economic background, in the rural than the urban regions and again among girls than the boys (Koech Report, 1999). Factors influencing this school wastage according to Psacharopoulos and Woodhall (1985) are poverty which may give rise to illness, malnutrition, absenteeism, the opportunity cost of schooling for poor families, cultural factors, which affect girls in particular, inappropriate curriculum and examinations which is excessively academic and designed to prepare majority of pupils for upper secondary and higher education and a shortage of secondary school places, which leads to repetition at the primary level (Psacharopoulos and Woodhall, 1985).

Psacharapoulous and Woodhall (1985) the most powerful influences on demand for secondary and higher education and even primary school enrolment rates in some developing countries is the level of family incomes. For instance if poor families in Malaysia choose to send their children in primary and secondary schools, they must make considerable sacrifices. In India, Most parents claim that they do not take children to school because they cannot afford to buy school uniform and notebooks. In Bangladesh, those who drop out come from lower income families (Sabates, 2010). According to the Republic of Kenya (2002), about 56% of Kenyan population living below the poverty line is unable to enroll their children in school due to both direct and indirect costs of schooling.

KIPPRA (2004), under the FPE and FDSE programmes, parents and local communities continue to meet some educational expenses such as building costs, uniform, transport and food. When these costs are very high, both the family and the society may neglect the provision of education. Financial constraints are the main causes of children not enrolling or completing school especially in hunger stricken, ASAL and hardship areas. The issue of fees accelerates school absenteeism in schools. Children whose parents cannot afford fees go to school irregularly and in the long run drop out of school Abagi and Odipo (1997).

## **2.8 Influence of teacher's character on performance**

Generally the qualities of teaching staff in schools affect the internal efficiency of schools. The characteristics that are related with quality of teachers include teachers attitude, qualification, experience, motivation, classroom management and their interaction with pupils' academic achievement in particular and school repetition rate in general (Bishop, 1989). For instance the effect of teachers input on cognitive achievement was studied by many researchers and the summary of the results of the study are reported as follow. Nebiyu (1999), summarized 96 studies conducted in developing countries they reported that among 63 studies conducted on the relationship between teacher education and 23 students' academic achievements 35 of them showed positive relationship. However the studies were found to have insignificant relationship. On the other hand studies conducted regarding teachers experience, salary and teacher-pupil ratio on

academic achievement, over half of the studies were found to have insignificant effect. In contrast the above mentioned fact (Simmons and Alexander, 1986). Reviewed many research findings and stated the following conclusion: Teachers experience and salary tends to have positive influence on academic achievement. Smaller teacher-pupil ratios have little effect on students' achievement.

Similarly studies carried out in Asian countries confirmed that schools which have increased class size had yet shown reduced wastage in terms of dropout and repetition. On the other hand, few class observations in Kenya indicate that there are cases where teachers negative attitudes —Push pupils, out of schools. These pupils are those who are neglected, abused, and miss-handled and sent out of class during teaching learning periods. The results of all the above cases are absenteeism, hate of schooling poor academic performance, and non-completion of the education cycle (Bishop, 1989).

Finally, in the sphere of teacher's characteristics, low teacher motivation is one of the most important causes for wastage in education. Low teacher motivation leads to teacher absenteeism and attrition, which are the prominent problems of developing countries. Teacher absenteeism reduces pupils learning time, while teacher attrition increases costs of teacher training. One recent World Bank study reports that the causes of low teacher motivation are low salaries, poor working conditions, insufficient career advancement opportunities and/or weak supervisory and support services. Low teacher moral, directly or indirectly,

affects the quality of teaching and the relationship between teachers and students, which results to low pupil achievement and high school dropouts (Simmons and Alexander, 1986).

## **2.9 Summary of the literature review**

Internal efficiency is viewed as the capacity of the educational system to turn out graduates at any level in the most efficient or best way, which is without wastage, stagnation and repetition. It is also seen as the ability of the educational system to meet educational goals and objectives. Internal efficiency deals with the relationship between input and out puts within the education system or within individual institution.

School physical resources and facilities include school buildings, furniture, equipment's of laboratory pedagogical center, library and textbooks. Shiundu (1999) have tried to study the effect of school physical resources and facilities on academic achievements of students in particular and internal efficiency in general. He indicates that shortage of physical resources and facilities at school level cause wastage of education, by raising the repetition and dropout rates. Shiundu (1999) does not indicate the influence of school physical facilities on enrolments at ECD centers. This study therefore, tried to bridge the gap by establishing the effect of school physical facilities on enrolments at ECD centers in Mwingi Central District.

Teacher credentials and teacher training do not make a consistent difference when assessed against student achievement gains (Boyd, Lankford, Loeb, and Wyckoff (2005), Kane, Rockoff, and Staiger (2006)). Finally, teacher quality does not appear to be closely related to salaries or to market decisions. In particular, teachers exiting for other schools or for jobs outside of teaching do not appear to be higher quality than those who stay (Hanushek, Kain, O'Brien, and Rivkin (2005)). The above writers, focused on primary schools. None was able to establish teacher's level of training influence on performance of children at ECD centers. Thus this study focused on bridging the gap.

According to Susy, (2008) factors contributing to repetition in particular and internal efficiency of primary schools in sub-Saharan Africa include the following. The cost of schooling, remoteness of the school, illness and malnutrition, lack of sanitation blocks at schools, the need to work, limited access to secondary schooling, quality and relevant of schooling instructional time in schools and language of instruction. Susy, (2008) focused on secondary schools thus was not able to establish the effect of the feeding programme in school dropout rate at ECD centers, which this study tries to find out.

Another important aspect of the life of children within the household is the relationship with their parents, in particular the support given by parents with the child's schooling and the perceptions of parents about the potential benefits of education for their children (Ananga, 2011). In Latin America, Africa and South

Asia, wastage is prevalent among the pupils or students from low socio-economic background, in the rural than the urban regions and again among girls than the boys (Koech Report 1999). According to Psacharapoulous (1985) the most powerful influences on demand for secondary and higher education and even primary school enrolment rates in some developing countries is the level of family incomes. Psacharapoulous (1985) focused on primary and secondary education thus this study focused on establishing effect of parent level of income on completion rate at ECD centers.

## **2.10 Theoretical framework**

The study adopted the Education Production Function Theory (EPT). In this theory, different combinations of inputs can produce different levels of outputs. The study was based on the production function theory by Mace (1779). The production function theory describes the relationship between inputs and outputs. Education is a process which uses scarce financial, physical and human resources allocated to produce of educated people.

In the ECD centre, the parents ensure that the necessary resources are availed in the schools. These resources include teaching and learning materials, infrastructure and the human resources which are inputs in to the production function. These resources affect the teaching and learning, participation and quality of education in terms of performance in schools which are the outputs in



the education system. With adequate educational resources both human and physical, this is an indicator of internal efficiency.

