

**MUSIC AS A MEDIUM OF INSTRUCTION AND CHILDREN'S PERFORMANCE IN  
LEARNING AREAS' IN EARLY CHILDHOOD EDUCATION IN MUKONO  
MUNICIPALITY, UGANDA.**

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## DECLARATION

I, **KUGONZA SARAH**, declare that this research project is my original work and that it has never been submitted to any institution of higher learning for the award .or any degree

**Sign** .....

**Date**.....

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## **APPROVAL**

The research project of Kugonza Sarah entitled “Music as a Medium of Instruction and Children’s Performance in Learning Areas in Early Childhood Education in Mukono Municipality, Uganda” has been carried out under my supervision.

**Sign** .....

**Date**.....

**Dr. SOFIA SOL T. GAITE**

**SUPERVISOR**

## **DEDICATION**

This thesis report is dedicated to my dearest mum ANNAH MUSIIME, the principal YMCA Mukono for the financial support, my friends Petronila, Dominic and Racheal for the encouragement given to me. God bless.

## **ACKNOWLEDGEMENTS**

First, I acknowledge and appreciate God for bringing me this far. He has kept me safe and in good health and empowered me with wisdom and strength to pass through these years.

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I thank my parents, my siblings, my children and relatives for their tireless efforts to see me through school have always been an inspiration to me in my academic pursuits. I also appreciate my respondents for their input and giving me the information.

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## **LIST OF ABBREVIATIONS AND ACRYONMS**

BC	Before Christ
CVI	Content Validity Index
ECCE	Early Childhood Care Education
ECD	Early Childhood Development
JECCE	Journal of Early Childhood Care and Education
MOES	Ministry Of Education and Sports
NCDC	National Curriculum Development Center
UNICEF	United Nations International children's Emergency Fund

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## **ABSTRACT**

The study investigated the effect of music as a medium of instruction on children's performance in learning areas in pre-primary schools in Mukono Municipality. The study objectives were: to find out the level of use of music as medium of instruction in ECE in Mukono municipality, to assess the children's performance in learning areas numbers, reading and writing in Mukono Municipality; and to establish the relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality, Uganda. The study used descriptive correlation research designs with both qualitative and quantitative approaches. Data was collected from 159 respondents using a self-administered questionnaire. The study found out that the level of use of music as medium of instruction in ECE in Mukono municipality was high with a mean of 3.06 and standard deviation of 1.01., there was a high level of children's performance in learning areas numbers, reading and writing in Mukono Municipality as shown with a mean of 3.04 and standard deviation of 0.99 also there is a significant relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality. In calculating the scores using Pearson correlation Coefficient with a statistical package SPSS. The study concluded that use of music as medium of instruction influences children's performance in ECE learning areas in Mukono Municipality. The influence is positive whereby children performance in numbers, reading and writing are among things children can do as a result of use of music when learning. Therefore the researcher recommends that teachers who teach children in ECE should continue to use music as a medium of instruction and the school administrators should provide materials that can foster use of music as a medium of instruction in pre-primary teachers in order to promote performance of children.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.0 Introduction**

The study investigated the relationship between music as medium of instruction and children's performance in learning areas of Early Childhood Education in Mukono municipality, Uganda. In this study music as medium of instruction is the independent variable and children's performance in learning areas is the dependent variable. So this chapter presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, and scope of the study and significance of the study.

### **1.1 Background of the Study**

The background of the study contains four systematically linked perspectives namely; historical perspective which shows the previous and present overview of the study variables, theoretical perspective that shows the theory that underpin the study, conceptual perspective that gives definitions of the variables and contextual perspective which shows on ground that prompted the study.

#### **1.1.1 Historical Perspective**

The connection between music and early childhood education has been debated since ancient times. In ancient Greece (around 500BC), Pythagoras and his disciples were at the forefront of this and they believed that a number is at the basis of everything and that everything can be understood by numbers and their proportions. While music was exclusively considered to be a form of science in ancient Greece, in the Middle Ages it was regarded as both a form of science and an art form. The study of music was associated with the study of arithmetic, geometry and astronomy (Tatlow, 2015). The use of music as a medium of instruction can be a powerful way to carry a volume of content to the children. In fact, music can do sixty percent

(60%) of the teaching work in about 5% of the time (Esimone, 2012). When children listen to music, they respond with their feelings and emotions, manipulative skills through intellectual means and by combination of these.

According to Agu (2006), music is an aesthetic art of putting together sounds that are pleasant to the ear. Music is a pleasant sound capable of influencing anybody, anytime and anywhere. The power of Music can be a great asset in helping children learn all that is expected of them.

