INFLUENCE OF SCHOOL RELATED FACTORS ON IMPLEMENTATION OF EARLY CHILDHOOD DEVELOPMENT EDUCATION PROGRAMMES IN KAKAMEGA SOUTH SUBCOUNTY, KENYA

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DECLARATION AND APPROVAL

Declaration by candidate

This project is my original work and has not been, presented for a degree in any other university or for any other award.

Signed: ..... Date: 05/11/2024

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Approval by the Supervisors

I confirm that the candidate under our supervision carried out this research project.

Signed: ..... Date: 05/11/2024

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DEDICATION

This research project is dedicated to Muchiti's family for its moral and financial support.

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ABSTRACT

Concerns have been raised over the state of the ECDE programmes implementation with regard to the negative teacher attitudes towards selection and use of instructional resources due to low remuneration, lack of time and demotivation. Thus, the purpose of the study was to investigate the school-based factors influencing the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County. The objectives of the study were to: Establish the influence of teaching and learning materials on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; assess the influence of teachers' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; determine the influence of instructional strategies on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; and find out the influence of learners' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. The information provided by this research will benefit policymakers, community members and academicians. It adopted a descriptive survey research design, with a target population of 4 ECDE Officers, 81 Head Teachers, 243 ECDE teachers and 243 ECDE Parents Representatives. The sample size of the study was 234 persons and stratified sampling technique was employed. The researcher collected data using questionnaires and interview guides. The researcher collected data using questionnaires and interview guides. The instruments were validated by the supervisors. Reliability of the instruments was determined through a pilot study, and thereafter, Cronbach alpha coefficients. Quantitative data was analyzed using descriptive and inferential statistics and presented in tables, while qualitative data analyzed in themes and sub themes and presented using quotations. The study established that school-based factors such as teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics influence the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. It was therefore recommended that there should be a consideration of school-based factors such as teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics as this will enhance the implementation of Early Childhood Development programmes.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS AND ACRONYMS

ECDE	Early Childhood Development Education
MDGS	Millennium Development Goals
NACOSTI	National Commission for Science, Technology and Innovation
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter have the following sub-topics: background to the study, statement of the problem, the purpose of the study, objectives of the study, research hypothesis, significance of the study, study limitations and delimitations, assumptions to the study, and operational definition of key terms.

1.1 Background to the study

Childhood education is crucial in the life of a child because it lays the foundation of intellectual and physical development (Pratiwi, 2024). Early Childhood Education (ECE) comprises essential programmes and activities which are very important to the holistic development of a child (Alicamen, 2023). This is one of the main reasons why the government through programmes interventions has given a lot of attention to ensuring that the program becomes a success. Effective ECDE program implementation results in both short and long-term benefits to children and eventually the entire society (Loomis & Akkari, 2023). Consequently, the world conference on Education for All EFA of 1980 laid a lot of emphasis on the significance of early childhood years as the foundation of life for an individual. International protocols and conventions as well as national policies and legislations such as the United Nations convention on human rights, (1948), Jomtein Declaration of Education for all (1990), Dakar Declaration of Education for all (2000), millennium development goals, Children's act (2001) and the sustainable development goals all state that every child is entitled to basic rights among which education is Key (UNESCO, 2023). However, access and equity in the provision of education at this level have remained a challenge as in the context of poverty eradication (Newaz, 2023). Besides, although the

development and expansion of early childhood programmes have greatly increased in the region, its implementations are faced by many school-based factors (Azeem, Alam, & Gladushyna, 2024).

Early Childhood Development and Education (ECDE) constitutes household, community and the state's efforts to provide integrated development for children from birth to the age of entry into primary school (Lundy, Murray, Smith, & Ward, 2024). ECDE teachers deal with children aged between 3 and 6 years. Children who are below three years are generally taken care of by their parents or guardians and care givers or child minders at home (Su, Yim, Wegerif, & Wah Chu, 2024). Therefore, the emphasis on ECDE has been on provision of institutionalized education to children in the 3 - 6 years age group, as this is the critical stage where so many social attributes and personalities are formed (Sapon-Shevin, 2024). For average learners, at least one year of ECDE is adequate to provide a smooth transition from home to school life. In the ECDE centers, children are introduced to the kinds of experiences that help them to make fuller and more efficient use of what, later will be taught in primary school (Carlbaum & Rönnberg, 2024). The instruments to monitor the implementation of ECDE programmes include but not limited to facilities and teaching materials, curricula and teaching instructional methodologies to help ease children's transition from preschool to the primary school is yet another, and Appropriate teaching & learning resources materials (Barchok & Miroga, 2020).

Early Childhood Care and Education (ECCE) is the subject of considerable debate and interest among governments and politicians in all parts of the world. International organizations such as UNICEF and UNESCO gives more emphasis on the provision of quality early childhood education and care to all children. Their arguments stem from research evidence that has shown the long-term benefits of offering young children quality

care and education in the early years. The widely observed issue has been suffering many of the children all over the world with no discrimination between urban and rural, poor and rich, black and white people, hence, workable policies programmes have to be formulated to tackle the problem (Fernández Quiroga, 2024). In Indonesia, early childhood education is threatened to enter into the lost generation, due to distance learning, which causes confusion for teachers and parents to be able to provide the best stimulation for them. Therefore, the government established how productive it is in policy implementation, and what are the obstacles of the implementation at Early-Childhood Education (ECE). However, the implementation of online learning policy at ECE still takes a lot of effort to become more powerful in preventing a decline in learning. There are five obstacles in in applying the in the field, namely the ability of teachers, the ability of parents, economic capability, facility constraints, and pedagogical constraints (Muhdi, Nurkolis, & Yuliejantiningsih, 2020).

Africa as part of the world experience, early childhood care and education as its low level of development. Most African countries even those with the better level of economic development tend to implement early childhood care and education in unstructured way this make children grow in short of social emotional development in skills abilities attitudes to wads others negligence to social environments which at last results to the unconsolidated and unorganized social and emotional development of children which in turn will affect the social, economic, cultural and political aspects of a nation (Chikwanda, Bayat, & Madyibi, 2022). According to the 2019 General Household Survey (GHS), only about 37% of South African children aged 0–4 years attend ECD centres or other educational and childcare arrangements (Statistics South Africa, 2021). Many ECD centres are reportedly inadequate and of poor quality due to poor infrastructure, unqualified ECD staff, or limited teaching and learning resources (Bayat & Madyibi, 2021). In Ethiopia, even though there are a policy and standard provision for ECDE in the country, the great majority of private and public sample

preschools in Bahir Dar city administration had problems/challenges to implement the policy. The preschool curriculum and current preschool standard, the data analysis indicated that the practices of preschools got challenges: teachers' and principals' qualifications; teaching methods; the classroom environment and its organization; playgrounds and play equipment; parent teacher interactions; and assessment practices which are the indicators of the policy implementation for ECCE, were not properly implemented even if there were the effort to implement a policy preschools (Yizengaw & Tessega, 2020), thus a recommendation of further and more in-depth study should be carried out.

Kenya recognizes the importance of ECDE as the most important lever for accelerating the attainment of Education for all (EFA) and the Millennium Development Goals (MDGs) (Muthoni, Ouko, & Githui, 2022). Early Childhood Education in Kenya concerns itself with holistic development of children between 0+ and 5+ years old (Ameli, Ouda, & Ayaga, 2023). With the promulgation of the Kenya Constitution in 2010, devolution is one of the most transformative changes to Kenya's governance system where the responsibility of Early Year's Education (EYE) was delegated to county governments. Kakamega County through its short, medium and long-term plans came up with an Integrated Development Plan (CIDP) that helps the county in identification of the projects and programmes through various consultative forums at the sub-county level (Kakamega County Integrated Development Plan, 2023-2027). Despite all the benefits that may accrue from ECDE and the commitments made by the government of Kenya to achieve Basic Education for All (BEFA) through ECDE, there is still poor implementation of ECDE sub-sector characterized by low enrolment of children and high rate of dropouts caused by school factors (Rose, Aslam, & Simpson, 2024). In Kakamega South Sub- County, Kakamega County, the situation has deteriorated to the extent that primary schools doubt the preparedness of children promoted from ECDE centres to primary schools. Children who went through ECDE were not

adequately prepared for entry into primary schools (Anami, 2023). Consequently, the study investigated the influence of school-based factors such as teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics on implementation of ECDE programmes in Kakamega South Sub-County, Kakamega County.

1.2 Statement of the problem

Concerns have been raised over the state of the ECDE programmes implementation with regard to the negative teacher attitudes towards selection and use of instructional resources due to low remuneration, lack of time and demotivation. Factors contributing to poor implementation of the ECDE programs are yet to be established. The implementation of the ECDE programs in Preschools is however, faced with many factors. Some of these factors are general, affecting the program as a whole while others are specific to sub counties such as Kakamega South Sub- County, Kakamega County. Despite the effort by the government of Kenya, communities and other collaborating partners in trying to remedy this, there are various challenges that affect these efforts and make it difficult to implement the ECDE programmes for pre-schools. Moreover, learning has been ineffective in most Early Childhood Development Education (ECDE) centres with children having difficulties in mastering reading, manipulative, numeric and interpersonal skills despite several studies on instructional resources being carried out. If the condition is left to continue, the child's holistic development cannot be guaranteed in the 21st Century and beyond. Therefore, the study investigated the school-based factors influencing the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County.

1.3 Purpose of the Study

The purpose of this study was to investigate the school-based factors influencing the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County.

1.4 Objectives of the Study

The study achieved the following research objectives;

i. To establish the influence of teaching and learning materials on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.
ii. To assess the influence of teachers' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.
iii. To determine the influence of instructional strategies on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.
iv. To find out the influence of learners' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

1.5 Hypotheses of the study

$H0_1$: There is no statistically significant relationship between teaching and learning materials on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

$H0_2$: There is no statistically significant relationship between teacher's characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

$H0_3$: There is no statistically significant relationship between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County

$H0_4$: There is no statistically significant relationship between learners' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

1.6 Significance of the study

The study will facilitate the education managers with the understanding of the challenges faced in the implementation of ECDE sub-sector and help it to acquire its rightful status. This study is significant in providing useful information on the status of the implementation of ECDE services and therefore contributes to the improvement of the on-going process of implementing pre-school curriculum and providing quality pre-school education to develop holistic foundation of children. The study will also help in identifying training needs for ECDE teachers, administrators and institution heads for effective implementation of ECDE programmes. Discrepancies in the implementation uncovered may assist in identifying feasibility problems that the institution heads face in supervision and hence possible solutions. The Ministry of Education may also be advised to allocate larger portion of funds to run the centres. Information obtained from this study may be proposed to guide the MOE and policy makers on future formulation and implementation of policy guidelines related to ECDE provision.

1.7 Scope of the study

The study covered the school-based factors influencing the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County. The study was conducted in Kakamega South Sub- County, Kakamega County. It targeted the Head Teachers, Parents Teachers Association Representatives, ECDE Officers and ECDE Teachers.

1.8 Limitations of the study

According to Best and Khan (2009), limitations are conditions beyond control of the researcher that may affect the conclusions of the study and their application to other situations. The study met the following limitations. Some of the information were deemed sensitive by some of the targeted respondents. This constraint was addressed by offering assurances and clarifications that the study's goal was entirely for academic and not motivated by any other motives. Time constraints was a difficulty that was overcome in order to complete various activities. The researcher devised a study strategy that included allocating time to each job and ensuring that time was rigorously adhered to.

1.9 Delimitations of the study

This study covered all the public primary schools in Kakamega South Sub- County, Kakamega County. The independent variables in the study were teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics while the dependent variable is implementation of ECDE programmes.

1.10 Basic assumption of the study

This study was based on the assumption that:

The respondents gave accurate, truthful and honest answers to items in the questionnaire.

All public ECDE centres in Kakamega south sub-county had adequate and relevant learning resources for holistic development of the pre-school children.

All public ECDE centres in Kakamega south sub-county was using guidelines for ECDE programme.

1.11 Operational definition of terms

Early childhood development education refers to education programme and strategies geared towards children from age of three to six.

Instructional strategies refer to the teaching methods such as demonstration, games, role play and songs that are used to teach learners at the ECDE centers.

Learners' characteristics refer to aspects of the learners that influence the implementation of ECDE curriculum such as age, gender, family background and entry behaviour.

School related factors include teaching learning resources, instructional strategies, learner characteristics, teacher characteristics

Teachers' characteristics refers to aspects of the teachers that influence the implementation of ECDE curriculum such as age, gender, level of education, levels of training and length of service at the ECDE center.

Teaching learning resources refers to the materials that teachers and pupils use in the teaching and learning resources which include books, pens, charts pictures and others.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter entails literature and other researchers' work related to parental involvement and its effects on learners' academic performance like the concept of Early Childhood Development and Education, teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics, framework, and conceptual framework.