The production function uses symbols to explain what happens to input to transform them to output.

$$A_{it} = f(F_{2t}, S_{2t}, P_{it}, I_{it})$$

A – Academic achievement (output)

i – Student

t – Time

f - Function of

f – Family characteristics

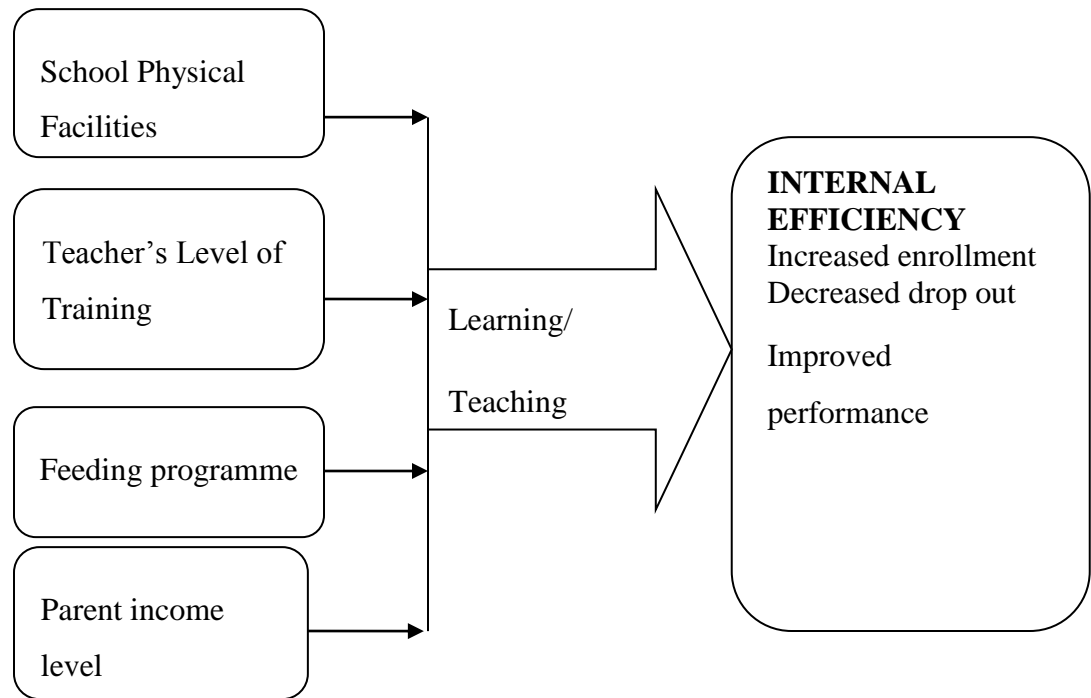
S - School characteristics

P – pre – school age characteristics

I – school age abilities

## 2.11 Conceptual framework

The conceptual framework below is a summary of independent and dependent variables. It explains how the variables relate with internal efficiency in ECDs.



**Figure 2. 1: Relationship between socio-economic factors and internal efficiency**

The conceptual framework shows how the inputs which are the school physical facilities, teacher's level of training, feeding programme and parent income level impact on internal efficiency. The interrelationship between these variables within the school setting had different results within the school (output). All these factors

impacted directly on the kind of teaching and learning (process) that goes on in schools whereby positive impact led to internal efficiency.

Lockheed and Hanushek (1994) argued that insufficient information upon which to base policy may result in very large inefficiency. The rationale of the study is therefore, to study the factors influencing internal efficiency in ECD Centres (as revealed by drop –out, repetition rates and transition to primary schools) under the education policy. This explanation is summarized in figure 2.1 that is conceptual framework of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter outlines the research methodology on how the study was conducted. It includes, research design, target population, sample size and sampling procedures, research instruments, validity of the instruments, reliability of the instruments, data collection procedure, data analysis techniques and ethical considerations.

#### **3.2 Research design**

The study used a descriptive survey research design. This enabled the researcher to understand better the impact of socio economic factors on internal efficiency at ECD centers. The method chosen allowed collection of comprehensive, intensive data and provide an in-depth study on socio economic factors and how it has affected internal efficiency at ECD centers. The research used both primary and secondary data. Primary data was obtained by using questionnaire while secondary data was found using journals, textbooks and internet. Descriptive survey design is an appropriate means of gathering information when goals call for qualitative and quantitative data (Pollard, 2005).

### 3.3 Target population

Mugenda and Mugenda (2003) defined population as an entire group of individual, events or objects having common observable characteristics, while Brinker (1980) defines a target population as a large population from which a sample population was selected. The study was carried out in Mwingi Central District, Kitui County. The district has a total of 124 ECD centers, 147 teachers (142 female and 5 male) 620 school committee members and 1109 parents (District education office Kitui County, 2014). The study targeted 124 ECD centers in the district. The study area was the ECD centers and the target population for this study were head teachers, preschool teachers, preschool parents and school committee members.

**Table 3.1: Target population**

<b>Group</b>	<b>Total Population</b>
Head teachers	124
Teachers	147
School committee members	620
Parents	1109
<b>Total</b>	<b>1380</b>

### 3.4 Sample size and sampling procedures

Orodho and Kombo (2002) define sampling as a process of selecting a number of individuals or objects from a population which contain elements representative or characteristics found in the entire group. The reason for sampling is to obtain results generalized for the whole population. The sample selected should be a good representation of the population. Mwingi Central District has 124 centers. The researcher used random sampling to select 38 ECD centers, 20 from public and 18 from private. The sample consisted of 38 head teachers, 44 teachers, 186 school committee members and 333 parents.

**Table 3. 2: Sampling sample**

<b>Group</b>	<b>Total Population</b>	<b>Sample %</b>	<b>Sample Size</b>
Head teachers	124	30	38
Teachers	147	30	44
School committee members	620	30	186
Parents	1109	30	333
<b>Total</b>	<b>1380</b>	<b>30</b>	<b>601</b>

### **3.5 Research instruments**

Mugenda and Mugenda (2003) the most used instrument in socio science research are questionnaires and interview.

The researcher made use of questionnaires unit, both open ended and closed ended items. The closed ended items were economical interim of time and enabled to collect data from a large group of respondents whereas the open ended items are easy to formulate. The questionnaires were administered to the respondents, and then collected immediately after they are filled in. The researcher also used an interview guide for the school committee members.

The researcher used the qualitative approach due to its suitability in social research, which was done in the subjects' natural setting (De Vos, 2001). Qualitative research is a type of primary research in which the researcher collects first-hand information obtained directly from participants (Miles and Huberman, 1994).

#### **3.5.1 Validity of the instruments**

Mugenda and Mugenda (2003) defines validity as the accuracy and meaningfulness of inferences, which are based on the research results. In other words validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study (Bryman and Cramer, 1997). Face and content validity was determined to test the instruments to be used for the

study. In face validity, the researcher established a logical link between the objectives of the study and the questions on the interview schedule. The validity of items in research instruments was determined by expert judgment, to ascertain that the instrument to be used during the study described the required information. Through content validity, the study established whether the questions on the instruments cover all the issues about the challenges facing the ECD centres in Mwingi Central District.

### **3.6 Reliability of the instruments**

An instrument is reliable when it can measure what it is intended to measure accurately and obtain same results under same conditions over a period of time. Mugenda and Mugenda (2003) defined reliability as a measure of the degree to which a research instrument is consistent result. The general formula for the margin of error for a sample proportion (if certain conditions are met) is

$$z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}},$$

Where;  $\hat{p}$  is the sample proportion,  $n$  is the sample size, and  $z^*$  is the appropriate value for your desired level of confidence.

To find out whether the instruments are reliable, researcher did the test pre-test of the instruments to determine the consistence. After a pre-test, if the scale is 0.7



and above the questioner was deemed reliable. This was achieved by running a Cronbach test on SPSS version 21.

### **3.7 Data collection procedure**

Mugenda and Mugenda, (2003) defines data as facts and figures of known or available information. Data are more than information of experiences or memories of a teller of a life story. They are all the relevant materials, past and the present, serving as the bases for study and analysis. Data collection therefore is the process of gathering such information from all the available sources with the main purpose of using such data in a research or a study. The data was collected using both primary and secondary methods. Mugenda and Mugenda (2003), primary data is where the researcher collects first hand data through the use of instruments such as surveys, experiments, case studies and questionnaires.