Ekpo (2008) urges that Children are inclined to be more interested in music, and possess more positive attitude towards an appreciation for music. Early childhood is a period from infancy to five (5) years of age. UNICEF (2011) reported that Early childhood is the most crucial and rapid period of development in human life. Early childhood is a critical stage of development that forms the foundation for children's future well-being and learning.

Since the 15th century experts have begun to realize the importance of education from an early age, Since then many opinions and theories have developed about the importance of education from an early age and how it is implemented (Astini, 2019). Frederic Frobel, an expert born in Germany in 1782 introduced the first kindergarten or playground. In Indonesia, Father of Education Ki Hadjar Dewantara introduced an educational concept for early childhood which was given the name of the student park (JECCE 2019). Music learning during schooling potentially brings the spontaneous repertoires of children's everyday musical performance to their formally organized and systematic learning process within formal schooling, that is, bringing children's music activities into their conscious awareness. Consequently, children begin to learn music within school instruction with awareness of the rhythmic structure and melodic patterns that characterize the spontaneous songs and dances which they bring into formal

learning from their everyday community participation. At the same time, reading instruction and the various forms of literacy activities in which children begin to participate introduce the written form of language with its specific peculiarities, providing a unique system of graphic representation of the spoken word and its rhythmic and melodic patterns that are simultaneously constitutive of musical expressions (Tomlinson 2013).

Therefore, unlike the formal learning of reading and writing which have the inherent potential to extend the child's knowledge of his or her language abilities at the same time that the child is introduced to the system of the formal concepts of school literacy, music instruction has the inherent potential to extend the pleasure aspect of everyday, spontaneous music performance activities at the same time that the serious formal learning and acquisition of formal concepts take place. As a result, music instruction in school may serve the critical role of connecting formal learning, on the one hand, to children's spontaneous musical performance and knowledge repertoires, on the other hand. Music could be understood as generally having an intrinsic and unique connection to the pleasure-driven motive, and as capable of producing activity that naturally leads to self-gratification normally associated with role-play activity, because both forms of children's activities have the capacity to serve as means, therefore enabling children to enter the world of adults and live in it on their own terms. Music instruction in school, therefore, has greater potential to promote learners' conscious awareness of the formal structure of the rhythmic and melodic structure of Open Access performance more readily than reading instruction would achieve, and hence, enabling efficient mastery of meanings embodied by and underpinned in the symbolic structure of the notation system. Music lesson activities introduce learners to textual representation of music performance through graphic charts or musical scores, which consisted, for example, of dots that represented steady beat and squares, as well as

rectangles to represent word rhythms, or lines to represent melodic contours. Textual lesson activities were particularly meant to foster learners' abilities to connect sounds to graphemes or letters, and to connect perceptions of rhythm and pitch to graphic shapes. The tapping of basic rhythms was also used to help students remember pronunciation of specific words in the song.

Research findings from a study done in Hispanic, Caucasian and Black American 165 preschool children and 11 teachers who were conveniently and criterion selected showed that music abilities enhanced children's tonal development. The findings of the study further established that children exposed to musical experiences significantly improved their grammatical understanding, oral vocabularies and sound recognition abilities.

The Kenya National Early Childhood Development Policy Framework, (2006) suggests that children's needs should be met holistically in education settings (NECDPF, 2006). The policy document emphasizes use of thematic approaches to teach activity areas. Kenya Institute of Curriculum Studies also puts emphasis for teachers to promote music skills in early childhood curriculum (KICD, 2014).

Uwezo (2012) established that In Kenya, 30% of children in lower primary schools are not able to read and write effectively. This was due to poor teaching methods, lack of enough language instructional materials and social economic status. This leads to most children completing school without the necessary language skills to cope in society, hence the need to explore on teachers' competence to use music as medium of instruction to promote language skills.

Children in South Africa – as generally in all African cultural contexts – participate in rich heritage of musical traditions from an early age (Blacking 1995; Campbell 1999). Although the nature and forms of such participation may be changing with time, the rich repertoires of



musical tradition and skilled performances that ensue from their community musical practices could have beneficial effects on their learning and development if these were appropriately acknowledged and utilized within their schooling. Meanwhile, music seems to have an inherent potential for contributing towards improved reading. and utilized within their schooling. Meanwhile music seems to have an inherent potential for contributing towards improved reading.

### **1.1.2 Theoretical Perspective**

The study was based on Daniel Levitin Cognitive Theory. According to Daniel Levitin, “Musical activity involves nearly every region of the brain that we know about and nearly every neural subsystem” Daniel Levitin (1920-1994) was a developmental psychologist who was a pioneer in research and theory on developmental stages and crises of adulthood. He was highly influenced and inspired by Erik Erikson's 1959 theory of psychosocial development from early to late adulthood. Before Erikson and Levinson, there was little emphasis on adult development in comparison to child development. The theory is centered on the idea that adult development is made up of a number of stages (eras) and transitional periods. However, Schlaug and others (2010) additionally claim that engaging in musical activities not only shapes the organization of the developing brain but also produces long-lasting changes even after brain maturation is complete.