2.1 Empirical Review

2.1.1 Concept of Early Childhood Development and Education Implementation

The definition of the term, early childhood education, depends on where the issue is looked at from. In terms of child's life, it is the period from birth to eight years of age (Miles & Browne, 2004). Grotewell and Burton (2008) also defined it as the time between the zero and eight years of age. In other words, E.C. E is a special branch of education serving children from infancy to elementary grade level of three (Gonzalez-Mena, 2008). The Education for All movement is a global commitment to provide quality basic education for everyone. This movement was launched at the World Conference on Education for All held in Jomtien (Thailand) in 1990, where representatives of the international community agreed to universalise primary education and massively reduce illiteracy by the end of the decade according to the Dakar Framework for Action Senegal, April 2000, a collective commitment was made to attain several EFA goals. These included expanding and improving comprehensive Early Childhood care and Education especially to the most disadvantaged and vulnerable children; improving every aspect of the quality of education, and ensuring

their excellence so that recognized and measurable learning outcomes are achieved by all especially in literacy, numeracy and essential life skills.

Early Childhood Development Education (ECDE) globally and Kenya in particular has been recognized as a crucial programme that lays a foundation for a child's holistic and integrated educational developmental needs. Currently, ECDE is under the care of parents, community, non-governmental organizations (NGO), religious organizations and other private providers (MOEST, 2005). ECDE being the first formal agent of socialization (Kibera & Kimokoti, 2007) calls the attention of all stakeholders to critically address the challenges related to issues of access, equity, quality and relevance of ECDE programmes. However, the private sector seems to have monopolized most of the ECDE centres compared to the government. Thus, the public education sector opportunities for ECDE are lacking, yet available data shows that at later formal education cater for well over 90% of Kenya's school going age in ECDE is currently facing challenges related to the following: funding, policy formulation, low participation rates of target age groups including special learners, lack of curriculum content informed by research based data, inadequate qualified educators, lack of schemes of service for educators, rising number of orphans, conflict in medium of instruction among others. Lack of practical approaches to inform the parents and lack of the implementation initiatives further complicates the provision of ECDE (Aboud & Prado, 2018).

2.1.1 Influence of teaching and learning materials on implementation of Early Childhood Development and Education

Early childhood curriculum is not simply about keeping children occupied or entertained. It is a thoughtfully crafted plan that fosters holistic development in young learners. A structured and engaging curriculum can enhance their cognitive, language, social, emotional, and

physical skills, paving the way for lifelong learning. Early years experiences in quality thinking and socialization are critical to the optimal development of children, and Quality Early Childhood Education (QECE), is crucial in achieving these quality developments. However, several literatures suggest that there is a general lack of Teaching and Learning Materials (TLMs). Online learning is an educational process which takes place over the Internet as a form of distance education. Distance education became ubiquitous as a result of the COVID-19 pandemic during 2020 (Guerrero & Camargo-Abello, 2023).

Muhdi, Nurkolis and Yuliejantiningsih (2020) assesed the he implementation of online learning in early childhood education during the COVID-19 Pandemic. This qualitative research uses a mixed method approach with an iterative analysis design, conducted in Central Java Province in 35 districts / cities with 1,899 respondents. Data collection techniques with open-closed questionnaires, study from 15 documentation, and in-depth interviews. Data analysis uses quantitative-qualitative software Nvivo12+, with Miles and Huberman models. The results showed the policy formulation of online learning at ECE has been effective. However, the implementation of online learning policy at ECE still takes a lot of effort to become more powerful in preventing a decline in learning. There are five obstacles in in applying this in the field, namely the ability of teachers, the ability of parents, economic capability, facility constraints, and pedagogical constraints.

Alam (2022) sought to synthesize data from studies on robotics programming experiences for children in the age bracket zero to eight, as well as for pre- and in-service early childhood educators, to identify possible contributions that robotics programming may make to teaching and learning of STEM (sciences, technology, engineering, and mathematics) subjects. The investigation was initiated with inclusion of research articles as a result of

search and assessment processes. All of these studies were selected such that they had the application of educational robotics in common. The synthesis of preliminary findings, study subjects, and potential advantages of educational robots in STEM education, especially in engineering and technology are discussed and dealt with in great detail. Additionally, the implications of educational robotics and robotics programming for educational institutions, curricular materials, and pedagogical techniques are incisively addressed. This review revealed that employing robots to teach computer programming may be a promising teaching tool for early childhood STEM education.

Gayatri (2020) examined the implementation of early childhood education during the pandemic of COVID-19. Methodology: A systematic review identified the implementation in early childhood education settings. Electronic databases such as PubMed, MEDLINE, Web of Science, Scopus and manual search on Google Scholar were explored with specific keywords from the inception of the pandemic COVID-19 to November 30, 2020. Main Findings: Early childhood education has been influenced due to school closure. Most of the children experience online learning, to reduce the spread of the outbreak, especially when face-to-face learning cannot be conducted. Parents and teachers have significant roles in supporting the children to improve their cognitive and social development. However, the implementation of home learning causes some difficulties in relation to the self-regulation of very young children, the readiness to utilize digital technology and learning materials, parent's beliefs and attitudes on online learning compared with traditional learning, and requirements of demanding time and knowledge to accompany the children. Therefore, it is important to have good communication between parents and teachers to support early childhood online learning during the outbreak. Applications of this study: This article will provide evidence from some countries about the matter of early childhood education during

the COVID-19 pandemic. The study will be useful for improving the quality of early childhood education. Novelty/Originality of this study: Due to the COVID-19 pandemic, the early childhood education has changed from the traditional system to online education system to reduce the spread of the diseases. The article showed the various implementations of learning system during the outbreak and the lesson learned.

Alam (2021) assesed whether robots should replace teachers? Mobilization of AI and learning analytics in education. The use of literature review as a research strategy and methodology helped in accomplishment of study's goal, which was achieved making use of a qualitative research technique. AI is an area of research in which computers, robots, and other technologies are programmed to exhibit human-like intelligence, as characterized by cognitive skills such as learning and adaptation, as well as decision-making capabilities. According to the findings, AI has been widely embraced and used in a number of ways by organizations, especially educational institutions, in a range of circumstances and settings. AI began with computer technology, progressed to intelligent online and web-based education, and finally, embedded computer systems were used to perform instructional tasks autonomously or collaboratively with teachers, in conjunction with other technologies such as humanoid robots and web-based chatbots. These platforms have allowed instructors to improve the overall quality of their instructional work while also improving their efficiency and speed for administrative duties such as evaluating students' work. However, since the systems are based on machine learning and adaptability, curriculum and materials can be customized to meet the unique requirements of individual students, resulting in improved absorption and retention and a more pleasant overall learning experience.

Surtikanti (2018) developed teaching materials for teachers to support the implementation of learning in Early Childhood Education (PAUD) in the Kubu Tribe or known as Suku Anak Dalam, (SAD) in Jambi Province. Meanwhile, the product of teaching materials produced in the form of printed teaching materials, contains learning materials that are relevant to the situation and conditions of SAD. The research method used in developing this teaching material is the Research and Development (R & D) approach. The instructional material developed contains learning material for the children in Jambi, using the approach to playing with the surrounding environment. Assessment of the feasibility of the developed teaching materials was carried out by two experts in the field of learning material for Early Childhood Education, and Learning Media Experts. Based on the results of the assessment by experts, the developed teaching materials have been deemed feasible and can be used for SAD children's PAUD in Jambi province. After being assessed as feasible, then the teaching material was tested for the implementation of the target users, especially PAUD teachers in applying learning to children in the Jambi village of Bungku. The results of the implementation stated that the teaching materials for children in Jambi were in the category of success.

Frimpong (2021) investigated the role of teaching and learning materials and interaction as a tool to quality early childhood education in Agona East District of the Central Region of Ghana. Meanwhile, the constructivists' theory and other researches indicate that to ensure QECE, TLMs should be available and accessible to learners to interact with in advance and during a lesson. Using case study design therefore, data in the form of interview and observation were collected from twelve ECE schools in the Agona East District of the Central Region of Ghana. Participants composed of twelve ECE teachers and twelve headteachers of the schools totaling twenty-four. The findings suggest that participants perceived TLMs as

very important factor in ensuring QECE provision. Again, TLMs were not readily available and so the children could not interact with them. The study further revealed that the schools don't have most of the things the children can play with in the school. Besides, some of the children don't even have textbooks and the exercise books at all and the school may have very few copies that cannot to reach all the children in the class. Teachers should also devise innovative ways of creating and developing TLMs from their locality. Moreover, they should encourage and promote children's active interaction with the TLMs, as this is a sure way of achieving learning.

Kim (2020) investigated Learning and teaching online during Covid-19: Experiences of student teachers in an early childhood education practicum. Because of these circumstances, online teaching and learning had an indispensable role in early childhood education programs, even though debates continue on whether or not it is beneficial for young children to be exposed extensively to Information and Communication Technology (ICT). This descriptive study demonstrates how a preservice teacher education course in early childhood education was redesigned to provide student teachers with opportunities to learn and teach online. It reports experiences and reflections from a practicum course offered in the Spring Semester of 2020, in the USA. It describes three phases of the online student teachers' experiences–Preparation, Implementation, and Reflection. Tasks accomplished in each phase are reported. Online teaching experiences provided these preservice teachers with opportunities to interact with children, as well as to encourage reflection on how best to promote young children's development and learning with online communication tools.

Kilel, Andrew and Joseph (2023) determined the influence of teaching and learning resources on pupil's transition from lower grade to upper grade in public primary schools in Sotik Sub-

County. The target population of the study was 165 head teachers, 1178 teachers and 5300 grade five pupils to give a total of 6643 target population. The study randomly selected 377 respondents using Nuausima's (2000) formula for calculating the sample sizes where 9 head teachers were purposely selected for the study while 67 teachers and 301 grade five pupils were randomly chosen. The data was collected using both questionnaires and interview schedule as well as observation checklist. The data was analyzed using both qualitative and quantitative approach. The study revealed that teacher's creativity in development of lesson aid facilitates transition of pupils, sound chats enable acquisition of skills required to transits, maps and charts aid enables pupils to acquire skills required for them to transits, models and creative visual materials are key resources required for acquisition of skills required for one to transit to the next grade and that picture aids enables pupils acquired skills required before they transit to the next grade. The study concludes that teaching and learning resources influence pupil's transition hence emphasis should be put so that teachers become creative so as to transfer the same knowledge to the learners.

2.1.2 Influence of teachers' characteristic on implementation of Early Childhood Development and Education

Evidence from various studies suggests that high-quality ECDE programs should therefore have highly skilled teachers. Early childhood teacher education is considered crucial for the development of professional knowledge. Appropriate Early Childhood Development and Education (ECDE) programmes as well as quality outcomes are directly correlated with better educated and trained teachers. Dunekacke, Jenßen and Blömeke (2021) investigated the relationship between opportunities to learn as reported by teacher educators and perceived by pre-service teachers and pre-service teachers' general pedagogical knowledge, mathematics pedagogical content knowledge, and mathematical content knowledge. The

sample comprised 909 pre-service teachers from two different teacher education tracks (vocational school vs. university) and their 43 teacher educators. The results provided the first empirical evidence that opportunities to learn reported by teacher educators are highly relevant for pre-service teachers' knowledge.

Clayback, Williford and Vitiello (2022) identified teacher beliefs and experiences associated with Curriculum Implementation Fidelity in Early Childhood Education. Despite our growing understanding of factors related to implementation in K-12 settings, much less is known about factors influencing implementation in early childhood education contexts. Understanding factors related to how well early childhood educators implement an intervention is critical to developing ways to improve implementation fidelity and ultimately education quality. The current study explored how teacher beliefs and experiences were related to initial uptake and later implementation in a sample of 87 early childhood educators implementing a novel comprehensive curriculum. Across teacher dosage, classroom dosage, and teacher responsiveness, teachers with more positive initial perceptions of the curriculum had higher implementation. The study further revealed that teachers with more positive initial perceptions may have higher initial engagement with the curriculum, which in turn leads to sustained or increased positive perceptions and engagement.

Van der Spoel, Noroozi, Schuurink and Van Ginkel (2020) compares teachers' perception regarding their online teaching expectations (prior to the transition to remote teaching) and experiences (after a month of online teaching). Two surveys were completed by 200 Dutch teachers. Results demonstrated a significant change in the perception of teachers regarding their resolutions to implement technology in their lessons in a post-corona era. In this regard, teachers' gender and prior experiences with the use of ICT seem to play a small role. Findings

of this study provide implications for the professionalization of teachers, such as characteristics of teachers and intentions to implement technology in teaching, as well as experienced positive and negative aspects of online teaching. Future research should focus on constructing and testing educational design principles for effective professionalization of teachers in adopting technology in their educational practices. Heikkilä (2020) described and found ways to understand the practical gender equality work that is going on to promote gender equality in preschools in the Nordic countries. Gender equality in this article is broadly understood as a process of developing higher "gender awareness" in a preschool organization and the analysis is performed through a poststructuralist understanding of gender. The material consisted of 59 interviews, policy document analyses and preschool visits in the Nordic countries and autonomous territories. In order to address the work concerning gender equality in preschools, practices and processes have been analysed in order to achieve deeper understanding of what is done practically. The results are presented as an illustration of how to understand the work done and using this illustration further as a tool for reviewing existing work could be one way of developing gender equality.