Questionnaires were used in data collection. According to Boslaugh, (2007) secondary data is information collected by someone else for some other purpose. Secondary sources used included books, magazines and the internet that involves; looking into already done materials was also used in data collection.

### **3.8 Data analysis techniques**

Data analysis refers to examining what has been collected in the survey or experiment and making deductions and inferences. It involved scrutinizing the acquired information and making inferences. Data analysis entailed separation of

data into constituent parts of the elements separately, or in relation to the whole. The quantitative data was analyzed by use of descriptive statistics such as mean and standard deviations (Kombo, 2006). Data in the questionnaires was coded and entered in SPSS version 21 software. The data was then analyzed. The analyzed data was presented in tables and graphs in order to be able to interpret, compare and make conclusion. The qualitative data was presented in prose form.

### **3.9 Ethical considerations**

The response from the respondent was confidential. The researcher respected people's opinions on the study. The researcher did not interfere with interviewer's time and did not disturb their privacy. The researcher assured respondents that the name of the school and the identity of the respondent remained confidential. This was done by telling the respondents not to indicate their names or name of the school.

## CHAPTER FOUR

### DATA ANALYSIS PRESENTATION AND DISCUSSION

#### 4.1 Introduction

This chapter presents data analysis data analysis presentation and conclusion. It consists of questionnaire return rate, demographic characteristics of respondents, presentation and analysis of the questions and regression analysis.

#### 4.2 Questionnaire return rate

The questionnaire return rate results are shown in Table 4.1.

**Table 4.1: Response rate**

<b>Respondents</b>	<b>Expected</b>	<b>Actual</b>	<b>Percentage (%)</b>
	<b>Response</b>	<b>Response</b>	
Head teachers	38	25	65.7
Teachers	44	40	90.9
Parents	333	300	90.1
School committee members	186	154	82.7
<b>Total</b>	<b>601</b>	<b>519</b>	<b>86.36</b>

The head teachers' response rate was 65.7%, teachers' response rate was 90.9%, parents' response rate was 90.1% and school committee members' response rate

was 82.7%. This reasonable response rate was achieved after the researcher made physical visits to remind the respondent to fill-in and return the questionnaires.

### **4.3 Demographic characteristics of respondents**

This section presents background information on the demographic data of the head teachers, teachers and parents highlighting basic characteristics of the target population in the study. It provides a summary concerning gender of the respondents, their age, academic qualifications professional qualification, teaching experience, the number of years served by the head teachers and teachers.

#### **4.3.1 Gender**

Gender refers to the basic and general distribution of the head teachers, teachers and pupils in the district. The head teachers were requested to state their gender and they gave the results as presented in Table 4.2.

**Table 4.2: Gender of the respondents**

	<b>Head teachers and teachers</b>		<b>Parents</b>	
	<b>Frequency</b>	<b>Percentage</b>	<b>Frequency</b>	<b>Percentage</b>
Female	60	92.3	206	68.6
Male	5	7.6	94	31.3
<b>Total</b>	<b>65</b>	<b>100.00</b>	<b>300</b>	<b>100.00</b>

The findings in Table 4.2 indicate that 92.3% of the head teachers and teachers were female. In addition, 68.6% of the parents were female. The analysis correlates the findings by Kimu (2012) who stated that the rural areas have higher concentration of female than male teachers.

#### 4.3.2 Age of respondents

Head teachers, teachers and parents were requested to state their age and Table 4.3 indicates the age distribution of the head teachers, teachers and parents in the district.

**Table 4.3: Age of the respondents**

	Head teachers and teachers		Parents	
	Frequency	Percentage	Frequency	Percentage
20- 30 years	6	9.2	169	56.3
31 – 40 years	32	49.2	127	42.3
41 – 50 years	22	33.8	3	1.0
51 and above	5	7.6	1	0.3
<b>Total</b>	<b>65</b>	<b>100.00</b>	<b>300</b>	<b>100.00</b>

The data in Table 4.3 indicated that 49.2% of the head teachers and teachers were aged 31 – 40 years. In addition, 56.3% of the parents were aged 20- 30 years. This is an ideal age by which the head have already gained a wealth of experience in

the profession. Most teachers gain experience with age in the teaching profession. This may lead to better content delivery hence improved performance for the children.

#### **4.3.3 Head teachers' teaching experience**

Head teachers were asked to state the number of years they had taught in the school and the results are shown on Table 4.4.

**Table 4. 4: Teaching experience of the head teachers**

	<b>Frequency</b>	<b>Percentage</b>
Below 2 years	2	3.0
2-5 years	9	13.8
5- 10 years	38	58.4
Over 10 years	16	24.6
<b>Total</b>	<b>65</b>	<b>100.00</b>

The results in Table 4.4 indicated that 58.4% of the head teachers and teachers had taught for 5- 10 years. This was enough time for them to have developed a teaching and school culture which has a direct influence on their capability and knowledge base on the implementation of inclusive education in the schools (Fullan, 2003).

#### **4.4 Presentation and analysis of the questions**

The data analysis on the socio-economic factors influencing internal efficiency in ECD centers in Mwingi Central District, Kitui County is presented in this section. It presents the responses of the head teachers, teachers, parents and school committee members on the influence of school physical facilities on enrolments at ECD centers, teacher's level of training influence on performance of children at ECD centers, effect of the feeding programme on school dropout rate at ECD centers and influence of parent level of income on completion rate at ECD centers in Mwingi Central District.

##### **4.4.1 Influence of school physical facilities on enrolments at ECD centers**

This section answers the question on the influence of school physical facilities on enrolments at ECD centers in Mwingi Central District.

###### **4.4.1.1 Population in the schools as per class**

The question sought from the head teacher's and teacher's information on the number of children in the school per class. The responses are shown on Table 4.5.

**Table 4. 5: Number of children in the schools per class**

	<b>Frequency</b>	<b>Percentage</b>
Less than 20	6	9.2
21-40 children	48	73.8
41-50 children	8	12.3
More than 50 children	3	4.6
<b>Total</b>	<b>65</b>	<b>100.00</b>

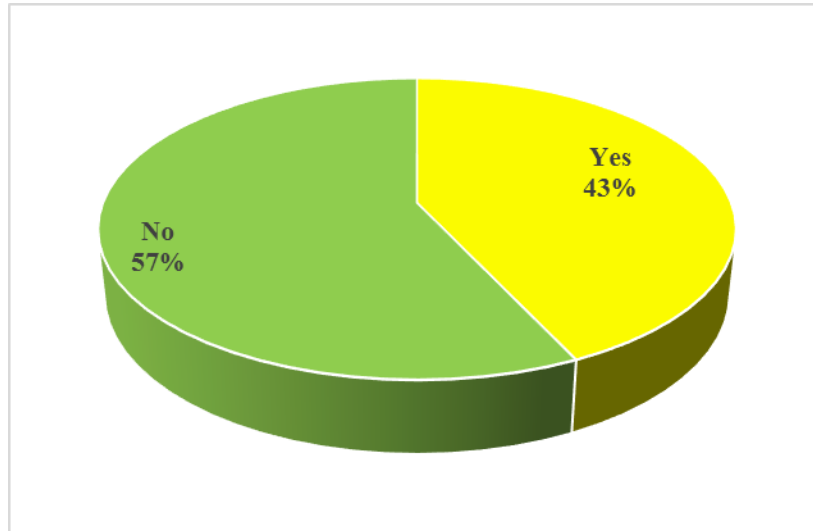
The data in Table 4.5 indicated that 73.8% of the head teachers and teachers indicated that the number of children in the school per class was 21-40 children. This implies that the ECD centers teacher-child ratio was average thus teachers were able to follow up on every child. A similar study carried out in Asian countries confirmed that schools which have increased class size had yet shown reduced wastage in terms of dropout and repetition (Bishop, 1989).