### **1.1.3 Conceptual Perspective**

In this study music as a medium of instruction is the independent variable and children's performance in learning areas is the dependent variable. Music as a medium of instruction is defined as the means of teachers providing instructions to children in learning areas using songs and rhythm (McCoy *et al* 2017). Tomlinson, (2012) defines Musical learning style as a child's 's

ability to understand and process sound, rhythm, patterns in sound, relationships between sounds, and ability to process rhymes and other auditory information.

The learning areas in Early Childhood Education comprise of numbers, reading and writing (encyclopedia of education 2014). However, depending on the physical status of the children, music could be used to meet their learning needs.

Children's performance in learning areas is defined as a measurable and observable behavior of children in Early Childhood Schools within a specific period of time. Children's performance in learning areas shall be assessed through grades awarded to children and the level of teachers' achievement of their set goals in a given period of time. In this study children's performance shall be focused to the three major learning areas namely: numbers, reading and writing.

#### **1.1.4 Contextual Perspective**

Early childhood education is a starting point for a child's development and the key foundation of the Uganda Educational System. This type of education is recognized by the Uganda Early Childhood Education policy (Nakabugo et al 2019). The role of Early Childhood Care and Education (ECCE) as a prerequisite for national development has been emphasized in recent years by developing countries and by donor agencies (Loete, & Delport, 2015). The aim of early childhood development (ECD) in Uganda is to develop children's capabilities, healthy physical growth and good social habits. Children in ECD care are looked at in three major levels, Baby class, middle class and top class. In the three levels, the children are at different stages of development thus they are not homogenous (MOES 2016). Lack of enough language materials, classrooms and teacher attitude largely leads to more than 75% of children unable to complete tasks for their next classes. Some of the prominent challenges and obstacles facing ECD in

Mukono include absence of learning materials and resources, especially within the classroom setting, minimal funding, lack of qualified teachers, inadequate security for children whilst at the ECD facility, as well as poor toilet amenities (Tashobya 2020). Furthermore, Ejuu (2016) reported that inadequate parental involvement and commitment to ECE in Mukono municipality were identified as challenges mainly by early childhood educators and heads of early childhood institutions. Furthermore, the limited number of teaching staff and teacher quality as well as the limited or no infrastructure and learning materials were also identified as major challenges. Below is a quote from one of the parents interviewed in the study.

The early years of a child are very important. Research has shown that 80% of the brain is formed during the first 3 years of the child's life. This is the period when the child is most vulnerable, impressionable and sensitive to environmental influences and is referred to as "formative" or "impressionable" years that is having an important and lasting influence on the development of a child's character. Experience of these years continues to influence the individual throughout life.

## **1.2 Statement of the Problem**

The number of pre-primary schools in Uganda increased by 236% from 2007 to 2011 (Ejuu, 2012). However, the number of institutions that train caregivers in ECD has not kept pace with this. In Mukono municipality despite the increasing number of pre- primary schools there are still indicators of low performance of children in learning areas. UWEZO –Uganda (2015) reported that the proportion of pupils who could read and comprehend language in ECDs in Mukono municipality was 46%. In numeracy and English reading, the proportion of competent children was 57%. The actual cause of the low grades in learning areas could be attributed to the medium of instruction. Therefore, Music is believed to create significant

contexts for life skills such as cooperation, collaboration and group effort. In addition, it also develops rudiments of an aesthetic sense and contributes to school readiness. Uwezo East Africa (2016), report on Music and arithmetic literacy cited that a third of pupils who were taught with adoption of music possessed basic numeracy skills. In spite of the importance of music as a medium of instruction. Most of the studies done are on having focused on primary and secondary schools. The Use of Music as a medium of instruction in preschool has not received much attention yet music plays a major role in laying a foundation for learning numeracy, literacy and life skills (MOEST 2022). It's therefore upon this background that the researcher investigated the effect of music as a medium of instruction on children's performance in learning areas in pre-primary schools in Mukono Municipality.

### **1.3. Purpose of the Study**

The study investigated the relationship between music as a medium and children's performance in early childhood education learning areas in Mukono Municipality, Uganda

#### **1.3.1. Specific Objectives of the Study**

The following were the specific objectives of the study:

- i. To find out the level of use of music as a medium of instruction in ECE in Mukono municipality, Uganda.
- ii. To assess the children's performance in learning areas numbers, reading and writing in Mukono Municipality, Uganda
- iii. To establish the relationship between music as a medium of instruction and children's performance in ECE learning areas in Mukono Municipality, Uganda.