Alicamen (2023) ascertained the instructional competencies of ECE teachers in Education for Sustainable Development (ESD). It determined teachers' level of awareness vis-a-vis the extent of implementation on the three key components of ESD: visioning/reflecting, systems thinking, and critical thinking; and the highlights and lowlights of the implementation. The study employed a quantitative-qualitative method of research with 90 kindergarten teachers from both public and private schools in Cebu City who were chosen through stratified random sampling. Findings revealed that teachers have fairly satisfactory awareness of the three key components while the extent of implementation of ESD competencies on the three key components was moderately implemented. Statistics unveiled that teachers' restricted

awareness did not have a direct association with the level of implementation. However, teachers took up the responsibility for promoting ESD activities since they believed that the quest for sustainability resides in education which led the learners to learn and enjoy varied educational opportunities. Home, school, and community collaboration along with administrative support needed to be strengthened to foster the implementation, monitoring, and evaluation of ESD activities. Teachers need to update and enhance their learning to carefully embed sustainable practices as they are the potent stewards of concretizing the mandates of ESD and transforming its concepts into plausible experiences at the early childhood level.

Early Childhood Education (ECE) known in most countries as Early Childhood Development (ECD) has now become a global imperative because it is vital for all children. Fidjeland, Rege, Solli and Størksen (2023) established the reducing the gender gap in early learning: Evidence from a field experiment in Norwegian preschools. Substantial gender differences in key academic skills appear even before children start formal schooling. Although increasing investments in early-childhood programs is motivated by efforts to promote equality of opportunity in education, program attendance seems to have less effect on boys. In this field experiment, we investigate whether a more structured curriculum can help preschools reduce the gender gap in early learning. While girls have higher skills at baseline, we find that the intervention primarily benefits boys, thereby reducing the gender skill gap, with effects persisting into formal schooling. Jahreie (2023) investigated how existing empirical research addresses the topic of early childhood education and care (ECEC) teachers' perceptions of school readiness. 27 quantitative, qualitative, and mixed methods studies were reviewed. The review suggests that most ECEC teachers perceive non-academic skills to be more deciding than academic skills for children's school readiness across national

contexts and curriculum traditions. The review contributes valuable insights into the multifaceted interplay between ECEC teachers' perceptions of school readiness, local contexts, national traditions for curriculum development, research, and the globalization of people and ideas about readiness.

Nyarambi and Ntuli (2020) examined Early Childhood Development (ECD) teachers' perceptions of ECD programs regarding benefits and opportunities for early intervention. Research indicates that young children with developmental delays and disabilities demonstrate better progress when intervention is offered early and in inclusive classrooms. A mixed method design was used to collect data from a purposeful sample of 81 ECD teachers in Chipinge district, in Zimbabwe. Both descriptive and regression analysis methods were used for data analysis. Findings indicated that there was a general lack of in-depth knowledge, and most teachers did not follow developmentally appropriate curriculum. Threats and challenges included: lack of knowledge and assessments to diagnose developmental delays, disabilities, as well as lack of developmentally and culturally relevant teaching materials. Regression analysis indicated that age, experience, location, and training are important variables explaining perceived benefits of ECD. This study offers research-based ways to address challenges and threats to effective ECD programs.

Kitsao-Wekulo, Mutisya, Hungi and Ngware (2023) established the influence of different aspects of early childhood development and education (ECDE) quality on children's outcomes in low-resourced settings in sub-Saharan Africa. We examined the impact of different aspects of ECDE quality on school readiness in a low-income context. The current study is a cross-sectional sub-study of the Tayari preschool pilot program evaluation. Baseline data were collected from public ECDE centers. Multiple linear regression analysis

was used to establish predictors of school readiness, that is, 4-6-year-old children being mentally, physically, socially and emotionally ready to start and succeed in primary school. Teaching experience, availability of textbooks and school facilities were significant predictors; learners' school readiness scores decreased with each additional year of teachers' experience, and were higher where school facilities were better, and in schools where textbooks were available. On the other hand, school enrolment, classroom resources, head teacher support, educational attainment and teacher training did not predict school readiness. Promoting quality preschool programs has important implications for policy as it can lead to improved school readiness and later success for children in disadvantaged settings.

Nyongesa (2020) established the impact of teacher preparedness on the implementation of ECDE curriculum in Vihiga County. The study adopted the theory of curriculum innovation to guide data collection process. The study employed a descriptive survey design. Stratified and simple random sampling techniques were used to obtain a 30% sample size from a target population consisting of 750 ECDE teachers, 50 head-teachers, 30 Quality Assurance Officers, and 20 Curriculum Support Officers. Data was collected using questionnaires, and interview schedules. The collected data was analyzed using the descriptive statistics in the form of frequencies and percentages, which were later presented in the form of tables. The study found that contrary to the popular discourse espoused by different stakeholders about the perceived drastic improvement of the ECDE education sub sector that came as a direct result of devolution, in-service training, as a means through which teachers improve their performance, has not increased significantly under devolution. This is a point of concern because research has proven that there exists a strong correlation between a teacher's access to in-service trainings and their performance as curriculum implementers. The onus therefore, is on the county government of Vihiga to create an enabling environment where

ECDE teachers have easy access to periodic in-service training to continuously better their practice.

2.1.3 Influence of instructional strategies on implementation of Early Childhood Development and Education

There are many different teaching methods implemented in early learning environments. One of The Montessori methods is a child-based, scientific approach to education developed by Italian physician, Maria Montessori. Montessori focuses heavily on self-directed, involved learning and teamwork. Learning through play has emerged as an important strategy to promote student engagement, inclusion, and holistic skills development beyond the preschool years. Policy makers, researchers and educators have promoted the notion that learning though play is developmentally appropriate as it leverages school-age children's innate curiosity while easing the often-difficult transition from preschool to school. However, there is a dearth of evidence and practical guidance on how learning through play can be employed effectively in the formal school context, and the conditions that support success (Owojori & Gbenga-Akanmu, 2021).

Alam, Ahsan and Ogawa (2023) investigated the pre-primary education system and identify the changing patterns influenced by culture globally and nationally. In this study, a mixed-methods approach has been employed for the data collected. This exploratory study used inductive reasoning to weave latest information into innovative ideas. Since the parental perspective varies in division wise needs and progress enhancement aspirations, the participants were selected from four divisional headquarters of Bangladesh: Dhaka, Chittagong, Khulna, and Rangpur. For the comprehensive development of cognitive and behavioral patterns, children must be exposed to the history and culture of the community by

making the curriculum more engaging. Thus, a refined early learning through ECE has been vital to building a dynamic, economic, and strong nation for the future of Bangladesh. Earley (2019) examined affordances and constraints associated with the implementation cross-curricular approach in an Irish Primary School Classroom, whereby all subject areas are united or linked to a central theme. This four-week study examined whether the cross-curricular approach facilitated bridge building between subject areas, allowing pupils to transport knowledge from one discipline area to another. It also sought to analyze whether the cross-curricular approach increased pupil's level of agency within the classroom. Situated within the interpretivist perspective, this study employed qualitative research methods such as focus groups, field notes and participatory research methods. It reported that the cross-curricular approach increased the levels of agency of the pupils in this. In addition to this, the cross-curricular approach implemented facilitated bridge building between subject areas, allowing pupils to transport knowledge across discipline areas.

Morgan (2020) assesed Best Practices for Implementing Remote Learning during a Pandemic. In response to the spread of COVID-19, a new coronavirus, many U.S. schools have implemented remote learning. This approach to education can prevent students from experiencing setbacks during school closures. However, some schools do not have enough resources to provide learning opportunities for students, and not all children have internet access at home. Schools that can implement online learning equitably can improve their approach if they follow the guidelines of reputable. The study revealed that one motivating instructional strategy involves taking advantage of virtual tours and other free educational resources. Ahmad, Jatoi and Riaz (2019) proposed strategies for the effective implementation of Early Childhood Education Programme in government schools in Punjab. A sample of 300 heads of educational institutions was taken from the 36 districts

of Punjab to evaluate this programme. A questionnaire was used to collect the opinion of the heads of educational institutions. The findings of the study show that physical facilities were provided by the government for the implementation of ECE programme in only 1000 schools in Punjab. The curriculum developed by the Federal Government is used for the development of the students. The heads of educational institutions and ECE teachers were provided training for effective implementation. The school council members/parents required to involve for the effective implementation of the ECE programme. The appointment of teachers on merits basis, having professional degree in Early Childhood Education is also required to make the ECE programme more effective and successful.

Parker and Berry (2022) assesed Learning Through Play at School – A Framework for Policy and Practice. The paper addresses the disconnect between policy, research and practice by presenting a range of empirical studies across a number of well-known pedagogies. These studies describe how children can foster cognitive, social, emotional, creative and physical skills through active engagement in learning that is experienced as joyful, meaningful, socially interactive, actively engaging and iterative. The authors propose an expanded definition for learning through play at school based on the science of learning, and summarize key findings from international studies on the impact of children's learning through play. They identify four key challenges that underpin the considerable gap between education policy and practice, and propose a useful framework that addresses these challenges via a common language and structure to implement learning through play.

Bitok (2020) established Instructional Strategies Used by Teachers in Public Early Childhood Education Centers in Uasin-Gishu County, Kenya. Teaching strategies used in implementing the curriculum are the arranged interactions of people and materials planned

and used by teachers. They include the teacher's role, teaching styles, and instructional techniques. However, in practice, most programs combine elements of both direct instruction and free play. The purpose of the study was to establish the instructional strategies used by teachers in public early childhood education centers in Kenya. The study targeted 3105 Early Child Development Education (ECDE) teachers and heads in the 775 public ECDE centers in Uasin Gishu County, Kenya taking 341 respondents as a sample. The paper adopted survey and descriptive design utilizing quantitative research methods. A self-administered questionnaire was administered to collect information from the respondent. The study found that the ECDE teachers were using integrated technology strategy, cooperative learning structures in their classrooms, differentiated instruction in their classroom and incorporated play activities in their instruction. ECD teachers employed goal setting, cross-curriculum teaching and class-wide peer tutoring and assessment instruction as their instructional strategies. County education office should step up their oversight on early childhood education.

Ochieng', Kisimbii and Said (2018) assessed the determinants of successful implementation of Early Childhood Development Education (ECDE) by County Governments in Kenya from the implementing partners" perspective. Decentralization theory and organization learning theory were used to explain the relationship between the study variables. Descriptive research design was used in the study. The population for the study was implementing partners working with County Governments in Kenya to support ECDE. Purposive sampling technique was used to select the respondents to participate in the study. A total of 100 respondents were targeted from the 10 organizations studied out of which 70 participated giving a response rate of 70%. Questionnaire was used as instrument for data collection. Both qualitative and quantitative data analysis techniques were used to analyze the data. It is also

worth noting that beside the general success, there were myriads of challenges facing the implementation of the program by county governments. The remaining 36.5% can be explained by other variables not included in the study. R square and adjusted R is above average an implication that an above average variation can be explained by the model. The study recommended that county governments should allocate more funds for the renovation and construction of more ECDE centres, allocate adequate funds for the implementation of ECDE and that they should organize consistent in-service training for ECDE teachers and at the same time employ more ECDE staff to cater for the large number of children in ECDE centres.

Obeywa, Okoth-Oluoch, Opiyo and Simiyu (2023) assess the effectiveness of the pedagogical strategies in promoting learners' readiness for primary education. The study was guided by the curriculum implementation theory by Gross (1971), Ecological Systems Theory of Bronfenbrenner revised by Guy Evans (2020) and Stufflebeam's CIPP evaluation model (2003). The study adopted a descriptive survey design. The study population comprised CSOs, Section Heads, ECDE centres-in-charge and teachers. A sample size of 212 respondents was calculated by Yamane's (1967) formula. Cluster, stratified and simple random sampling was used to apportion individual members of the groups. Data was collected using an interview schedule, questionnaire, and Focus Group Discussions (FGD). Qualitative data was analysed using content analysis and presented in narrative form. Quantitative data was analysed using descriptive statistics such as frequencies and percentages, and findings were presented in pie charts, graphs, and tables. Inferential statistics was done using parametric and non-parametric tests. The findings may be used by the County Government in designing, planning, and funding to deliver quality ECD services. Teachers may find these findings quite informative since it has provided various strategies

for effective implementation of the ECDE curriculum to enhance learners' preparedness for school.

2.1.4 Influence of learners' characteristic on implementation of Early Childhood Development and Education

Early Childhood Period is the most critical period in human life development. All aspects owned such as cognitive, social-emotional, physical-motoric, language, moral and religious values are growing rapidly. The characteristics of children at this time are identification and imitation. Habits of character value need to be learned as early as possible through learning. However, in today's age, early childhood improves the exemplary crisis. The characteristics of students from cognitive, affective, and psychomotor aspects so that educators are able to cultivate and develop the potential and talents of each student so that educators easily evaluate the strengths and weaknesses in learning. Different characteristics possessed by each student can provide an understanding for each educator to use strategies and methods in developing these different talents and potentials. The potential of multiple intelligences of early childhood possessed from birth will be able to develop optimally when they get the right parenting patterns from their parents. Unfortunately, there are still many parents, especially in Java who do not understand it, so parenting tends to be careless. On the other hand, related research is still very limited (Watini, 2020).