#### **4.4.1.2 Satisfaction with quality of sanitary facilities at the ECD centres**

The question aimed at finding out whether the head teachers and teachers were satisfied with the quality of sanitary facilities at the ECD centres. The responses are shown in Figure 4.1.



**Figure 4.1: Whether the respondents were satisfied with the quality of sanitary facilities**



The findings on Figure 4.1 indicated that 57% of the head teachers and teachers indicated that they were not satisfied with the quality of sanitary facilities. This implies that the sanitary facilities in most ECD centers were not child friendly. Mbugua (1987) says that one of the duties of the head teachers in Kenya is to develop the school's physical facilities.

#### **4.4.1.3 Adequate facilities in the ECD centres**

This question meant to investigate from the head teachers on whether there were adequate facilities in the ECD centres. The results are shown in Table 4.6.

**Table 4. 6: If the facilities in the schools were enough**

Facilities	Not at all adequate		Not adequate		Moderately adequate		Adequate		Very adequate	
	F	%	F	%	F	%	F	%	F	%
Textbooks	4	6	7	10	40	61	12	18	3	5
Toys	3	5	47	72	2	3	7	10	7	10
Chalks	5	7	2	3	3	5	42	64	14	21
Blackboard/white board	3	4	5	8	7	10	43	66	8	12
Playing ground	8	13	9	14	38	58	5	8	5	7
Toilet	3	4	41	63	10	16	7	10	5	7
Water	4	6	39	60	7	10	7	11	8	13
Desks	3	4	5	8	46	70	7	10	5	8
Classrooms	5	7	6	9	5	7	45	69	5	8

In Table 4.6, the head teachers and teachers indicated that blackboard/white board, chalks and classrooms were adequate as shown by 64%, 66% and 69% respectively. This implies that most ECD centers in the area had class facilities though not enough. This was in agreement with Shami and Hussain (2005) who indicated that physical facilities including drinking water, electricity, boundary wall, toilets, furniture, playgrounds, libraries, and dispensaries have a significant positive influence on the performance of the students and their achievement.

#### 4.4.1.4 Effect of school facilities

This question meant to investigate from the head teachers and teachers the extent that they agreed about the facilities in the ECD centres. The results are shown in Table 4.7.

**Table 4. 7: Extent to which head teachers and teachers’ agreed with the school facilities statements**

Statements	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Shortage to physical resources and facilities at school level increase dropout rate among children	3	5	5	8	49	76	4	6	3	5
School facilities affect the value of teaching thus children’ performance	2	3	2	3	3	4	53	81	6	9
Availability of physical facilities in schools influences the enrolment of children	2	3	5	7	5	7	10	15	44	68
Lack or inadequate facilities in schools affect the teaching process	5	7	5	8	7	10	47	72	2	3
Availability of facilities contribute to conducive learning environment	3	4	7	10	10	16	5	7	41	63

The data in Table 4.7 indicated that the head teachers and teachers strongly agreed that availability of facilities contribute to conducive learning environment and availability of physical facilities in schools influences the enrolment of children as shown by 63% and 68% respectively. This is in agreement with Shiundu (1999) who indicated that shortage of physical resources and facilities at school level causes wastage of education, by raising the repetition and dropout rates.

#### **4.4.1.5 Physical facilities available at ECD centres**

The objective of this question was to ascertain from the school committee members if ECD center had physical facilities to make the kids comfortable. The school committee members indicated that ECD center had physical facilities to make the kids comfortable. The physical facilities included blackboard/white board, playing ground, toilets, desks, classrooms, chalks and textbooks. Physical facilities strive to give students a comfortable atmosphere in which they work and learn. All facilities must be provided to the schools for the students' better, concrete, and real experiences (Leeper and Silver, 1968).

#### **4.4.2 Teacher's level of training influence on performance of children**

This section outlines the teacher's level of training influence on performance of children at ECD centers in Mwingi Central District.

#### 4.4.2.1 Level of education of the head teachers and teachers

The question aimed at finding out from the level of education of the head teachers and teachers as shown on Table 4.8.

**Table 4. 8: Level of education of the head teachers and teachers**

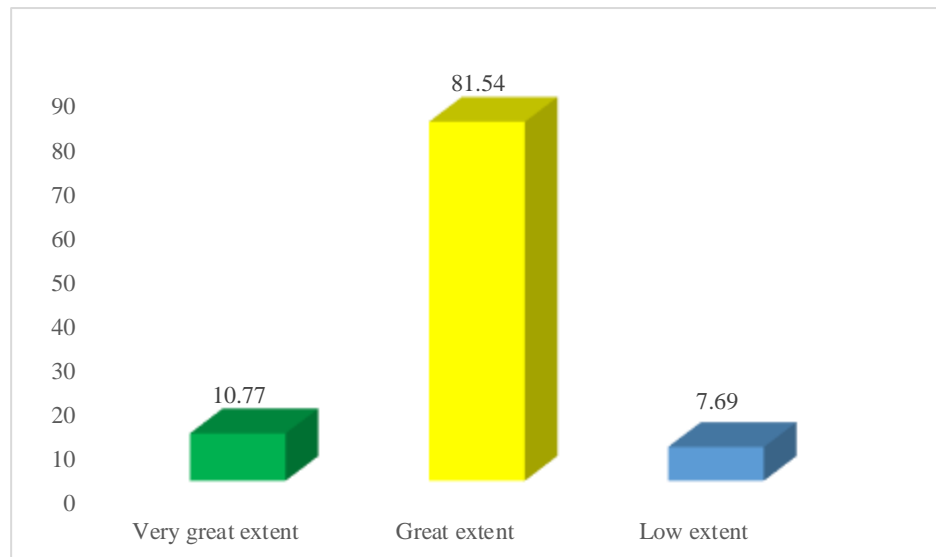
	Frequency	Percentage
Form four	7	10.7
Certificate in ECDE	38	58.4
Diploma in ECDE	18	27.6
Degree in ECDE	2	3.0
<b>Total</b>	<b>65</b>	<b>100.00</b>

The results in Table 4.8 indicate that 58.4% of the head teachers and teachers had a certificate in ECDE. This implies that qualified teachers were employed at most of the ECD centers which could lead to improved performance. Guskey and Clifford (2003) noted that the ultimate goal of teacher training is improving student outcomes.

#### 4.4.2.2 Extent that teacher's level of training affected performance at ECD centers

The question sought from the head teacher's and teacher's extent that teacher's level of training affected performance at ECD centers. The responses are shown on Figure 4.2.

**Figure 4. 2: Extent that teacher’s level of training affected performance at ECD centers**



The findings in Figure 4.2 indicated that 81.5% of the head teachers and teachers indicated that teacher’s level of training affected performance at ECD centers to a great extent. Sustained and intensive training is more likely to have an influence on enhanced teacher knowledge and skills and consequently student achievement than short training activities (Porter, Birman and Garet, 2001).

This question meant to investigate from the head teachers and teachers on the rate of absenteeism among teachers. The results were represented in Table 4.9.