### **1.3.2. Research Questions**

- i. What is the level of use of music as a medium of instruction in ECE in Mukono Municipality, Uganda?
- ii. What is the level of performance of children in learning areas of numbers, reading and writing in Mukono Municipality, Uganda?
- iii. What is the relationship between music as a medium of instruction and children's performance in learning areas numbers, reading and writing in Mukono Municipality, Uganda?

### **1.3.3. Null Hypothesis**

H0: There is no significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Mukono Municipality

## **1.4. Scope of the Study**

The scope of the study presents geographical scope, content scope, theoretical scope and time scope.

### **1.4.1 Geographical Scope**

The study was carried out in the pre-primary schools in Mukono Municipality, which is 16 kilometers outside of Kampala city on Jinja Road. This was selected because despite having many pre-primary schools there were several allegations of the ineffective teaching of infants in pre-primary schools in the municipality (the map of Mukono Municipality is attached in Appendix iii)

#### **1.4.2 Content Scope**

The content of the study was limited to the levels of use of music as medium of instruction in ECE, children's performance in ECE learning areas and the relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono municipality, Uganda.

#### **1.4.3. Theoretical Scope**

The study employed Levitin Cognitive Theory (2018).

#### **1.4.4. Time Scope**

The study primarily concentrated on the years 2017–2021 because this was the time frame during which the education stakeholders in Mukono Municipality highlighted a number of concerns about the performance of children in pre-primary schools.

#### **1.5. Significance of the Study**

This research study will provide information to head teachers of pre-primary schools on importance of the use of music as a medium of instruction in ECE.

Secondly Pre- primary school teachers may benefit by getting information on how to use music in teaching ECD learning areas to improve children's performance.

Thirdly, ministry of education Science and sports may use the findings to come up with policies to enhance use of music as a medium of teaching in ECE.

In addition, the national curriculum development center may use the findings to come up with modules on step-by-step guidelines on how teachers should integrate music in different early childhood learning areas.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Literature review can be described as an evaluation of published and unpublished works on the subject of study by researchers, practitioners and scholars. It is a critical review of books, journal, articles, dissertations, magazines, newspapers and reports related to the intended inquiry (Amin, 2005). The purpose was to deepen theoretical understanding, gain insight into what has been covered, establish gaps, locate the study problem within the field of study, evaluate methods and approaches used and provide a basis for data analysis and interpretation (Creswell, 2011). The chapter covered related literature review in respect to the theoretical basis and objectives of the study.

#### **2.1 Theoretical Review**

Music education has long been a significant part in early childhood education, knowledge, developmentally appropriate practices, and educational strategies as it provides quality education to children. Early childhood education needs the use of particular pedagogical practices that cover all the methods that teachers can apply to foster the children's overall development in the classroom interaction (Esimone, 2012; Gordon and Brown, 2013).

Studies show that music has been used as an active developmental tool (Kim et al., 2011), language and literacy tool (Walton, 2014), and interactive tool in learning (Custodero, 2002). The child's exposure to music comes first from his early childhood onwards. This helps him to speak, strengthen social and emotional skills. This kind of exposure through socialization

processes suggests that music is a universal language and it is important to understand how it can help children learn and enhance their learning development.

One of the early childhood's characteristics is active and they have high curiosity. Music can accommodate those matters. In early childhood education, music has its strategic role. The teachers use it as a fun learning medium for children (Sæther, 2016). Music can be utilized as a learning medium in early childhood education. On the other hand, it can also be used as means of communication (Lee and Ho, 2018) to channel children's talents and expressions. Through music, children are given the opportunity to express their feelings and ideas by moving to the rhythm of the music.

Music has an important role in children's early life and development. Teachers' understanding of early childhood music advocates music learning practice which will be applied in early childhood education. In general, teachers believe that music has an important role in children's early learning and educational experience (Barrett, Zhukov, Brown and Welch, 2020). In addition to the teachers' role in music learning, their attitude has an important role in the process of learning as well (Lee, 2019). The factors which influence teachers' belief in the importance of music of early childhood include internal factors, such as teachers' confidence in the learning process and external factors, such as teachers' experience and education (Barrett, Zhukov, Brown and Welch, 2020). The internal factor teachers have to possess is an optimistic attitude and confidence in their ability, so that it results in a more consistent teaching method. The external factor comes from their teaching experience as well as their educational backgrounds, either formal or non-formal. These two factors have to be possessed by the teachers so that the goals of music learning in early childhood education can be achieved. This