School entry regulations in Indonesia have a specific cutoff date for enrolment and it requires children to start school at the age of seven. In practice, there were schools that allowed children to start elementary school before reaching seven years old. This might create age differences between children in the same grade at school. Some literature has been shown that older students outperform younger students in the school outcomes. For instance, higher

education attainment, reduce grade repetition, and excellent academic performances. However, limited evidence exists about the school starting age and academic performances in Indonesia. In order to determine whether the school starting age rule in Indonesia affects children's academic performance, this study utilizes the Indonesian Family Life Survey (IFLS wave) 5 and regression discontinuity design. This study found that older entrance might get lower score compared to the children who start school at early age. Based on the results, entering school earlier might increase the average of total score by 2.687 grade points higher than older entrance (Guswandi, 2021).

Chikwanda, Bayat and Madyibi (2022) assesed School Readiness and Community-Based Early Childhood Development (ECD) Centres in Low-Income Communities: Examining the Case of Gugulethu, Western Cape Province, South Africa. A qualitative study was conducted in Gugulethu, a poor community in the Western Cape province in South Africa, to determine how Early Childhood Development centres in a poor community prepare children for schooling. The study involved a sample of 12 community-based ECD centres. Interviews and focus group discussions were conducted with direct role-players, including principals, practitioners, and ECD industry key informants. Data was enriched through direct observation of operations at each facility. The study found that all the community based ECD centres struggle to provide quality SRP. Contributing factors include limited ECD practitioner training, education resources, infrastructure, and facility management. Because these conditions relate to poverty, they affect the SRP of most children in poorer communities, such as Gugulethu, who tend to only have access to under-resourced ECD centres. The child must be well developed mentally, emotionally, physically, and socially and you can see this development when the child is playing with educational toys. The study concludes that, given the appalling performance of South Africa's basic education system,

the government has to accept that improving its learning outcomes begins with vastly improving the SRP of children from birth.

Incognito and Pinto (2023) longitudinally investigated the relative weight of the child's family context, i.e., parents' occupation and education levels; home literacy; and the school context, in terms of didactical intervention, on emergent literacy skills. A total of 193 children in the last year of preschool participated in the longitudinal research. Each child was administered socio-economic measures (parental education [PE] and home literacy [HL] levels) and, at the beginning and end of the school year, tasks to assess his or her emergent literacy skills (phonological awareness and textual and notational skills). General linear model analyses were carried out. The results of the initial assessment showed that PE level was a powerful predictor of performance that was associated with significantly lower performance in children from disadvantaged backgrounds in all the tested skills. After a year of schooling, all participants benefitted from the teaching received, with significantly increased performance in phonological awareness, notational skills and textual competence. In addition, by comparing the scores of the three groups at the end of the school year, we verified that teaching exerted varying degrees of influence depending on the student group and tested ability.

Alannasir (2020) assesed the characterisitcs-based development students' aspect. Understanding the development of student characteristics can be seen from three aspects, namely cognitive, affective, and psychomotor aspects. The cognitive element is the domain that includes mental activities (brain). Emotional issues are those related to attitudes and values, which include behavioral traits such as feelings, interests, beliefs, emotions, and values. Psychomotor aspects are domains that include movement behavior and physical

coordination, motor skills, and physical abilities of a person so that the skills that will develop if often practiced can be measured based on distance, speed, speed, technique, and manner of implementation. Analyzing students can be seen in four key factors that determine student success, including general characteristics (general characteristics), specific entry competencies (special initial abilities), learning styles (learning styles), and multiple intelligences (plural intelligences).

Amal, Asti and Ilyas (2023) assesed the influence of learning styles on the language ability of kindergarten children. The research was experimental research that aims to know: the interaction effect between REA and learning style on language ability. The population in this research is all kindergarten children in Makassar City. The research sample was done by random technique and kindergarten that was chosen there are two kindergarten that is TK Teratai UNM that consists of 20 people and Rahma Kindergarten with 20 children. This research analysis the findings using descriptive analysis techniques and inferential test analysis. The result of this research show that language ability of children who have a field dependent learning style is higher than children who have field independent. So based on this explanation, improving language skills in children requires paying attention to the child's learning style so that the learning activities provided are appropriate and able to stimulate the child's development, it must be considered factor learning style of children.

Setiawan, Mardapi and Karyanto (2020) assesed Multiple Intelligences-Based Creative Curriculum: The Best Practice. Research using multi-years by method R & D (Research and Development) with two phases; First phase: 1) Preliminary survey stage, 2) definition stage, 3) design phase, 4) trial stage, and 5) development stage; The second phase: 1) the instrument design stage through the Forum Group Discussion, 2) the product trial phase of 100 children

in Sleman Regency, 3) wide-scale implementation of 200 children in Yogyakarta Province, 4) the evaluation phase with construct analysis and achievement of research subjects' performance, 5) the stage of measuring the effectiveness of the product with user perception. The subject comprises 200 children of early childhood and 20 kindergarten teachers in 10 kindergartens in the Yogyakarta province in Indonesia, by the approach of Reflective Measurement Theory (RMT). The results showed that: 1) the MI-based creative curriculum assessment model was developed to meet valid, reliable and conformity criteria of an empirical data model.

Fadlillah, Wahab, Ayriza, Rohmah and Ahdhianto (2020) explored parenting patterns by parents in developing multiple intelligences in early childhood. This research used qualitative methods with a phenomelogical approach to uncover this phenomenon. Data collection was carried out by in-depth and open interviews with three parents who have early childhood with excellence and achievements in the field of multiple intelligences. Data analysis used a phenomenological qualitative analysis. This research indicates that there are three main themes of parenting patterns, namely: 1) identification of children's interests and talents: done by parents intensively by observing activities that are preferred and become children's excellence intensively; 2) the demandingness and responsiveness of parents in developing children's multiple intelligences: Parents' high demandingness and responsiveness can develop early childhood multiple intelligences; and 3) the development and stimulation of multiple intelligences: parents stimulate the children's multiple intelligences talents by having children take a course and various competition activities that are appropriate to their abilities.

2.2 Theoretical framework

The study was guided by Education Production Function Theory by Samuel Bowles (1970). The common approaches were factors such as school resources, teacher quality and the outcome as the learner's achievement. This area was however distinguished from many because the results of analysis impacted directly the policy process. Historically, the most frequently employed measure of schooling had been attainment, or simply years of schooling completed. The value of school attainment as a rough measure of individual skill had been verified by a wide variety of studies of labour market outcomes-Psacharopoulos and Patrinos (2004). Among the four approaches, the goal-attainment approach was considered to be the most suitable for this study in the sense that for effective ECDE programmes implementation, appropriate goals must be set and how they should be implemented. In addition, an organization, by definition, was created to achieve one or more specified goals. As a result, goal attainment was probably the most widely-used criterion of effectiveness. The goal attainment approach stated that an organization's effectiveness must be appraised in terms of the accomplishment of ends rather than means. The goal attainment approach assumed that organizations were deliberate, rational, goal seeking entities. In order to successfully use this approach, the organization must have the following five criteria (Robbins, 1990). An organization must have ultimate goals, these goals must be identified and defined well enough to be understood, these goals must be few enough to be manageable, there must be general consensus or agreement on these goals, Progress toward these goals must be measurable. This study considered ECDE Officers, parent representatives and teachers' perceptions of ECDE programmes implementation. All these stakeholders needed to be familiar with the ECDE programmes in order to understand the various school-based factors that influenced its successful implementation. The theory was most appropriate in examining

the school-based factors that influenced the effectiveness in the implementation of the programmes at the ECDE level.

2.3 Conceptual framework

The conceptual framework is a figure that helps to conceptualize the relationship between the variables. The independent variables or this study were conceptualized as teaching and learning materials, teachers' characteristics, instructional strategies and learners' characteristics factors while the dependent variable was implementation of ECDE programmes. The figure gave guidelines in the understanding of how the variables influence each other. From the assumptions of the study these was a direct relationship between the variables as shown in figure 1.

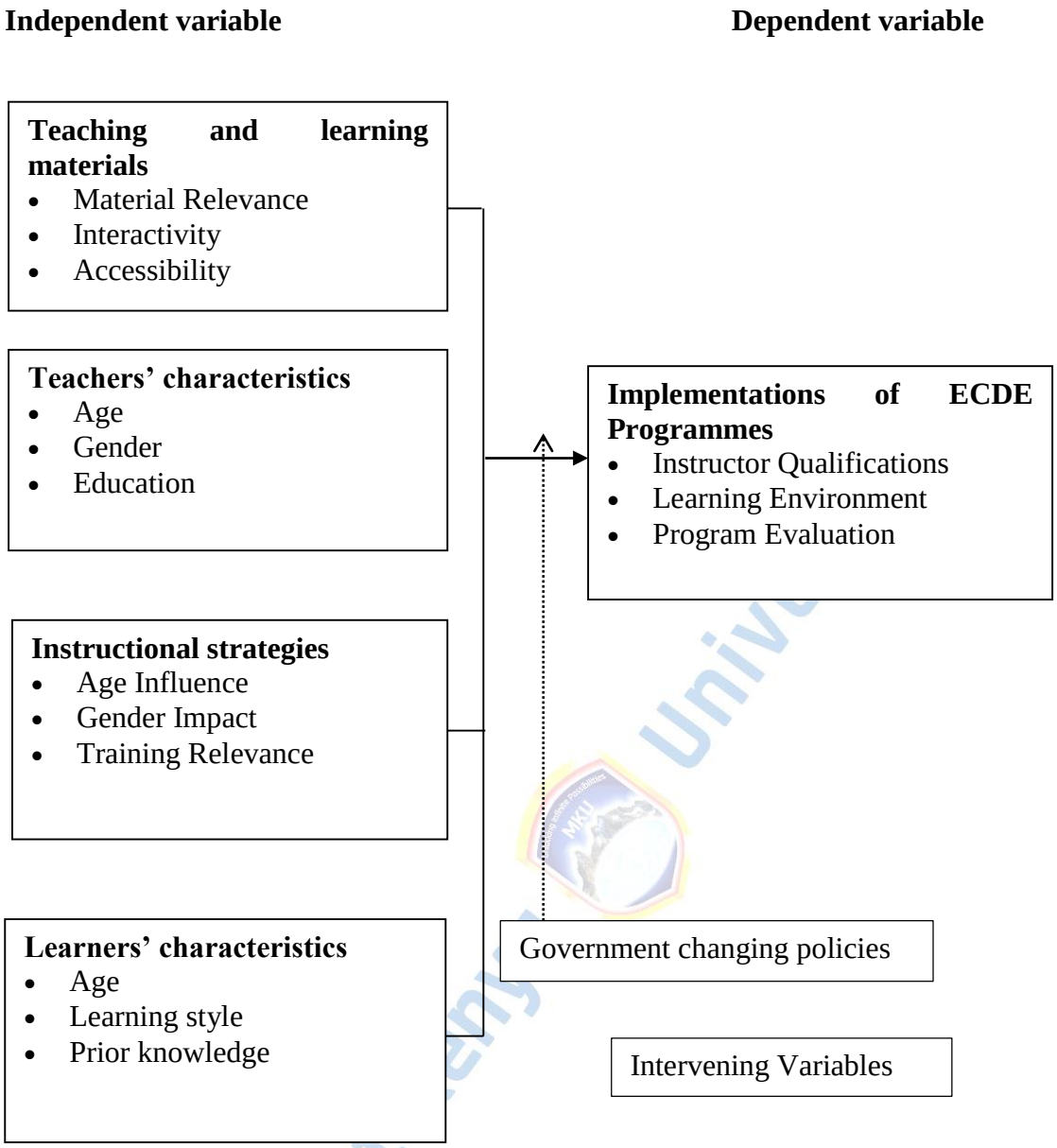

Figure 1: Conceptual framework

Source: Researcher (2024)

2.4 Research Gap

This study identified various factors that influence the programme implementation process in a way that would be expected to ensure the success of the implementation process. From the literature reviewed it was evident that programme implementation was influenced by various factors ranging from personal factors and characteristics of the teachers to parents

and the officers in charge to institutional factors. The literature built on this foundation and provided support for the notion that effective programmes implementation led to performance of ECDE centres. Relevant to this discussion were the teaching and learning materials, teacher's characteristics, instructional strategies and learners' characteristics factors were studied. The studies reviewed indicated that most ECDE centers lacked the required resources to enhance the operation of the centers. However, how this related to programmes implementation had not been discussed in the available literature, hence, the need to carry out this study. The resources available were also taken into consideration. Among the resources were financial and the curriculum materials for teaching. The literature revealed that most studies conducted in relation to ECDE programmes focused on other countries other than Kenya and this created the interest to find out whether the findings in other areas can infer to the situation in the ECDE centers in Kenya.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter provides a detailed description of the research methodology, which includes research designs, target population, sample size and sampling techniques, data collection instruments, and data analysis procedures.

3.1 Research Methodology

The study used a mixed method research methology. This implies that it was able to collect both qualitative and quantitative data. This aided in concurrent triangulation of the data collected and hence enriching the data collected.

3.2 Research Design

The study adopted the descriptive and correlational research design. Description survey design was used in preliminary and exploratory studies to allow researchers to gather information, summarize, present and interpret for the purpose of clarification. (Borg and Gall, 2000) note that descriptive survey research is intended to produce statistical information about aspects of education that interest policy makers and educators. By using the descriptive survey design, it was possible to measure the study variables using questionnaires and related them to the dependent variable, which was the effect of ECDE programme implementation. The survey design enabled the researcher to collect data without manipulating the variables.