**Table 4. 9: Respondents' view on absenteeism among teachers**

	<b>Frequency</b>	<b>Percentage</b>
Very high	3	4.6
High	6	9.2
Average	42	64.6
Low	9	13.8
Very low	5	7.6
<b>Total</b>	<b>65</b>	<b>100.0</b>

The findings in Table 4.9 indicated that 64.6% of the head teachers and teachers rated absenteeism among teachers as average. This implies that absenteeism was mostly average among the teachers and could have a positive influence on kid's performance.

#### **4.4.2.4 Teacher turnover rate**

This question meant to investigate from the head teachers and teachers the teacher turnover rate. The results are shown in Table 4.10.

**Table 4. 10: Rating teacher turnover rate in the last one year**

	<b>Frequency</b>	<b>Percentage</b>
Very high	2	3.0
High	3	4.6
Average	36	55.3
Low	17	26.1
Very low	7	10.7
<b>Total</b>	<b>65</b>	<b>100.00</b>

The findings in Table 4.10 indicated that 55.3% of the head teachers and teachers rated teacher turnover rate in the last one year as average. This implies that turnover rate was mostly average among the teachers.

#### **4.4.2.5 Language used when teaching the children**

This question meant to investigate from the head teachers and teachers the language used when teaching the children. The results are shown in Table 4.11.

**Table 4. 11: Language used when teaching the children**

	<b>Frequency</b>	<b>Percentage</b>
Mother tongue	23	35.3
English	4	6.1
Kiswahili	17	26.1
English and Kiswahili	21	32.3
<b>Total</b>	<b>65</b>	<b>100.00</b>



The results in Table 4.11 indicated that 35.3% of the head teachers and teachers indicated that the language used when teaching the children was mother tongue. Hence, this led to better content delivery thus increased performance.

#### 4.4.2.6 Extent that training affected performance at ECD centres

This question meant to investigate from the head teachers and teachers the extent that training affected performance at ECD centres. The results are shown in Table 4.12.

**Table 4. 12: Extent that training affected performance at ECD centres**

Statements	Very low extent		Low extent		Moderate extent		Great extent		Very great extent	
	F	%	F	%	F	%	F	%	F	%
Teachers attitude	3	4	5	7	7	10	7	10	45	69
Qualification	5	7	7	10	42	64	5	8	7	11
Experience	2	3	8	13	7	10	38	58	10	16
Classroom management	7	10	3	5	4	6	4	6	47	73
Interaction with children's academic achievement	3	5	10	15	38	58	8	12	7	10

The findings in Table 4.12 indicated that classroom management and teachers attitude affected performance at ECD centres to a very great extent as shown by 73% and 69% respectively. According to Ngala (1997), other factors held

constant, there exists a positive correlation between teacher training and student academic achievement in final examinations.

#### 4.4.2.7 Effect of teacher's training on performance

This question meant to investigate from the head teachers and teachers the extent to which they agreed with effects of training on performance. The results are shown in Table 4.13.

**Table 4. 13: Extent to which the respondents agreed with the training statements**

Statements	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Qualities of teaching staff in schools affect the performance of schools	5	7	5	8	8	12	46	70	2	3
Teachers experience and salary tends to have positive influence on academic achievement.	6	9	2	3	6	9	42	65	9	14
Teacher-pupil ratios have effect on students' achievement	2	3	4	6	7	10	5	8	47	73

The results in Table 4.13 indicated that the head teachers and teachers strongly agreed that teacher-pupil ratios have effect on students' achievement as shown by 73%. This is in agreement with Ngala and Odebero (2010) in Rift Valley and

Nyanza provinces on staff development programs as it relate to teacher effectiveness, it was discovered that teachers in high performing schools took more interest in staff training programs compared to their colleagues in the average and low performing schools.

#### **4.4.2.8 Quality of education in ECD centres**

The question aimed at finding out from the parents how they rated the quality of education in ECD center as shown on Table 4.14.

**Table 4. 14: Rating of the quality of education in ECD centres**

	<b>Frequency</b>	<b>Percentage</b>
Very good	13	4.3
Good	39	13.0
Moderate	239	79.6
Bad	9	3.0
<b>Total</b>	<b>300</b>	<b>100.0</b>

The findings in Table 4.14 indicated that 79.6% of the parents rated the quality of education in ECD center as moderate. Ferguson (1991), suggested that teacher training may play an important role in student academic achievement.

This question meant to investigate from the school committee members if they checked qualification and education level of teachers before employing them at the ECD.

The minimum education level needed for the teacher to be employed at the ECD centre was form four certificate. Sanders and Rivers (1996) observed that teacher effectiveness is highly influenced by teacher training.

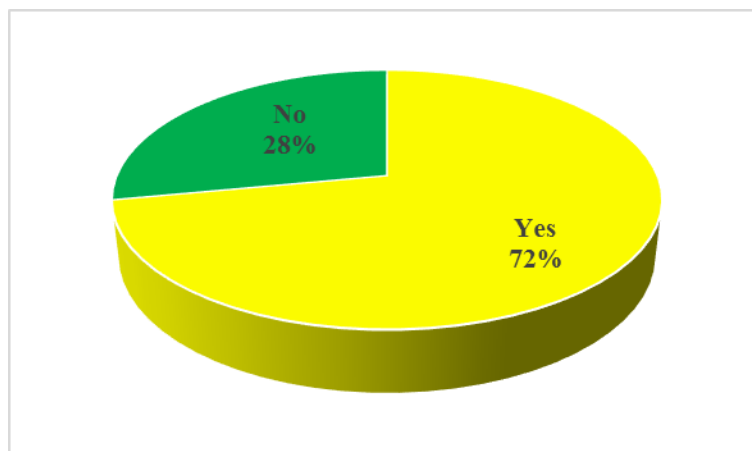
#### **4.4.3 Effect of the feeding programme on school dropout rate at ECD centers**

This section outlines the effect of the feeding programme on school dropout rate at ECD centers in Mwingi Central District.

##### **4.4.3.1 Feeding programme at the ECD centre**

The question aimed at finding out from the head teacher and teachers if the schools had a feeding programme as shown on Figure 4.3.

**Figure 4. 3: If the school had a feeding programme**



The findings on Figure 4.3 indicate that 72% of the head teachers and teachers had a feeding programme in place. This implies that feeding programme was essential in the ECD centers. Ahmed (2004) found a positive effect of school feeding programs, both in-school meals and take-home rations, on reducing the dropout rate. Thus, this led to reduced drop out rate in schools.

#### **4.4.3.2 Extent that feeding programme helped to reduce school dropout rate at ECD centres**

The question sought from the head teacher's and teacher's information on the the extent that feeding programme helped to reduce school dropout rate at ECD centres.

**Table 4. 15: Extent that feeding programme helped to reduce school dropout rate at ECD centres**

<b>Statements</b>	<b>Very low extent</b>		<b>Low extent</b>		<b>Moderate extent</b>		<b>Great extent</b>		<b>Very great extent</b>	
	F	%	F	%	F	%	F	%	F	%
Lunch	3	5	5	7	5	8	46	70	7	10
Tea or porridge during break time	6	9	3	4	45	69	4	6	8	12

The findings in Table 4.15 indicated that the head teachers and teachers indicated that lunch helped to reduce school dropout rate at ECD centres to a great extent as shown by 70%. According to Adelman, Jennifer, Agüeros, Marcel, Allam, Sahar, Prieto (2008), in-school meals programs may also have an impact on cognitive development, though the size and nature of the effect vary greatly by program, micronutrient content of the food, and the measure of cognitive development used.

#### 4.4.3.3 Extent to which head teachers and teachers' agreed with the feeding programme

This question meant to investigate from the head teachers and teachers to what extent they agreed with feeding programme statements.