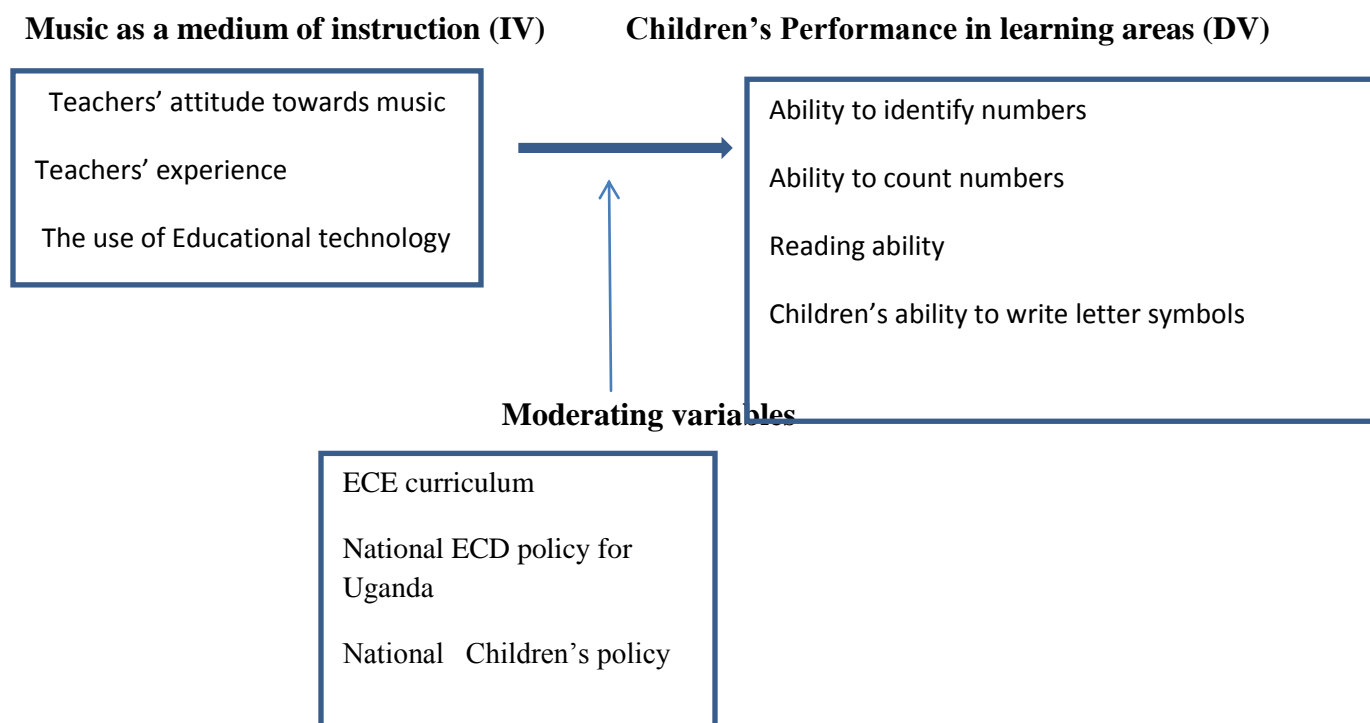


opinion provides important information to support the studies of the factors which influence teachers' belief in the importance of music for early childhood.

A wealth of scientific research (Hodges, 2000) over the last decade is proving that music education is a powerful tool for attaining children's full intellectual, social and creative potential. It speeds the development of speech and reading skills, trains children to focus their attention for sustained periods and helps children gain a sense of empathy for others (see Jensen, 2000). From the neurological perspective, the benefits of early music education can be recognized in stronger neural connections, more grey matter and better information processing, in higher IQ and better memory and attention and better motor coordination. Research shows that active musical involvement benefits both, brain structure and brain function (see Peretz & Zatorre, 2003). Therefore, the Music lessons taken in early childhood could benefit a child's brain later in life, even if they do not continue taking lessons into adulthood. They had discovered that brain responses to speech are faster among older adults who used to take music lessons even if they have not taken music lessons in a long time. The benefits seem to be stronger the longer a person took music lessons as a child (Kraus et al., 2014). It allows a child to manage time and attention, organize their thoughts and regulate their behavior (Zuk et al., 2015). Therefore, this theory is suitable as a theoretical framework for the study on music as a medium of instruction and children's performance in learning areas.

## **2.2 Conceptual Framework**

This conceptual framework presents the effect of the music as a medium of instruction the independent variable on the performance of children in learning areas in Early Childhood Education as the dependent variable. The framework look at how the independent variables in their respective categories influence the dependent variable.