3.3 Study Location

The study was conducted in ECDE centres located in Kakamega County, Kakamega south Sub County; thus, Kakamega south Sub County is on longitude 34.74E and latitude 0.1882S. It covered an area of approximately 143.6 km^2 and has a population of approximately 104,669 people according to the (2009) census. The economic activities carried out in the zone included dairy farming on small scales, peasant, and small business. The main stable food grown was maize and grown with beans, subsistence crops such as sweet potatoes; sorghum and finger millet were also grown.

A few people have been employed in the government and public sectors. Poverty index of the area was approximately 40% and the climate was normally cool and wet. This enhanced tea plantation for small scale farmers. The topography of Kakamega south sub county comprised of a relatively flat land with good drainage systems. Wells, ponds and streams to rivers supply the area with water. Means of transport used included vehicles, bicycles and motor bikes that connected the rough roads (murram roads) where vehicles could not apply. The area had several dispensaries and a sub-district hospital for treatment. Common diseases that affected people in the zone include typhoid, malaria and also AIDS. AIDS resulted to orphanage and widows.

Socio-cultural activities practiced included circumcision of boys, marriage rites, bull fighting. A forestation activity was partly carried out to promote a good environment of this Luhya community (Idakho). Educational institutions included, 81 public ECDE centers, primary school, secondary schools and polytechnics (youth), and technical colleges forms the basic foundation in literacy.

3.4 Target Population

A target population is defined as a complete set of individuals, cases or objects with some common observable characteristics (Mugenda & Mugenda, 2003). The target population was 81 ECDE centres in Kakamega South Sub County in Kakamega County. The study target population comprised of 4 ECDE Officers, 81 Head Teachers, 243 ECDE teachers and 243 ECDE Parents Representatives. The ECDE Officers were purposively selected to uphold the information that was obtained from Head Teachers, ECDE teachers and ECDE Parents Representatives on the influence of school-based factors on ECDE curriculum implementation within the study area.

Table 1*:* Target Population

Category	Target population
ECDE Officers	4
Head Teachers	81
ECDE teachers	243
ECDE Parents Representatives	243
Total	**571**

Source: Kakamega South Sub County Educational Office, 2023.

3.5 Sample Size and Sampling Procedures

A sample is a small portion of a target population which is carefully selected to represent all the main traits of the population. Sampling is a technique used in selecting a given number of subjects from a defined population as a representative of that population (Borg & Gall, 1989; Orodho, 2002). Krejcie and Morgan (1970) utilized the table in Appendix IV for determining sample size for calculating the sample size for the study. According to the table,

a target population of 571 yield a sample size of 234. Mugenda and Mugenda (2003) emphasize that purposive sampling allows the researcher to use the cases that have required information with respect to the objective of the study. A simple random sample technique was applied in arriving at 32 ECDE centers for the study. From the selected ECDE centers, Head Teachers, ECDE teachers and ECDE Parents representatives were randomly taken to answer the questionnaires.

Table 2*:* Sampled Population

Category	Target population	Sampled population
ECDE Officers	4	4
Head Teachers	81	32
ECDE teachers	243	99
ECDE Parents Representatives	243	99
Total	**571**	**234**

Source (Researcher, 2024)

3.6 Data collection Instruments

A variety of research instruments helps in getting a holistic view of the research situation. According to Asambo (2003) there is a significant importance of using several appropriate instruments for the collection of the relevant information. Interviews for ECDE Officers and Head Teachers, ECDE teachers and ECDE Parents Representatives were utilized for gathering the data.

3.6.1 Questionnaires

The researcher relied on self-administered questionnaires. A questionnaire is a research instrument that gathers data over a large sample (Kombo & Tromp, 2006). The advantages of using questionnaires were that the person administering the instrument had an opportunity to establish rapport, explain the purpose of the study and the meaning of items that may not be clear. The questionnaires were filled by the Head Teachers, ECDE teachers and ECDE Parents Representatives. The anonymity of the respondents' filling the questionnaire gave the participants freedom, a sense of security and honesty in the answers.

3.6.2 Interview Schedule

An interview schedule is a meeting between two people face to face to accomplish a known purpose by discussion (Kothari, 2003). The interviews facilitated the acquisition of in-depth data and also ensured a high response rate and encouraged a natural situation the researcher came face to face with the respondents. The researcher probed for adequate elaboration of the issues as the respondents were able to express their views and ideas freely. The researcher used interviews on ECDE Officers to triangulate the responses from the questionnaires.

3.7 Validity and Reliability of Research Instruments

The principles of validity and dependability were, utilized to judge the quality of research.

3.7.1 Validity of Research Instrument

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research result (Orodho, 2008). Supervisors who were experts in the field determined the content and face validity. ECDE specialists in the field reviewed the questionnaires and interview schedules. Items that were deemed unsuitable were repositioned and some deleted.

Other expert advice, such as language use and sentence design, were added to improve validity. Furthermore, during piloting, the researcher examined the replies and checked whether the items provided necessary information. Items that were considered insufficient because of inappropriate were edited.

3.7.2 Reliability of Research Instruments

This is the degree to which a research instrument yields consistent results or data after repeated trials. (Mugenda & Mugenda, 2003). The test re-test method involved a repeated administration of the same subjects and looked at the correlation between the two sets of scores. The researcher used the Pearson's correlation coefficient formula to find the test-retest reliability coefficient. As a rule of thumb, this measure was only considered as reliable, as the Cronbach's Alpha Coefficient value was above 0.70 (Field, 2009). The boundaries for this coefficient are $0 \geq \alpha \leq 1$. The results to be obtained were shown in Table 3.

Table 3: Cronbach Alpha for Pilot Study

Variable	Number of Items	N	Cronbach Alpha coefficient
Teaching and learning materials	4	23	0.76
Teacher's characteristics	4	23	0.78
Instructional strategies	4	23	0.77
Learners' characteristics	4	23	0.77
Implementation of ECDE	4	23	0.76

Source (Researcher, 2024)

Consequently, the Cronbach Alpha coefficient of all variables was obtained; that was the Cronbach alpha coefficient for Teaching and learning materials (0.76), Teacher's characteristics (0.78), Instructional strategies (0.77), and Learners' characteristics (0.77), and Implementation of ECDE (0.76).

3.8 Data Collection Procedures

The researcher sought for a research permit from the National Commission for Science, Technology and Innovation (NACOSTI) and permissions sought from the County Director of Education (CDE) Kakamega south Sub County, and thereafter the researcher wrote letters to the head teachers to be allowed to do the study. The selected institutions visited and the questionnaires were administered to the respondents. Later, an appointment with the ECDE Officers were scheduled to gather in-depth information.

3.9 Data Analysis Methods

Data analysis usually involves reducing accumulated data to a manageable size, developing summaries, looking for patterns, and applying statistical techniques Orodho (2005). The Statistical Package for Social Sciences (SPSS) version 28 was exploited to prepare and arrange data for analysis. Descriptive and inferential statistics was used. Descriptive statistics was the most efficient means of summarising the characteristics of large sets of data while correlations showed the relationships between the independent and dependent variables in all the research questions. In a statistical analysis, the analyst calculated one number or a few numbers that reveal something about characteristics of large sets of data (McDaniel & Gates, 2012). Inferential statistics like Chi-square was used by the researcher to determine the association between the variables. Moreover, the qualitative data from the interviews were examined thematically.

3.10 Ethical Consideration

Ethics in research is usually put in place to control the relationship between the researchers and participants and between the researchers and the fields they wish to study (Flick, 2006).

In adhering to the ethical issues, the researcher sought permission from the NACOSTI before commencing the study. The researcher also made sure that participants were informed of the study. The respondents were not coerced to participate in the study. They were given the freedom to choose to participate or not to participate in the study. The researcher also ensured confidentiality and anonymity of the respondents' identities. This was achieved by not asking participants to write their names on the questionnaires.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.0 Introduction

This chapter presents the data analysis and discussion of the findings investigated the school-based factors influencing the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County. The chapter is divided into various sections namely, response rate, the demographic information of the participants and the study objectives specifically: Establish the influence of teaching and learning materials on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; assess the influence of teachers' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; determine the influence of instructional strategies on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County; and find out the influence of learners' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. The chapter starts with the response rate and is then followed by demographic information of the participants.

4.1 Response rate

A total of 230 questionnaires were sent out to the respondents to fill. Of these questionnaires, 210 were returned for analysis. The returned 210 questionnaires accounted for 91.3% response rate. A response rate of 70% and above is adequate (Mugenda and Mugenda, 1999), accordingly a response rate of 91.3% was appropriate for data analysis. This was shown on Table 4.

Table 4: Response rate

Questionnaire	Frequency	Percentage
Administered	230	100.0
Returned	210	91.3

Source (Researcher, 2024)

4.2 Demographic Characteristics of the respondents

Among the demographic information sought was gender, age and level of education. These variables were considered to influence the relationship between school-based factors and the implementation of ECDE programmes in Kakamega South Sub- County, Kakamega County. The respondents were first asked to indicate their gender. This is shown in Table 5.

Table 5: Gender of the respondents

Category	Frequency	Percent
Female	125	59.5
Male	85	40.5
Total	**210**	**100.0**

Source (Researcher, 2024)

Table 5 shows that majority 125(59.5%) of the respondents were females while minority 85(40.5%) were males. This implies that a third gender rule as per the Kenya Constitution (2010) is obeyed during representation of parents in schools, employment of teachers by Teacher Service Commission (TSC) and ECDE teachers by the county government of Kakamega, Kenya**.** Additionally, the respondents were asked to indicate their age.

Table 6: Age of the respondents

Category	Frequency	Percent
Below 25 years	37	17.6
25-34 years	82	39.0
35-44 years	56	26.7
45-54 years	26	12.4
55 and above	9	4.3
Total	**210**	**100.0**

Source (Researcher, 2024)

As shown in Table 6 above shows that majority 82(39.0%) of the respondents were 25-34 years, 56(26.7%) 35-44 years, 37(17.6%) below 25 years, 26(12.4%) 45-54 years and 9(4.3%) were above 55 years old. This implies that most of the respondents are above 25 years old, thus understand the needs of a child. Moreover, the respondents were asked to indicate their level of education. This is presented in Table 7.

Table 7: Level of education

Category	Frequency	Percent
Primary	18	8.6
Secondary	20	9.5
Certificate/Diploma	151	71.9
Bachelor's Degree	16	7.6
Post Graduate Degree	5	2.4
Total	**210**	**100.0**

Source (Researcher, 2024)

Table 7 majority 151(71.9%) of the respondents had certificate/diploma level of education, 20(9.5%) secondary, 18(8.6%) primary, 16(7.6%) bachelor's degree and 5(2.4%) had post graduate degree level. This implies that the respondents had a basic education to answer the questionnaires.

4.3 Influence of teaching and learning materials on the implementation of Early Childhood Development programmes

The study adopted descriptive and inferential statistical analysis. This helped to establish the influence of teaching and learning materials on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. For analysis, descriptive statistics (frequency, percentage, and mean distribution) for the level of agreement on a five-point Likert scale of the variable, teaching and learning materials was established and summarized in Table 8.

Table 8: Descriptive statistics for influence of teaching and learning materials on the implementation of Early Childhood Development programmes.

Statement		SD	D	U	A	SA	Mean
Use of maps and charts aid enables improves ECDE programmes implementation	F	19	14	16	86	75	3.88
	%	9.0	6.7	7.6	41.0	35.7	
Robotic programming promotes ECDE programmes implementation	F	28	14	9	68	91	3.86
	%	13.3	6.7	4.3	32.4	43.3	
Use of swings, Mary-go-round, sea-saw, colours, writing books boosts implementation of ECDE programmes	F	7	6	33	68	96	4.14
	%	3.3	2.9	15.7	32.4	45.7	
Availability and accessibility of textbooks and the exercise books improves ECDE programmes implementation	F	4	23	12	63	108	4.18
	%	1.9	11.0	5.7	30.0	51.4	

Source (Researcher, 2024)

Table 8 shows that 86(41.0%) of the respondents agreed with the statement that use of maps and charts aid improved ECDE programmes implementation, 75(35.7%) strongly agreed, 19(9.0%) strongly disagreed, 16(7.6%) were undecided and 14(6.7%) disagreed with the statement. The study findings suggested that the respondents tended to agree (3.88) that use of maps and charts aid improved ECDE programmes implementation. This was supported by an interviewee who had the following to say;

> … Use of maps and charts aid help teachers and students not only to identify and visually represent their views and knowledge but also to recognize and depict relationships among concepts. Even though some of our ECDE centres have teaching aids, they can't paste them because they don't have walls around to let the wall talk for the children to see and hear… *Female Participant, 49 years*, ECDE Officers.

This implies that use of maps and charts aid allow pupils acquire skills required for them, thus, improves implementation of the ECDE programmes. This is in line with the findings of Kilel, Andrew and Joseph (2023) that teacher's creativity in development of lesson aid facilitates transition of pupils, sound chats, maps and charts aid, models and creative visual materials are key resources required for acquisition of skills required.