**Table 4. 16: Head teachers and teachers' agreement level with feeding programme statements**

Statements	Very low extent		Low extent		Moderate extent		Great extent		Very great extent	
	F	%	F	%	F	%	F	%	F	%
A free feeding programme helps to reduce school dropout rate	4	6	2	3	5	7	41	63	14	21
Parents feel more secure when their kids are provided with food at ECD centre	6	9	3	5	16	24	38	59	2	3

The results in Table 4.16 indicated that the head teachers and teachers agreed that a free feeding programme helps to reduce school dropout rate and parents feel more secure when their kids are provided with food at ECD centre as shown by 63% and 59% respectively. School feeding programs have a positive impact on learning achievement, as measured by increases in test scores and on drop-out rates (Ahmed, 2004).

#### **4.4.3.4 Feeding programme in ECD centres**

This question meant to investigate from the school committee members if the schools had a feeding programme.

The school committee members indicated that ECD centres had a feeding programme. The committee purchased the food which the parents paid for. Food for education programs have improved both school participation and learning and cognitive outcomes by increasing the consumption of nutritious food by undernourished children (Adelman, Jennifer, Agüeros, Marcel, Allam, Sahar, Prieto, 2008).

#### **4.4.4 Parent level of income on completion rate at ECD centers**

This section outlines the parent level of income on completion rate at ECD centers in Mwingi Central District.

#### 4.4.4.1 Extent that parent level of income helps to increase completion rate at ECD centres

The question aimed at finding out from the head teachers and teachers the extent that parent income level helps to increase completion rate at ECD centres as shown on Table 4.17.

**Table 4. 17: Extent that parent level of income level helps to increase completion rate at ECD centres**

Statements	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	F	%	F	%	F	%	F	%	F	%
Ability to pay school fees	9	14	1	2	3	5	2	3	49	76
Affordability of ECD education	3	4	5	8	8	12	45	69	5	7
Ability to purchase school uniform	5	8	3	4	4	6	51	78	3	4

The findings in Table 4.17 indicated that the head teachers and teachers indicated that ability to pay school fees helped to increase completion rate at ECD centres as shown by 76%. This indicates that parent level of income determines if the parents would afford to pay the kids school fees. Poverty and economic challenges of the time contribute to lack of motivation, negative self-concept in



terms of academic abilities, failures at school, domestic violence, delinquency and higher drop outs (Abagl and Odipo 1997).

#### 4.4.4.2 Parent level of income

The question sought from the extent to which head teacher's and teacher's agreed with the with parent income level statements.

**Table 4. 18: Extent that head teachers and teachers' agreed with parent level of income statements**

Statements	Very low extent		Low extent		Moderate extent		Great extent		Very great extent	
	F	%	F	%	F	%	F	%	F	%
Parents' income level affects completion rate at ECD education	3	5	3	4	2	3	10	16	47	72
Household ability and willingness to pay for education determine enrollment levels in schools	5	8	3	4	4	6	4	6	49	76
Perception of parent on return to education is a determinant of enrolling their children to a school	7	10	7	10	3	4	44	68	5	8
Malnutrition impact on enrollment levels in schools	2	3	1	2	13	20	42	65	7	10

The results in Table 4.18 indicated that the head teachers and teachers strongly agreed that household ability and willingness to pay for education determine enrollment levels in schools and parents' income level affects completion rate at ECD education as shown by a mean of 72% and 76% respectively. Children of wealthier households are less likely to drop out of school than their counterparts from poorer households. It has been observed that the wealth effect is significant for both boys and girls, urban and rural children (Koech Report, 1999).

#### **4.4.4.3 Affordability of the school fees**

This question meant to investigate from the school committee members if they faced problems of parents who were not able to pay the fees.

From the findings, the school committee members indicated that they faced problems of parents who were not able to pay the fees. They also had challenges with parents who were not able to afford the school uniform for their children. According to the Republic of Kenya (2002), about 56% of Kenyan population living below the poverty line is unable to enroll their children in school due to both direct and indirect costs of schooling.

#### **4.5 Regression analysis**

In this study, a multiple regression analysis was conducted to test the influence of school physical facilities, teacher's level of training, feeding programme, parent level of income on internal efficiency. The research used statistical package for

social sciences (SPSS Version 21) to code, enter and compute the measurements of the multiple regressions

**Table 4. 19: Results of multiple regression between internal efficiency in ECD centers (dependent variable) and the combined effect of the selected predictors**

Model	R	R Square	Adjusted R Square	Std. Error of the
				Estimate
1	.793	.726	.678	.2076
a. Predictors: (Constant), school physical facilities, teacher's level of training, feeding programme, parent level of income.				

The data in Table 4.19 indicated that R-Square (coefficient of determination) is a commonly used statistic to evaluate model fit. R-square is 1 minus the ratio of residual variability. The adjusted  $R^2$ , also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. 67.8% of the changes in internal efficiency in ECD centers variables could be attributed to the combined effect of school physical facilities, teacher's level of training, feeding programme and parent level of income.

**Table 4. 20: ANOVA results of the regression analysis between internal efficiency in ECD centers and predictor variables**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	12.223	4	3.112	3.971	.001
	Residual	92.876	66	.641		
Total		115.099	70			

a. Predictors: school physical facilities, teacher's level of training, feeding programme, parent level of income.

b. Dependent Variable: internal efficiency in ECD centers.

The data in Table 4.20 indicated that the probability value of 0.001 indicates that the regression relationship was highly significant in predicting how school physical facilities, teacher's level of training, feeding programme, parent level of income influenced internal efficiency in ECD centers. The F critical at 5% level of significance was 3.971 since F calculated is greater than the F critical (value = 2.830), this shows that the overall model was significant.

**Table 4. 21: Regression coefficients of the relationship between internal efficiency in ECD centers and the four predictive variables**

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	2.770	0.451		4.307	0.000
	School physical facilities	+0.332	0.121	0.146	3.333	0.025
	Teacher's level of training	+0.433	0.079	0.126	3.214	0.025
	Parent level of income	+0.248	0.073	0.045	3.329	0.032
	Feeding programme	+0.142	0.073	0.142	3.425	0.021
a. Dependent Variable: internal efficiency in ECD centres						

The regression equation in Table 4.21 has established that taking all factors into account (school physical facilities, teacher's level of training, feeding programme, and parent level of income) constant at zero internal efficiency in ECD centres will be 2.770. The findings presented also show that taking all other independent variables at zero, a unit increase in teacher's level of training would lead to a 0.433 increase in the performance at ECD centres. Further, the findings shows

that a unit increase in school facilities would lead to a 0.332 increased enrolment at ECD centres. In addition, the findings show that a unit increase in parent level of income would lead to a 0.248 increase in completion rate at ECD centres. The study also found that a unit increase in the scores of feeding programme would lead to a 0.142 decrease in dropout rate at ECD centres. Overall, feeding programme had the least effect on internal efficiency in ECD centres and teacher's level of training had the highest effect.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter contains the summary of the entire study. It consists of summary of the findings, research findings, conclusion, recommendations and suggestions for further studies.

#### **5.2 Summary of the findings**

The purpose of this research study was to investigate the socio-economic factors influencing internal efficiency in ECD centers in Mwingi Central District, Kitui County. The objectives of the study were to determine the influence of school physical facilities on enrolments at ECD centers; to assess teacher's level of training influence on performance of children at ECD centers; to establish effect of the feeding programme on school dropout rate at ECD centers and to determine the parent level of income on completion rate at ECD centers. Responses from the objectives guiding the study were presented to show background information. Descriptive survey design was used to conduct the study.