**Figure 2. 1: Conceptual framework**

**Source:** *Adopted from Owusu-Boateng (2014) and modified by the researcher*

The conceptual framework in Figure 1 above shows the linkage between music as a medium of instruction (IV) and children's performance in learning areas (DV). Music as a medium of instruction is constituted by teachers' attitudes towards music, teacher experience and educational technology. It's believed that these factors of the independent variable collectively or individually can affect the performance of children in learning areas. The entire framework shows that use of music would improve the performance of children in ECD learning areas.

## 2.3 Related Studies

### 2.3. 1 The Use of Music as Medium of Instruction in Early Childhood Education

The level of singing response was in line with the developmental characteristics of individual age groups. In the age group up to 1 year, we did not observe any response in the form of vocalization, a typical form of musical communication of that age. Responses to singing occurred through motor activity. The level of singing response was in line with the

developmental characteristics of individual age groups. In the age group up to 1 year, we did not observe any response in the form of vocalization, a typical form of musical communication of that age. Responses to singing occurred through motor activity. Listening to repeated singing of familiar songs, babies expressed enthusiasm, which indirectly confirmed their understanding of verbal and musical contents as well as memorizing at the auditory level. With children between 1 and 2 years old, we noticed chanting to individual syllables, words or phrases, which is consistent with the finding that singing is a musical activity achieved after the age of 2 (Borota et al. 2006, 2013). Children between 2 and 3 years old sang entire songs, accompanying them with instruments. In this age group, the level of engagement in the activities planned in connection with singing depended on their own mood. In case of embarrassment or low preparedness for cooperation, encouragement provided by parents or mentors was crucial for participation and cooperation in activities.

Music education can be seen as one of the effective ways in developing children's potential and directing early childhood to grow based on their talents and interests. Essentially, early childhood education is about learning through play, which means that the children learn in active and fun ways (Welch et al, 2020). In line with the characteristics of the early childhood who are active in carrying out various explorations of their environments, playing is part of the learning process. The learning itself must be designed in many ways so that the children will not feel burdened in achieving their developmental tasks. In order not to make the learning process burdensome and boring for the children, the atmosphere needs to be made natural, warm, and fun. The activities which provide opportunities for children to interact with their friends and environment have to be prioritized. In addition, because children are unique and varied

individuals, some elements such as individual variety and children's interests must also be considered.

Listening to repeated singing of familiar songs, babies expressed enthusiasm, which indirectly confirmed their understanding of verbal and musical contents as well as memorizing at the auditory level. With children between 1 and 2 years old, we noticed chanting to individual syllables, words or phrases, which is consistent with the finding that singing is a musical activity achieved after the age of 2 (Borota et al. 2006, 2013). Children between 2 and 3 years old sang entire songs, accompanying them with instruments. In this age group, the level of engagement in the activities planned in connection with singing depended on their own mood. In case of embarrassment or low preparedness for cooperation, encouragement provided by parents or mentors was crucial for participation and cooperation in activities.

Hansen and Milligan (2012) emphasize the need to train teachers and develop their music skills for a constructive and holistic teaching and learning on language skills. When teachers use music in teaching language, children easily learn auditory skills and later begin to develop interest in writing the sounds heard.

Studies by Silton & Silton, (2015), have shown that musical recording during learning of language increased children's interests to form learning groups. Therefore, children should have adequate language skills informed by music skills to nurture talents and cope with modern technologies in society. A study by Wairimu (2015) in Kikuyu, Kiambu County involving 30 children and sixty preschool teachers found out that 71.7% of teachers asserted that use of songs increases children's vocabulary skills, listening skills, oral, fluency and memory abilities. However, the study did not explore the level of use of music in pre-primary schools.

A study conducted by Ng'asike (2004) in Starehe Sub-county, Nairobi City County pre-schools on use of play as a teaching strategy to promote mathematics concepts in children highlighted that, only 10% of teachers did employ the strategy. Most teachers could use songs to introduce lessons through singing and supported by pupils' finger movement. Use of piano, guitar and locally improvised musical instruments was not explored. Additionally, teachers did not possess adequate music skills and competence to employ music as a strategy to promote language skills; rather, music was used for pupils' enjoyment and relaxation during and after lessons.

In all age groups, it was noticed that children showed interest and listened attentively when a new song was introduced. When a song was repeated, children usually started moving spontaneously, indicating the content of the song, which is a reflection of primary expression over music in early childhood. We observed that children listened to their parents' singing with particular attention and enthusiasm. The timbre of a well-known voice triggered positive emotional reactions (Zadnik, 2016). A higher level of involvement in the planned activities depended on the number of repetitions of an activity in the course of the learning process.

Alfredo et al (2022) Researched on the impact of music interventions and revealed positive effects on a variety of skills. These findings suggest that musical interventions may have further potential to support educational processes and development of children were compared on study setup, methodological quality, intervention components, outcome variables, and efficacy. A review of these selected studies (n = 46) revealed suggestive beneficial effects of music intervention on development of children, although clear conclusions cannot be drawn.