Similarly, 91(43.3%) of the respondents strongly agreed with the statement that robotics programming promoted ECDE programmes implementation, 68(32.4%) agreed, 28(13.3%) strongly disagreed, 14(6.7%) disagreed and 9(4.3%) were undecided on statement. It emerged from the study that the respondents tended to agree (3.86) that robotics programming promoted ECDE programmes implementation. This was supported by an interviewee who had the following to say;

> …We are trying to ensure that we have robotics education in all our ECDE school as it encourages learners to think critically and solve problems through hands-on experiences. It provides a tangible and hands-on way for learners to apply theoretical concepts from some sciences and mathematics subjects. It bridges the gap between theory and practice by allowing learners to physically build, program, and interact with robots, fostering a deeper understanding of complex concepts… *Male Participant, 41 years*, ECDE Officer.

This implies that when ECDE centres adopt robotics programming teaching and learning of STEM subjects becomes easier for promotion of ECDE programmes implementation. This supports the findings of Alam (2022) that employing robots to teach computer programming may be a promising teaching tool for early childhood STEM education.

Additionally, 96(45.7%) of the respondents strongly agreed with the statement that use of swings, Mary-go-round and Sea-saw boosted implementation of ECDE programmes,

68(32.4%) agreed, 33(15.7%) were undecided, 7(3.3%) strongly disagreed and 6(2.9%) disagreed with the statement. The study findings suggested that the respondents agreed (4.14) that use of swings, Mary-go-round and Sea-saw boosted implementation of ECDE programmes. This was supported by an interviewee who had the following to say;

> …We don't have most of the things the children can play with in the school. Materials like swings, Mary-go-round and Sea-saw are not available in most of our ECDE centers to help us. When you go around the ECDE centres, they don't have even a single play item outside for these children to play with, thus, how can the children interact. This is the major challenge to teachers in the public schools. We hold the material for the children or not everybody will get it. If the teachers are able to teach well, then the learning can go on well. … *Female Participant, 49 years*, ECDE Officer.

This implies that use swings, Mary-go-round and Sea-saw boost implementation of ECDE programmes. This is in line with the findings of Suman and Frimpong (2021) that schools don't have most of the things the children can play with in the school.

Lastly, 108(51.4%) of the respondents strongly agreed with the statement that availability and accessibility of textbooks and exercise books improved the implementation of ECDE programmes, 63(30.0%) agreed, 23(11.0%) disagreed, 12(5.7%) were undecided and 4(1.9%) strongly disagreed with the statement. It emerged from the study that the respondents agreed (4.18) that availability and accessibility of textbooks and exercise books improved the implementation of ECDE programmes. This was supported by an interviewee who had the following to say;

> …When it comes to the textbooks and the exercise books, some of the children don't even have one at all and the school may have very few copies that cannot to reach all the children in the class. Most children don't come to school with the exercise books. The parents also don't buy for them. It is only the few that my head teacher is able to provide that we use. Because of this sometimes I give the children chalk to write on the floor… *Male Participant, 56 years*, ECDE Officers.

This implies availability and accessibility of textbooks and exercise books improves the implementation of ECDE programmes. This concurs with the findings of Surtikanti (2018)

that some of the children don't even have textbooks and the exercise books at all and the school may have very few copies that cannot to reach all the children in the class.

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between teaching and learning materials and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County as summarized in Table 9. To achieve this, the hypothesis below was tested.

H_{01}: There is no significant association between teaching and learning materials and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County

Table 9: Chi-square test of association between teaching and learning materials on the implementation of Early Childhood Development programmes.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1217.216[a]	132	.000
Likelihood Ratio	567.581	132	.000
Linear-by-Linear Association	152.462	1	.000
N of Valid Cases	210		

a. 146 cells (93.6%) have expected count less than 5. The minimum expected count is .03.

Source (Researcher, 2024)

Table 9 shows that the p value (p=0.000) for teaching and learning materials was less than 0.05. Hence, the hypothesis, “there is no significant association between teaching and

learning materials and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County" was rejected. This implies that there is statistically significant association between teaching and learning materials and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

4.4 Influence of teachers' characteristics on the implementation of Early Childhood Development programmes

The study adopted descriptive and inferential statistical analysis. This helped to asses the influence of teachers' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. For analysis, descriptive statistics (frequency, percentage, and mean distribution) for the level of agreement on a five-point Likert scale of the variable, teachers' characteristics was assessed and summarized in Table 10.

Table 10: Descriptive statistics for influence of teachers' characteristics on the implementation of Early Childhood Development programmes.

Statement		SD	D	U	A	SA	Mean
ECDE programme implementation increases with ECDE teachers' education	F	28	14	9	68	91	3.86
	%	13.3	6.7	4.3	32.4	43.3	
An experience of ECDE teacher determines ECDE programmes implementation	F	2	32	14	88	74	3.95
	%	1.0	15.2	6.7	41.9	35.2	
ECDE programmes implementation is enhanced with ECDE teachers' positive beliefs	F	4	24	12	64	106	4.16
	%	1.9	10.4	5.7	30.5	50.5	
ECDE teacher age determine ECDE programmes implementation	F	8	18	8	84	92	4.11
	%	3.8	8.6	3.8	40.0	43.8	

Source (Researcher, 2024)

Table 10 shows that 91(43.3%) of the respondents strongly agreed with the statement ECDE programme implementation increased with ECDE teachers' education 68(32.4%) agreed, 28(13.3%) strongly disagreed, 14(6.7%) disagreed and 9(4.3%) of the respondents were undecided on statement. The study findings suggested that respondents tended to agree (3.86) that ECDE programme implementation increased with ECDE teachers' education. This was supported by an interviewee who had the following to say;

> …We have noted increased motivation among teachers who have attended in-service training. Most of such teachers go as far as innovating with their own teaching and learning materials to the benefit of the learners, thereafter increases the implementation of the ECDE programmes. The number of in-service trainings thoroughly prepares teachers for ECDE programmes

> implementation. The former system which was used under the central government still applies, where trainees meet at a central point to train. This system is not attractive… *Male Participant, 56 years*, ECDE Officer.

This implies that teachers' education adds value to ECDE qualification, therefore facilitate ECDE programme implementation. This is in line with the findings of Nyongesa (2020) that that there exists a strong correlation between a ECDE teacher's access to in-service trainings and their performance as curriculum implementers.

Similarly, 88(41.9%) of the respondents agreed with the statement that an experience of an ECDE teacher determined ECDE programmes implementation, 74(35.2%) strongly agreed, 32(15.2%) disagreed, 14(6.7%) were undecided and 2(1.0%) strongly disagreed with the statement. It emerged from the study that the respondents tended to agree (3.95) that experience of an ECDE teacher determined ECDE programmes implementation. This implies that when ECDE teachers have more experience, the ECDE programme implementation s improved. This is in line with Kitsao-Wekulo, Mutisya, Hungi and Ngware (2023) that learners' school readiness scores decreased with each additional year of teachers' experience.

Additionally, 106(50.5%) of the respondents strongly agreed with the statement that ECDE programme implementation was enhanced with ECDE teachers' positive beliefs, 64(30.5%) agreed, 24(10.4%) disagreed, 12(5.7%) were undecided and 4(1.9%) of the respondents strongly disagreed with the statement. The study findings suggested that respondents agreed (4.16) that ECDE programme implementation was enhanced with ECDE teachers' positive beliefs. This was supported by an interviewee who had the following to say;

> …ECDE teachers do respect the dignity, worth, and uniqueness of each learner' family member, and colleague. They recognize that learners achieve their full potential in the context of relationships that are based on trust and respect. Some ECDE teachers in our ECDE centres have a positive belief by demonstrating and instilling the importance of teamwork that can teach respect for the opinions of others, listening, cooperation and equality,

> therefore, promoting ECDE programmes implementation… *Female Participant, 49 years*, ECDE Officer.

This implies that when ECDE teachers have positive beliefs ECDE programme implementation is enhanced. Clayback, Williford and Vitiello (2022) that teachers with more positive initial perceptions may have higher initial engagement with the curriculum, which in turn leads to sustained or increased positive perceptions and engagement.

Lastly, 92(43.8%) of the respondents strongly agreed with the statement that ECDE teacher age determined ECDE programmes implementation, 84(40.0%) agreed, 18(8.6%) disagreed, 8(3.8%) were undecided and 8(3.8%) of the respondents strongly disagreed with the statement. It emerged from the study that respondents agreed (4.11) that ECDE teacher age determined ECDE programmes implementation. This implies that ECDE teacher age determine ECDE programmes implementation. This concurs with the findings Nyarambi and Ntuli (2020) that age is important variables explaining perceived benefits of ECD.

The descriptive statistics of objective two was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between teachers' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County as summarized in Table 11. To achieve this, the hypothesis below was tested.

H_{02}: There is no significant association between teachers' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

Table 11: Chi-square test of association between teachers' characteristics on the implementation of Early Childhood Development programmes.

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1152.370[a]	132	.000
Likelihood Ratio	534.840	132	.000
Linear-by-Linear Association	142.777	1	.000
N of Valid Cases	210		

a. 148 cells (94.9%) have expected count less than 5. The minimum expected count is .03.

Source (Researcher, 2024)

Table 11 shows that the p value (p=0.000) for teachers' characteristics was less than 0.05. Hence, the hypothesis, "there is no significant association between teachers' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County" was rejected. This implies that there is statistically significant association between teachers' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

4.5 Influence of instructional strategies on the implementation of Early Childhood Development programmes

The study adopted descriptive and inferential statistical analysis that helped in determining the influence of instructional strategies on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. For analysis, descriptive statistics (frequency, percentage, and mean distribution) for the level of

agreement on a five-point Likert scale of the variable, instructional strategies were determined and summarized in Table 12.

Table 12: Descriptive statistics for influence of instructional strategies on the implementation of Early Childhood Development programmes.

Statement		SD	D	U	A	SA	Mean
Integrated technology strategies promote the ECDE programmes implementation	F	20	16	28	60	86	3.84
	%	9.5	7.6	13.3	28.6	41.0	
Incorporation of play activities in their instruction improve the ECDE programmes implementation	F	4	18	6	100	82	4.13
	%	1.9	8.6	2.9	47.6	39.0	
Cooperative learning structures in their classrooms enhance the implementation of ECDE programmes	F	2	8	28	66	106	4.27
	%	1.0	3.8	13.3	31.4	50.5	
Cross-curriculum teaching improves the implementation of ECDE programmes	F	5	8	31	54	112	4.24
	%	2.4	3.8	14.8	25.7	53.3	

Source (Researcher, 2024)

Table 12 shows that 86(41.0%) of the respondents strongly agreed with the statement that integrated technology strategies promoted the ECDE programmes implementation, 60(28.6%) agreed, 28(13.3%) were undecided, 20(9.5%) strongly disagreed and 16(7.6%) disagreed with the statement. The study findings suggested that respondents tended to agree

(3.84) that integrated technology strategies promoted the ECDE programmes implementation. This was supported by an interviewee who had the following to say;

> … We adopt integrated technology instructional strategy in some of our ECDE centres that has really helped in improving the ECDE programmes implementation. The strategy allows the teacher to connect with these kids, and for this to work teachers have to learn to speak their language and become conversant with the technology that comes so naturally to the young, who leads to the effectiveness of teachers, assessment and instruction are inseparable. Hereafter tapping into learners' interests and strengthening their technical skills, and enriching learning opportunities… *Male Participant, 56 years*, ECDE Officer.

This implies that taking advantage of virtual tours and other free educational resources promote the ECDE programmes implementation. This supports the finding of Morgan (2020) that taking advantage of virtual tours and other free educational resources improves early education implementation.

Additionally, 100(47.6%) of the respondents agreed with the statement that incorporation of play activities in their instruction improved the ECDE programmes implementation, 82(39.0%) strongly agreed, 18(8.6%) disagreed, 6(2.9%) were undecided and 4(1.9%) strongly disagreed with the statement. It emerged from the study that respondents agreed (4.13) that incorporation of play activities in their instruction improved the ECDE programmes implementation. This was supported by an interviewee who had the following to say;

> …When teachers seek to employ playful pedagogies in the classroom, there are various identifiable points along the learning journey. Play based learning help learners bring prior experiences, skills and knowledge to the classroom that may impede or support the implementation of strategies that, for example, require strong oral language, or decision-making skills. Most ECDE centres adopt joyful, meaningful, iterative, socially interactive and actively engaging experiences, focused on fostering cognitive, social, emotional, creative and physical skills… *Male Participant, 41 years*, Education Officers.

This implies that learners learning through play improves the ECDE programmes implementation. This supports the findings of Parker and Berry (2022) that children can

foster cognitive, social, emotional, creative and physical skills through active engagement in learning through play.

Similarly, 106(50.5%) of the respondents strongly agreed with the statement that cooperative learning structures in their classrooms enhanced the implementation of ECDE programmes, 66(31.4%) agreed, 28(13.3%) were undecided, 8(3.8%) disagreed and 2(1.0%) of the respondents were in a strong disagreement with the statement. The study findings suggested that respondents agreed (4.27) that cooperative learning structures in their classrooms enhanced the implementation of ECDE programmes. This was supported by an interviewee who had the following to say;

> …Teachers do organize small groups of learners to work together on a common task. The task can be as simple as solving a multi-step math problem together, or as complex as developing a design for a new kind of school. This strategy encourages interaction among the learners themselves, as the teacher, rather than calling on one student at a time, allows children to discuss class materials with buddies or in groups, thus maximizing the level of participation… *Female Participant, 49 years*, Education Officers.