The study targeted 124 ECD centers in the district with 147 teachers (142 female and 5 male) 620 school committee members and 1109 parents. The researcher used random sampling to select 38 ECD centers, 20 from public and 18 from private. The sample consisted of 38 head teachers, 44 teachers, 186 school committee members and 333 parents. The researcher made use of questionnaires.

The questionnaires were administered to the respondents, and then collected immediately after they are filled in. The researcher also used an interview guide for the school committee members. The instrument was tested for reliability through test-retest technique with a reliability coefficient of 0.88 for head teacher's and teacher's questionnaire and 0.92 for the parents' questionnaire. Descriptive statistics was used to analyze data which was assembled, coded with the assistance of Statistical Package for Social Sciences (SPSS) programmes which generated frequency tables, percentages and bar graphs.

### **5.3 Research findings**

The findings suggest that focusing on social economic factors is fundamental to improved internal efficiency in ECD centres. Focusing on the influence of school physical facilities on enrolments at ECD centers, teacher's level of training influence on performance of children at ECD centers, effect of the feeding programme on school dropout rate at ECD centers and parent level of income on completion rate at ECD centers is vital in improving internal efficiency in Mwingi Central District, Kenya. Taking all factors into account (school physical facilities, teacher's level of training, feeding programme, and parent level of income) constant at zero internal efficiency in ECD centres will be 2.770.



### **Influence of school physical facilities on enrolments at ECD centers**

The researcher found that 73.8% of the head teachers and teachers indicated that the number of children in the school per class was 21-40 children. The class was manageable. In addition, 57% of the head teachers and teachers indicated that the schools did not have adequate toilets. Blackboard/white board, chalks and classrooms were adequate as shown by 64%, 66% and 69% respectively. Availability of facilities contributed to conducive learning environment and availability of physical facilities in schools influences the enrolment of children as shown by 63% and 68% respectively. Lack or inadequate facilities in schools affected the teaching process and school facilities affected the value of teaching thus children's performance. ECD center had physical facilities to make the children comfortable. Taking all other independent variables at zero, a unit increase in teacher's level of training would lead to a 0.433 increase in the internal efficiency in ECD centres.

### **Effect of teacher's level of training influence on performance of children at ECD centers**

The research established that 58.4% of the head teachers and teachers had a certificate in ECDE. In addition, 81.5% of the head teachers and teachers indicated that teacher's level of training affected performance at ECD centers to a very great extent. Absenteeism among teachers was moderate as indicated by 64.6% head teachers and teachers. Teacher turnover rate in the last one year was

moderate as indicated by 55.3% head teachers and teachers. The language used when teaching the children was mother tongue, English and Kiswahili. Classroom management and teachers attitude affected performance at ECD centres to a very great extent as shown by 73% and 69% respectively. Experience affected performance at ECD centres to a great extent. Teacher-pupil ratios have effect on children's achievement. Teachers experience and salary tends to have positive influence on academic achievement and qualities of teaching staff in schools affect the performance of schools. Moreover, 79.6% of the parents rated the quality of education in ECD center as moderate. The minimum education level needed for the teacher to be employed at the ECD centre was form four certificate. A unit increases in school facilities would lead to a 0.332 increase in internal efficiency in ECD centres.

#### **Effect of the feeding programme on school dropout rate at ECD centers**

The researcher that 72% of the head teachers and teachers indicated that schools had a feeding programme. Free feeding programme helps to reduce school dropout rate as shown by 70% and parents feel more secure when their children are provided with food at ECD centre. The committee purchased the food which the parents paid for. A unit increase in parent level of income would lead to a 0.248 increase in internal efficiency in ECD centres.

### **Influence of parent level of income on completion rate at ECD centers**

The research established that ability to pay school fees helped to increase completion rate at ECD centres as shown by 76%. Ability to purchase school uniform and affordability of ECD education helped to increase completion rate at ECD centres. Household ability and willingness to pay for education determine enrollment levels in schools and parents' income level affects completion rate of ECD education as shown by 72% and 76% respectively. School committee members faced problems of parents who were not able to pay the fees and had challenges with parents who were not able to afford the school uniform for their children. A unit increase in the scores of feeding programme would lead to a 0.142 increase in internal efficiency in ECD centres.

### **5.3 Conclusion**

On the question, the extent the school physical facilities influenced enrolment at ECD centers in Mwingi Central District, this research concludes that the ECD classes had a manageable population. The schools had physical facilities though they were not enough. The facilities contributed to conducive learning environment. Shortage of physical facilities at school level caused wastage of education. School facilities and academic achievement of children were associated directly. Availability of physical facilities in schools played a major role in influencing children's retention.

On the question, the extent the teacher's level of training influenced performance at ECD centers in Mwingi Central District, the study reveals that head teachers and teachers employed in ECD centers were qualified and most had undergone ECD training. There was minimal absenteeism and turnover among the teachers. Experience affected performance at ECD centres. Classroom management and teachers attitude affected performance at ECD centres. Teacher's level of training had the highest effect on internal efficiency in ECD centres.

On the question, the extent the feeding programme influenced school dropout rate at ECD centers in Mwingi Central District, this study concludes that the schools had a feeding programme. The feeding programme in the schools was funded by the parents. The school feeding program reduced drop-out rate among children. Feeding programme had the least effect on internal efficiency in ECD centres.

On the question, extent that parent income level influenced completion rate at ECD centers in Mwingi Central District, the study reveals that some parents were not able to afford the ECD fees and uniform. Household ability and willingness to pay for education determine enrollment levels in schools. Affordability of ECD education helped to increase completion rate at ECD centres.

## **5.4 Recommendations**

- The CDF committee members need to offer funds for developing ECD centers. The funds will help to put in place the physical facilities.
- The ministry of education needs to provide funds to support ECD centers.
- Ministry of education needs to consider employing the ECD teachers.
- The CDF committee members need to help in paying the ECD teachers. This will help to employ qualified teachers with ECD training.
- The ministry of education needs to offer short courses and seminars for ECD teachers to help them change with time.
- The untrained teachers should be encouraged to join ECD colleges for holiday studies.
- The government needs to provide free feeding programme to ECD centers in places affected by drought and semi-arid areas.
- The school committee needs to come up with a feeding programme which is cheap and affordable. This will help to reduce the money burden from the parents.
- The government needs to make ECD education free.
- The government need to provide children with books, crayon, pencils and other equipments they may need while learning.

### **5.5 Suggestions for further studies**

- Further research needs to be done on socio-economic factors influencing internal efficiency in ECD centers in Kitui County.
- Further studies should be done on the factors influencing internal efficiency in primary schools.
- Also a study should be done on other factors other than socio economic factors influencing internal efficiency in ECD centers.

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## APPENDICES

### Appendix A: Letter of introduction

Annah K. Muli

University of Nairobi,

School of Education

P.O. Box.92,

Kikuyu, Kenya.

March, 2015

Dear Sir/Madam,

I am a postgraduate student pursuing a Masters of Education in Economics of Education at The University of Nairobi. I am required to carry out research on

**“Influence of socio-economic factors on internal efficiency in early childhood development centres in Mwingi central district, Kenya”.**

The purpose of this letter is to request you to kindly allow me to carry out the study in your school. The identity of the respondents will be treated with absolute confidentiality and the data collected will only be used for the purpose of this study.

Yours faithfully,

Annah K. Muli

## **Appendix B: Questionnaire for the head teachers and teachers**

This questionnaire is designed to collect general information about your school.

Please answer the questions honestly. The answers you give will be treated with utmost confidentiality. Please do not indicate the school name or your name anywhere on this questionnaire.