One of the main causes is the weak foundation in general music developed prior to enrolling in teacher preparation programs, as part of compulsory education and/or extracurricular

musical activities (example music fundamentals, instrumental lessons, community music such as bands, ensembles, choirs). For example, a study conducted with 108 Greek ECE student teachers found that 75% of them had no music background whatsoever and that only a minority had participated in music courses during Secondary school (Koutsoupidou, 2010). Similarly, a study based on 46 Australian kindergarten teachers found that 46% of them never learned how to sing or play musical instruments, which resulted in difficulties in conducting music activities with children (Barrett et al., 2019). Consistent findings have been reported in a survey study conducted with 1,019 Hong Kong kindergarten teachers (Bautista & Ho, 2022). It was found that only around half of the sample had learned how to play a musical instrument, sing, and/or dance for at least two years, and that teachers with lower educational qualifications were less likely to have had such prior music education experiences. Another cause relates to the limited provision of music education courses within ECE teacher preparation programs, which are mainly designed to train generalists. Many universities and colleges offer no music training whatsoever to prospective ECE teachers (Altinkaynak *et al.*, 2012).

### **2.3.2 The level of children's performance in ECE learning areas**

A study by Colwell (2000), found that American students who were not taught mathematics using musical instructions performed poorly in math tests as compared to their colleagues" who were taught using music. Lewis and Aiken (2000), adds that a student's personal attitude towards music and mathematics integration in the classroom environment and mathematics anxiety could be a factor that influences their achievement in the subject.

Uwezo East Africa (2012), report on Music and arithmetic literacy cited that a third of pupils who were taught with adoption of music possessed basic numeracy skills. The above studies however did not establish the extent to which music as a factor affects pupils'

achievement in Mathematics, hence the need for the study. According to Mutunga and Breakel (1992), basic mathematical skills should be well known by adults to assist children in career opportunities, choices, household budgets, community programs and daily life management, underscoring the need for further.

The longitudinal study showed that collaborative informal music-making in the home environment from around the ages of two and three can lead to better literacy, numeracy, social skills, and attention and emotion regulation by the age of five. It was concluded, that when an adult, typically a parent, engages a child in playing with him with music, such as improvising a counting song or making new rhymes to a familiar song, the unique combination of face-to-face interaction, creativity and sound results in learning that is reinforced by positive, empathic emotional relationship (Williams *et al.*, 2015).

The grounds for planning and forming early music activities are based on quality musical incentives in a safe stimulating musical environment. Selection of musical activities and contents represents quality aesthetic and artistic environment, which enhances music-aesthetic values and taste in children. Primarily on the socio-affective area, which encourages the development of psycho-motor areas on the basis of a child's musical activity, indirectly, however, these effects result in the child's cognitive development.

### **2.3.3 Relationship between Music as Medium of Instruction and Children's Performance in ECE Learning Areas**

According to Bautista *et al.*, (2021) Children's limited and often superficial exposure to musical experiences is concerning because many musical competencies (e.g., auditory and perceptual skills, sense of beat and rhythm, ability to sing in tune), as well as the cognitive functions required for music (e.g., self-regulatory skills, executive functions), are best developed and acquired during the early years (Putkinen *et al.*, 2015; Williams, 2018). In fact, there is

evidence to suggest that time of music engagement is associated with positive musical and extra-musical outcomes, which are observable in the short term (Hogan et al., 2018) and in the mid-to-long term (Williams et al., 2015). However, the current status of music education in ECE settings prevents young children around the world to reap multiple benefits and positive outcomes associated with music education (Campbell & Scott-Kassner, 2019).

Music has an important role in child development. Music learning is believed to have positive influence and impact on children's cognitive and behavioural development (Habibi et al., 2018). Therefore, it becomes a good means for early childhood to learn in a fun way as the children will listen and focus their attention and practice their thinking skills. There is a strong correlation between learning music and art and improving literacy and mathematical skills (Varner, 2019). Musical activities which emphasize song lyrics, rhymes, rhythmic patterns, constant beats, and dramatized stories through movement and musical instruments can expand and strengthen children's memory to help develop their linguistic skills.

Research Yates and Twigg (2017) suggests that providing music practice improves brain development in dyslexic children. Music can develop children's creativity and imagination (Alemán, et al., 2017) Music also stimulates children's memory well as it has strong influence on the brain by stimulating intellectual and emotional level (Kirschner, Sebastian and Tomasello, 2017) and changes in behaviour including children's social attitude (Kreutz and Feldhaus, 2020). Musical activities given by the family have an effect on their children's personalities (Foster and Marcus Jenkins, 2017) and hone their emotional sensitivity and enrich the development of children's behaviour (Flores, 2018).