This implies that when cooperative learning structures in their classrooms is adopted, the implementation of ECDE programmes is enhanced. This supports the finding of Bitok (2020) that ECD teachers were using cooperative learning structures in their classrooms, and the using of the strategy reduces learning gaps, increases achievement for all children, and allows students to share and engage in the learning process.

Lastly, 112(53.3%) of the respondents strongly agreed with the statement that cross-curriculum teaching improved the implementation of ECDE programmes, 54(25.7%) agreed, 31(14.8%) were undecided, 8(3.8%) disagreed and 5(2.4%) were in a strong disagreement with the statement. It emerged from the study that respondents agreed (4.24) that cross-curriculum teaching improved the implementation of ECDE programmes. This was supported by an interviewee who had the following to say;

> …Some of our ECDE centres adopt cross-curriculum teaching that integrates content and skills from multiple content areas into one cohesive learning experience. Basically, the approach asks more from the teacher, thus, the low level of utilization by the ECDE teachers used cross-curriculum teaching as their instruction strategy. The cross-curriculum teaching allows multiple subjects simultaneously can help learners go much deeper in learning concepts and skills… *Male Participant, 52 years*, Education Officers.

This implies that cross-curriculum teaching improves the implementation of ECDE programmes. This is in line with the findings of Earley (2019) that the cross-curricular approach increased the levels of agency of the pupils in this. In addition to this, the cross-curricular approach implemented facilitated bridge building between subject areas, allowing pupils to transport knowledge across discipline areas.

The descriptive statistics of objective three was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County as summarized in Table 13. To achieve this, the hypothesis below was tested.

H_{03}: There is no significant association between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

Table 13: Chi-square test of association between instructional strategies on the implementation of Early Childhood Development programmes.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	717.886[a]	132	.000
Likelihood Ratio	385.308	132	.000
Linear-by-Linear Association	115.905	1	.000
N of Valid Cases	210		

a. 146 cells (93.6%) have expected count less than 5. The minimum expected count is .03.

Source (Researcher, 2024)

Table 13 shows that the p value (p=0.000) for instructional strategies was less than 0.05. Hence, the hypothesis, "there is no significant association between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County" was rejected. This implies that there is statistically significant association between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

4.6 Influence of learners' characteristics on the implementation of Early Childhood Development programmes

The study adopted descriptive and inferential statistical analysis. This helped to find out the influence of learners' characteristics on the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County. For analysis, descriptive statistics (frequency, percentage, and mean distribution) for the level of agreement on a five-

point Likert scale of the variable, learners' characteristics was found out and summarized in Table 14.

Table 14: Descriptive statistics for influence of learners' characteristics on the implementation of Early Childhood Development programmes.

Statement		SD	D	U	A	SA	Mean
Learners' entry competencies determine the implementation of the ECDE programmes	F	12	14	30	88	66	3.67
	%	5.7	6.7	14.3	41.9	31.4	
Appropriate learners' learning styles boosts the implementation of the ECDE programmes	F	2	32	12	86	78	3.98
	%	1.0	15.2	5.7	41.0	37.1	
Learners' general characteristics determines the implementation of the ECDE programmes	F	5	22	12	63	108	4.18
	%	2.4	10.5	5.7	30.0	51.4	
Learners' multiple intelligences improves the implementation of the ECDE programmes	F	7	18	6	96	83	4.10
	%	3.3	8.6	2.9	45.7	39.5	

Source (Researcher, 2024)

Table 14 shows that 88(41.9%) of the respondents agreed with the statement that learners' entry competencies determined the implementation of the ECDE programmes, 66(31.4%) strongly agreed, 30(14.3%) were undecided, 14(6.7%) disagreed and 12(5.7%) strongly disagreed with the statement. The study findings suggested that respondents tended to agree (3.67) that learners' entry competencies determined the implementation of the ECDE programmes. This was supported by an interviewee who had the following to say;

> …Our ECDE schools readiness preparation begins from the nought to two years group because children learn from what they see and manipulate an object; nothing comes from the minds on its own. we observe how they play with building blocks, pretend kitchen, and another knowledge… *Female Participant, 49 years*, ECDE Officer.

This implies that learners' entry competencies determine the implementation of the ECDE programmes. This supports the finding of Chikwanda, Bayat and Madyibi (2022) that child must be well developed mentally, emotionally, physically, and socially and you can see this development when the child is playing with educational toys.

Similarly, 86(41.0%) of the respondents agreed with the statement that appropriate learners' learning styles boosted the implementation of the ECDE programmes, 78(37.1%) strongly agreed, 32(15.2%) disagreed, 12(5.7%) were undecided and 2(1.0%) strongly disagreed with the statement. It emerged from the study that respondents tended to agree (3.98) that appropriate learners' learning styles boosted the implementation of the ECDE programmes. This implies that appropriate learners' learning styles boost the implementation of the ECDE programmes. This concurs with the findings of Amal, Asti and Ilyas (2023) that improving language skills in children requires paying attention to the child's learning style so that the learning activities provided are appropriate and able to stimulate the child's development, it must be considered factor learning style of children.

Additionally, 108(51.4%) of the respondents strongly agreed with the statement that learners' general characteristics determined the implementation of the ECDE programmes, 63(30.0%) agreed, 22(10.5%) disagreed, 12(5.7%) were undecided and 5(2.4%) strongly agreed with the statement. The study findings suggested that the respondents agreed (4.18) that learners' general characteristics determined the implementation of the ECDE programmes. This was supported by an interviewee who had the following to say;

> …ECDE learners in our ECDE centres us learning styles such as visual, auditory, tactile, and kinaesthetic, and it's not uncommon for children to prefer more than one style. Three of the most popular in kindergartens grades

> are visual, auditory, and kinesthetic in which learners take in information. Some leaners are visual learners, while others are auditory or kinesthetic learners. To be able to identify them in your children, it's important for the ECDE teachers to understand the different learning styles for kids as this will help to promote ECDE programmes implementation… *Male Participant, 52 years*, ECDE Officer.

This implies that learners' general characteristics determine the implementation of the ECDE programmes. This is in line with the finding of Incognito and Pinto (2023) and Guswandi (2021) that child general characteristics like parents' occupation and education levels; home literacy and school at early age is associated significantly with performance in children.

Lastly, 96(45.7%) of the respondents agreed with the statement that learners' multiple intelligences improved the implementation of the ECDE programmes, 83(39.5%) strongly agreed, 18(8.6%) disagreed, 7(3.3%) strongly disagreed and 6(2.9%) were undecided on the statement. It emerged from the study that respondents agreed (4.10) that learners' multiple intelligences improved the implementation of the ECDE programmes. This was supported by an interviewee who had the following to say;

> …We have vital types of intelligence that includes spatial, kinesthetic, logical, linguistic, intrapersonal, interpersonal, musical, and naturalistic. It provides opportunities for authentic learning based on your learners' needs, interests and talents. If learners have multiple intelligence, they are able to regulate their emotions and build self-confidence; they were more expressive to communicate their feelings with others and demonstrated decision-making skills… *Male Participant, 56 years*, ECDE Officer.

This implies that learners' multiple intelligences improve the implementation of the ECDE programmes. This is in line with the findings of Fadlillah, Wahab, Ayriza, Rohmah and Ahdhianto (2020) that multiple intelligences enable learners to regulate their emotions and build self-confidence.

The descriptive statistics of objective four was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between learners' characteristics and the implementation of Early Childhood

Development programmes in Kakamega South Subcounty, Kakamega County as summarized in Table 15. To achieve this, the hypothesis below was tested.

H_{04}: There is no significant association between learners' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

Table 15: Chi-square test of association between learners' characteristics on the implementation of Early Childhood Development programmes.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	836.306[a]	143	.000
Likelihood Ratio	468.816	143	.000
Linear-by-Linear Association	135.359	1	.000
N of Valid Cases	210		

a. 159 cells (94.6%) have expected count less than 5. The minimum expected count is .02.

Source (Researcher, 2024)

Table 15 shows that the p value (p=0.000) for learners' characteristics was less than 0.05. Hence, the hypothesis, "there is no significant association between learners' characteristics and the implementation of Early Childhood Development programmes in Kakamega South subcounty, Kakamega County" was rejected. This implies that there is statistically significant association between learners' characteristics and the implementation of Early Childhood Development programmes in Kakamega South subcounty, Kakamega County.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter summarized the findings, gave conclusions, recommendations, and the contribution to the body of knowledge. It also suggested areas for further research in the following sub themes.

5.1 Summary of the study findings

Based on the data and information analyzed in chapter four. The findings are summarized in this section.

5.1.1 Influence of teaching and learning materials on the implementation of Early Childhood Development programmes

The study findings suggested that the respondents tended to agree that use of maps and charts aid improved ECDE programmes implementation. Similarly, it emerged from the study that the respondents tended to agree that robotics programming promoted ECDE programmes implementation. Additionally, the study findings suggested that the respondents agreed that use of swings, Mary-go-round and Sea-saw boosted implementation of ECDE programmes. Lastly, it emerged from the study that the respondents agreed that availability and accessibility of textbooks and exercise books improved the implementation of ECDE programmes. Chi-square test of association revealed that there is statistically significant association between teaching and learning materials and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

5.1.2 Influence of teachers' characteristics on the implementation of Early Childhood Development programmes

The study findings suggested that respondents tended to agree that ECDE programme implementation increased with ECDE teachers' education. Similarly, it emerged from the study that the respondents tended to agree that experience of an ECDE teacher determined ECDE programmes implementation. Additionally, the study findings suggested that respondents agreed that ECDE programme implementation was enhanced with ECDE teachers' positive beliefs. Lastly, it emerged from the study that respondents agreed that ECDE teacher age determined ECDE programmes implementation. Chi-square test of association revealed that there is statistically significant association between teachers' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

5.1.3 Influence of instructional strategies on the implementation of Early Childhood Development programmes

The study findings suggested that respondents tended to agree that integrated technology strategies promoted the ECDE programmes implementation. Additionally, it emerged from the study that respondents agreed that incorporation of play activities in their instruction improved the ECDE programmes implementation. Similarly, the study findings suggested that respondents agreed that cooperative learning structures in their classrooms enhanced the implementation of ECDE programmes. Lastly, it emerged from the study that respondents agreed that cross-curriculum teaching improved the implementation of ECDE programmes. Chi-square test of association revealed that there is statistically significant association between instructional strategies and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

5.1.4 Influence of learners' characteristics on the implementation of Early Childhood Development programmes

The study findings suggested that respondents tended to agree that learners' entry competencies determined the implementation of the ECDE programmes. Similarly, it emerged from the study that respondents tended to agree that appropriate learners' learning styles boosted the implementation of the ECDE programmes. Additionally, the study findings suggested that the respondents agreed that learners' general characteristics determined the implementation of the ECDE programmes. Lastly, it emerged from the study that respondents agreed that learners' multiple intelligences improved the implementation of the ECDE programmes. Chi-square test of association revealed that there is statistically significant association between learners' characteristics and the implementation of Early Childhood Development programmes in Kakamega South Subcounty, Kakamega County.

5.2 Conclusion

From the findings, the study concludes that school-based factors influence the implementation of ECDE programmes. It is concluded that there is a statistically significant association between teaching and learning materials and and the implementation of ECDE programmes. Use of maps and charts aid, swings, Mary-go-round and Sea-saw, adoption of robotics programming and availability and accessibility of textbooks and exercise books improve the implementation of ECDE programmes. Similarly, it is concluded that there is a statistically significant association between teachers' characteristics and the implementation of ECDE programmes. ECDE programme implementation is enhanced with ECDE teachers' education, experience of an ECDE teacher, ECDE teachers' positive beliefs and ECDE teacher age.

Additionally, it is concluded that there is a statistically significant association between instructional strategies and the implementation of ECDE programmes. This is because integrated technology strategies, incorporation of play activities in their instruction, cooperative learning structures in their classrooms and cross-curriculum teaching. Lastly, it is concluded that there is a statistically significant association between learners' characteristics and the implementation of ECDE programmes. This is because learners' entry competencies, appropriate learning styles, general characteristics and multiple intelligences boost the implementation of ECDE programmes.

5.3 Recommendation for practice

In reference to the findings, conclusions, and the guidance from the literature review, it was clear that school-based factors like teaching and learning materials, teacher's characteristics, instructional strategy and learners' characteristics influence implementation of ECDE programmes. Consequently, school headteacher, school administration, policy makers and other stakeholders should consider school-based factors such as teaching and learning materials, teacher's characteristics, instructional strategy and learners' characteristics as this will enhance implementation of ECDE programmes. Additionally, on the influence of instructional strategies on implementation of ECDE programmes, it is recommended that policy makers, county and national governments and other stakeholder should ensure that County education office step up their oversight on early childhood education. This will ensure the students are enlightened through exposure to the right instructional strategies.

5.4 Recommendation for further studies

The researcher suggests the following further areas of research.

1. Research should be carried out on the influence of other school-based factors on the implementation of ECDE programmes.

2. Further research should be done on the mediating effects on the relationship between school-based factors and the implementation of ECDE programmes.