### **Section A: Demographic information**

1. Indicate your gender

Female            ( )                      Male            ( )

2. What is your age bracket?

20- 30 years    ( )                      31 – 40 years    ( )

41 – 50 years    ( )                      51 and above    ( )

3. Indicate your teaching experience

Below 2 years ( )                      2-5 years        ( )

5- 10 years     ( )                      Over 10 years    ( )

4. How many years have you been teaching ECD.

.....

### **Section B: School physical facilities**

1. Give the number of children in your school per class (2014)

Less than 20    ( )                      21-40 children        ( )

41-50 children ( )                      More than 50 children ( )

2. Are you satisfied with the number of sanitary facilities at the ECD centre?

Yes                ( )                      No                ( )

3. Are the following facilities in your school enough? Where 1=not at all and

5 = very adequate

<b>Facilities</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Textbooks					
Toys					
Chalks					
Blackboard/white board					
Playing ground					
Toilet					
Water					
Desks					
Classrooms					

4. What is agreement level with the following statements? Where 1=strongly

disagree and 5=strongly agree.

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Shortage to physical resources and facilities at school level increase dropout rate among children					
School facilities affect the value of teaching thus children' performance					
Availability of physical facilities in schools influences the enrolment of children					
Lack or inadequate facilities in schools affect the teaching process					
Availability of facilities contribute to conducive learning environment					

### Section C: Teacher's level of training

5. What level of education do you possess?

- Form four      ( )                      Certificate in ECDE      ( )
- Diploma in ECDE ( )                      Degree in ECDE                      ( )
- Other (Specify)                      ( )

6. To what extent does teacher's level of training affect performance at ECD centers?

- Very great extent      ( )                      Great extent
- Low extent ( )

7. How would you rate absenteeism among teachers?

- Very high      ( )                      High      ( )
- Moderate      ( )                      Low      ( )
- Very low      ( )

8. How would you rate teacher turnover rate in the last one year?

- Very high      ( )                      High      ( )
- Moderate      ( )                      Low      ( )
- Very low      ( )

9. Which language do you use when teaching the children?

- Mother tongue( )                      English                      ( )
- Kiswahili      ( )                      English and Kiswahili ( )

10. To what extent do the following affect performance at ECD centres.

Where 1= very low extent and 5= very great extent

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Teachers attitude					
Qualification					
Experience					
Classroom management					
Interaction with children' academic achievement					

11. What is agreement level with the following statements? Where 1=strongly disagree and 5=strongly agree.

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Qualities of teaching staff in schools affect the performance of schools					
Teachers experience and salary tends to have positive influence on academic achievement.					
Teacher-pupil ratios have effect on students' achievement					

#### **Section D: Feeding programme**

12. Does the school have a feeding programme?

Yes ( )                      No ( )

13. To what extent do the following help to reduce school dropout rate at ECD centres. Where 1= very low extent and 5= very great extent

Statements	1	2	3	4	5
Lunch					
Tea or porridge during breaktime					

14. What is agreement level with the following statements? Where 1=strongly disagree and 5=strongly agree.

Statements	1	2	3	4	5
A free feeding programme helps to reduce school dropout rate					
Parents feel more secure when their kids are provided with food at ECD centre					

### Section E: Parent income level

15. To what extent do the following helps to increase completion rate at ECD centres. Where 1= very low extent and 5= very great extent

Statements	1	2	3	4	5
Ability to pay school fees					
Affordability of ECD education					
Ability to purchase school uniform					

16. What is agreement level with the following statements? Where 1=strongly disagree and 5=strongly agree.

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Parents' income level affects completion rate of ECD education					
Household ability and willingness to pay for education determine enrollment levels in schools					
Perception of parent on return to education is a determinant of enrolling their children to a school					
Malnutrition impact on enrollment levels in schools					

### **Appendix C: Questionnaire for the parent**

This questionnaire is designed to collect general information about your school.

Please answer the questions honestly. The answers you give will be treated with utmost confidentiality. Please do not indicate the school name or your name anywhere on this questionnaire.

#### **Section A: Demographic information**

1. Indicate your gender

Female            ( )                      Male            ( )

2. What is your age bracket?

20- 30 years    ( )                      31 – 40 years    ( )

41 – 50 years    ( )                      51 and above    ( )

3. What is your level of education?

Primary            ( )                      Secondary        ( )

College            ( )                      University        ( )

4. What is your occupation?

.....

5. How would you rate the quality of education in ECD center your kids go to?

Very good        ( )                      Good            ( )

Moderate        ( )                      Bad            ( )

Worst            ( )



6. What is agreement level with the following statements? Where 1=strongly disagree and 5=strongly agree.

<b>Statements</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Parents' income level affects completion rate of ECD education					
Household ability and willingness to pay for education determine enrollment levels in schools					
Perception of parent on return to education is a determinant of enrolling their children to a school					
Malnutrition impact on enrollment levels in schools					

## **Appendix D: Interview guide for school committee members**

1. Does the ECD center have physical facilities to make the kids comfortable? Which ones?

.....  
.....

2. When employing teachers for the ECD, do you check their qualification and their education level.

.....  
.....

3. What is the minimum education level needed for the teacher to be employed at the ECD centre?

.....  
.....

4. Do the ECD centre have a feeding programme?

.....  
.....

5. Who provides the food and do the parents pay for it.

.....

.....

Do you face problems of parents who are not able to pay the fees?

.....

.....

Do you have challenges with parents who are not able to afford the school uniform for their children?

.....


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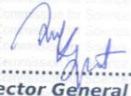
## Appendix E: Research authorization permit

**THIS IS TO CERTIFY THAT:**  
**MS. ANNAH KAMENE MULI**  
**of UNIVERSITY OF NAIROBI, 0-90400**  
**Mwingi, has been permitted to conduct**  
**research in Kitui County**


**on the topic: SOCIO- ECONOMIC**  
**FACTORS INFLUENCING INTERNAL**  
**EFFICIENCY IN EARLY CHILDHOOD**  
**DEVELOPMENT CENTRES IN MWINGI**  
**CENTRAL DISTRICT, KENYA.**

**for the period ending:**  
**31st August, 2015**

  
Applicant's  
Signature


  
Director General  
National Commission for Science,  
Technology & Innovation


Permit No : NACOSTI/P/15/5424/6528  
Date Of Issue : 30th June, 2015  
Fee Received : Ksh 1000



**CONDITIONS**

- 1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit**
- 2. Government Officers will not be interviewed without prior appointment.**
- 3. No questionnaire will be used unless it has been approved.**
- 4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.**
- 5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.**
- 6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice.**

  
**REPUBLIC OF KENYA**

  
**National Commission for Science,  
Technology and Innovation**

**RESEARCH CLEARANCE  
PERMIT**

Serial No. A **5519**

**CONDITIONS: see back page**

## Appendix F: Letter of authorization



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349, 310571, 2219420  
Fax: +254-20-318245, 318249  
Email: secretary@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref: No.

Date:

**30<sup>th</sup> June, 2015**

**NACOSTI/P/15/5424/6528**

Annah Kamene Muli  
University of Nairobi  
P.O. Box 30197-00100  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Socio-economic factors influencing internal efficiency in Early Childhood Development Centres in Mwingi Central District, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Kitui County** for a period ending **31<sup>st</sup> August, 2015**.

You are advised to report to **the County Commissioner and the County Director of Education, Kitui County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

  
**DR. S. K. LANGAT, OGW**  
**FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Kitui County.

The County Director of Education  
Kitui County.