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APPENDICES

Appendix I: Introductory Letter

Elizer M. Muhonja
P.O. Box 342-01000,
Thika

RE: Request for Participation in Data Collection Exercise

I am a post graduate student in the School of Education at Mount Kenya University. I am undertaking a Master of Education in Early Childhood Development Education. I am required to undertake a research study whose title is **"Influence of school related factors on the implementation of Early Childhood Development Education programmes in Kakamega South Subcounty, Kakamega County"**.

I kindly request you to assist me collect data to compile my research by truthfully filling the attached questionnaires. I would like to assure you that all information given will be treated with utmost confidentiality and will be used for academic purposes only. A copy of the final report will be made available to you on request.

Your assistance and cooperation are highly appreciated.

Thank you

Yours faithfully,

Signature…… Date……

Principal investigator

Name: **Elizer M. Muhonja**

For complains or clarification, please contact.

Chairperson,

MKU IREC,

P.O. Box 342-01000,

Thika

Appendix II: Questionnaire

Please respond to each of the following questions by filling in or ticking (√) based on your view. Fill in the blanks in each questionnaire item with your replies.

SECTION A: DEMOGRAPHIC INFORMATION

(Please check the boxes next to your responses.)

1. Indicate your gender Male [ ] Female [ ]

2. Indicate your age?

3. Indicate your level of education?

CATEGORY I: INFLUENCE OF TEACHING AND LEARNING MATERIALS ON IMPLEMENTATION OF ECDE PROGRAMMES

Please indicate the degree of agreement by circling the corresponding number. Make use of the supplied scale.: **1=strongly disagree, 2=Disagree, 3=Undecided, 4= Agree and 5= strongly agree.**

Statements					
Use of maps and charts aid enables improves ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**
Robotic programming promotes ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**
Use of swings, Mary-go-round, sea-saw, colours, writing books boosts implementation of ECDE programmes	**1**	**2**	**3**	**4**	**5**
Availability and accessibility of textbooks and the exercise books improves ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**

CATEGORY II: INFLUENCE OF TEACHERS' CHARACTERISTICS ON IMPLEMENTATION OF ECDE PROGRAMMES

Please indicate the degree of agreement by circling the corresponding number. Make use of the supplied scale.: **1=strongly disagree, 2=Disagree, 3=Undecided, 4= Agree and 5= strongly agree.**

Statements					
ECDE programme implementation increases with ECDE teachers' education	**1**	**2**	**3**	**4**	**5**
ECDE teacher experience determines ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**
ECDE programmes implementation is enhanced with ECDE teachers' positive beliefs	**1**	**2**	**3**	**4**	**5**
ECDE teacher age determine ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**

CATEGORY III: INFLUENCE OF INSTRUCTIONAL STRATEGIES ON IMPLEMENTATION OF ECDE PROGRAMMES

Please indicate the degree of agreement by circling the corresponding number. Make use of the supplied scale.: **1=strongly disagree, 2=Disagree, 3=Undecided, 4= Agree and 5= strongly agree.**

Statements					
Integrated technology strategy promotes the ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**
Incorporation of play activities in their instruction improve the ECDE programmes implementation	**1**	**2**	**3**	**4**	**5**
Cooperative learning structures in their classrooms enhance the implementation of ECDE programmes	**1**	**2**	**3**	**4**	**5**
Cross-curriculum teaching improves the implementation of ECDE programmes	**1**	**2**	**3**	**4**	**5**

CATEGORY IV: INFLUENCE OF LEANERS CHARACTERISTICS ON IMPLEMENTATION OF ECDE PROGRAMMES

Please indicate the degree of agreement by circling the corresponding number. Make use of the supplied scale.: **1=strongly disagree, 2=Disagree, 3=Undecided, 4= Agree and 5= strongly agree.**

Statements					
Learners' entry competencies determine the implementation of the ECDE programmes	**1**	**2**	**3**	**4**	**5**
Appropriate learners' learning styles boosts the implementation of the ECDE programmes	**1**	**2**	**3**	**4**	**5**
Learners' general characteristics determines the implementation of the ECDE programmes	**1**	**2**	**3**	**4**	**5**
Learners' multiple intelligences improves the implementation of the ECDE programmes	**1**	**2**	**3**	**4**	**5**

CATEGORY IV: INFLUENCE OF LEANERS CHARACTERISTICS ON IMPLEMENTATION OF ECDE PROGRAMMES

Please indicate the degree of agreement by circling the corresponding number. Make use of the supplied scale.: **1=strongly disagree, 2=Disagree, 3=Undecided, 4= Agree and 5= strongly agree.**

Statements					
Creativity in the ECDE centres improved because of effective adoption to the school-based factors	**1**	**2**	**3**	**4**	**5**
Knowledge acquisition and cognitive skills in the ECDE centres enhanced because of effective adoption to the school-based factors	**1**	**2**	**3**	**4**	**5**
Physical well-being and motor development in the ECDE centres is boosted because of effective adoption to the school-based factors	**1**	**2**	**3**	**4**	**5**
Emotional development and social competency in the ECDE centres improved because of effective adoption to the school-based factors	**1**	**2**	**3**	**4**	**5**

Appendix III: Interview Schedule

i. How do teaching and learning materials influence the implementation of Early Childhood Development programmes in public ECDE centres in Kakamega South subcounty, Kakamega County?

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……

……

ii. How do teacher's characteristics influence the implementation of Early Childhood Development programmes in public ECDE centres in Kakamega South subcounty, Kakamega County?

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……

……

iii. How do instructional strategies influence the implementation of Early Childhood Development programmes in public ECDE centres in Kakamega South subcounty, Kakamega County?

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How do learners' characteristics influence the implementation of Early Childhood Development programmes in public ECDE centres in Kakamega South subcounty, Kakamega County?

……

……

Appendix IV: ERC CERTIFICATE

Mount Kenya University

REF: **MKU/ISERC/3708**
TO: **ELIZER .M. MUHONJA**

Date: 13 May 2024

REG: **MECS/2017/67088**

Dear Sir/Madam,

RE: INFLUENCE OF SCHOOL RELATED FACTORS ON THE IMPLEMENTATION OF EARLY CHILDHOOD DEVELOPMENT EDUCATION PROGRAMMES IN KAKAMEGA SOUTH SUBCOUNTY, KAKAMEGA COUNTY

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2752.** The approval period is **13/05/2024 - 12/05/2025.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

MOUNT KENYA UNIVERSITY P.O. Box 13495 - 00100 NAIROBI CAMPUS
12 SEP 2024
DIRECTOR Graduate Studies
RECEIVED

The Chairman Mount Kenya University Ethics Review Committee P. O. Box ... 01000 Thika

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Appendix V: INTRODUCTORY LETTER FROM MKU

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MECS/2017/67088

12th September, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki, Upper Kabete
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: ELIZER M. MOHONJA – REGISTRATION NO. MECS/2017/67088

The purpose of this letter is to introduce the above named student who is pursuing **Master of Education in Early Childhood Studies** in the **Department of Special Needs and Early Childhood Education** in the **School of Education.**

The title of the research is "**Influence of School Related Factors on the Implementation of Early Childhood Development Education Programmes in Kakamega South Sub-County, Kakamega County.**" It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **September, 2024 and November, 2024.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P.O. Box 342-01000, THIKA
Office of the Director
Graduate Studies

Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

Appendix VI: RESEARCH PERMIT

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **808376**

Date of Issue: **26/September/2024**

RESEARCH LICENSE

This is to Certify that Ms.. ELIZER MUTAMBWA MUHONJA of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Kakamega on the topic: INFLUENCE OF SCHOOL RELATED FACTORS ON THE IMPLEMENTATION OF EARLY CHILDHOOD DEVELOPMENT EDUCATION PROGRAMMES IN KAKAMEGA SOUTH SUBCOUNTY, KAKAMEGA COUNTY for the period ending : 26/September/2025.

License No: **NACOSTI/P/24/40231**

808376

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VII: RESEARCH AUTHORIZATION LETTER

REPUBLIC OF KENYA

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION
STATE DEPARTMENT FOR INTERNAL SECURITY AND NATIONAL ADMINISTRATION

Email: cckakamega12@yahoo.com
When replying please quote:

County Commissioner
Kakamega County
P O Box 43 - 50100
KAKAMEGA

Ref. No. ED. 12/1 VOL. VII/93

Date: 11th October, 2024

Elizer Mutambwa Muhonja
Mt. Kenya University
P O Box 342 - 01000
THIKA

RESEARCH AUTHORIZATION

Following your authorization vide License Ref. No. **NACOSTI/P/24/40231** dated 26th September, 2024 by **NACOSTI** to undertake research on "***Influence of school related factors on the Implementation of Early Childhood Development Education programmes in Kakamega South Sub County, Kakamega County***" for the period ending 26th September, 2024.

I am pleased to inform you that you have been authorized to carry out the research on the same in this County.

COUNTY COMMISSIONER
KAKAMEGA COUNTY

P. K. KEMEI
FOR: COUNTY COMMISSIONER
KAKAMEGA COUNTY

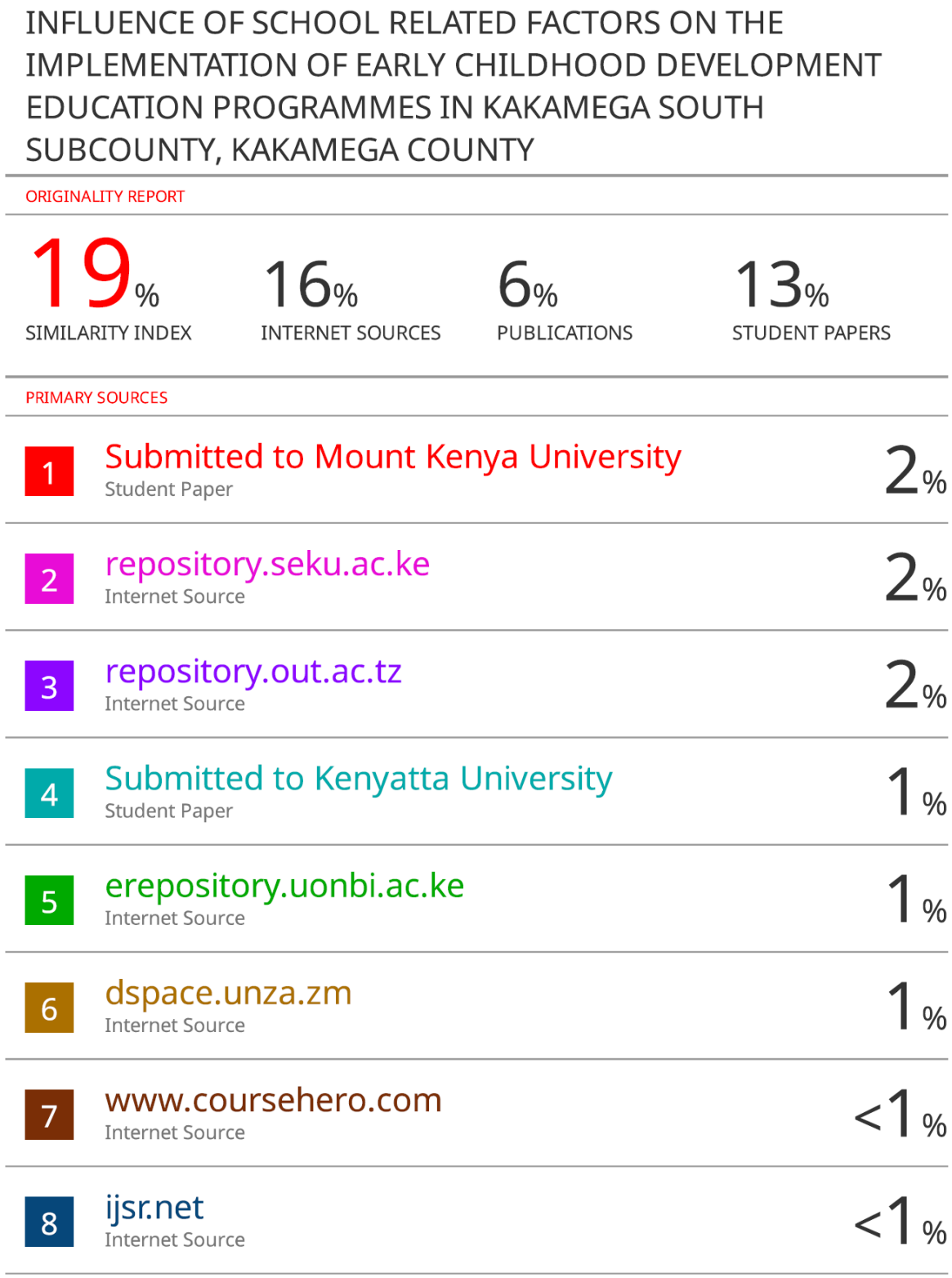
CC: Deputy County Commissioner
KAKAMEGA SOUTH SUB COUNTY

Appendix VIII: Table for Determining Sample Size from a Given Population

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

Appendix IX: Map of Kakamega South Sub County

Appendix X: Similarity Index



INFLUENCE OF SCHOOL RELATED FACTORS ON THE IMPLEMENTATION OF EARLY CHILDHOOD DEVELOPMENT EDUCATION PROGRAMMES IN KAKAMEGA SOUTH SUBCOUNTY, KAKAMEGA COUNTY

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