Research on teachers in Australia suggests that they have a positive attitude towards music despite having no music educational backgrounds (Lee, 2019). These findings recommend



further professional development to support teachers which will have implications on improving learning outcomes. There is a correlation between teachers' attitude and emotional leadership on the effectiveness of teaching in early childhood. The knowledge and attitude of early childhood teachers towards music have an important role in education. The findings related to the influence of the role theory on music learning for pre-schoolers in Malaysia (Ang, Odendaal and Panebianco, 2019). These findings bridge the expectations of parents and teachers about teachers' role in music learning for early childhood. Furthermore, teachers' belief in musical abilities affects teaching activities and teachers' interaction in the classroom which relates to the goals of music education for the children. The implementation of music in early childhood education can be applied during the learning time in the classroom or during the break time (Lee and Welch, 2017). This indicates that music can be utilized as a learning activity or an alternative to fill the spare time as children play with their friends.

Azwihangwisi et al (2017) suggested that participation in school music instruction might benefit pre - primary school learners' development of early reading abilities especially so when instructional activities are purposefully structured to benefit cognate conceptual skills, with crucial implications for policy development and the organization of subject matter content knowledge in primary schooling in contemporary South Africa.

Ghana which has a fairly developed Early Childhood Policy has acknowledged the important role played by Music and movement in child development. Thus, Music and movement has been inculcated in their curriculum. The same applies to other countries such as United States of America, United Kingdom, South Africa, Germany and such other countries that have put substantive effort in catering for ECD.

According to the case studies carried out by Kelley and Sutton-Smith (1987), lack of awareness by the ECD teachers as to the importance of music and movement as well as lack of adequate support from the various stakeholders such as parents, ECD centers administration and the government hinder implementation of music and movement. From a pedagogical standpoint, ECE teachers are highly motivated to engage in practical experiences of music teaching and learning, including micro-teaching activities (Vannatta-Hall, 2010), live and video-mediated lesson observations in actual classrooms (Bautista et al., 2019; Koutsoupidou, 2010; Lenzo, 2014), and hands-on implementation of innovative lesson ideas (Barrett et al., 2021; Kos, 2018; Rajan, 2017). ECE teachers also highly value mentoring as a strategy to improve their music-specific pedagogies. In a study conducted in United States, pre-primary.

In London, the use of songs in instruction in secondary schools was related to students' achievement in academic. However, Zicari (2016) found out that primary teachers who were not willing to use music in teaching were not trained on music activity area. Therefore, it was important to explore on appropriate competence for teachers to use music skills to teach language skills to children. In a related study Moyles and Adams (2000) pointed out that adequately trained teachers in music creates self-confidence, self-esteem and serves as a source of inspiration to the children. This develops a learning community which focuses on inquiry about rhythms, sounds and meaning of sounds, hence promoting language skills.

Boahene and Baffoe (2014) conducted a study in Zanzibar preschools on importance of musicianship skills to learning and discovered that only teachers with music skills could promote learning in children about music. Besides the Mozart effect, where benefits of music were established in spatio-temporal reasoning, one important aspect of general intelligence which is related to some skills required in mathematics, there is increasing evidence that active

engagement with music can increase phonological skills (Gromko, 2005; Schlaug et al. 2005), literacy (Butzlaff, 2000), numeracy (Hallam, 2010) and creativity (Koutsoupidou& Hargreaves, 2009).

Socio-affective development is by our opinion the domain of human development where active musical involvement brings the most beneficial outcomes in young preschool children. This is not surprising since music is a universal human language based on emotions, which represents the first means of communication of a child with an outer world. Communication through music represents a tool of parent-infant bonding (Lehtimäki, 2013).

#### **2.4 Gaps Identified**

From the analysis of the literature reviewed it's revealed that some of the studies carried out on the proposed topic of study are foreign based. Very few have been carried out in Uganda and Mukono Municipality particularly. However, it has also been noted that most of the previous studies were quantitative. Therefore, this study shall use a mixed methods approach so as to allow triangulation.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0 Introduction**

A thorough explanation of the research design for the study provided in this chapter. The definition of the target population, the sampling techniques, and the techniques used to get information from respondents are also presented. The chapter also described the method of data analysis used and explains how the validity and reliability of the research instrument were fulfilled.

#### **3.1 Research Design**

The descriptive correlation research design was adopted in this study. The design was used because the researcher wants to establish the relationship between the use of music as medium of instruction and performance of children in different learning areas (numbers, reading and writing). In early childhood education. The study also made use of both qualitative and quantitative approaches to describe the state of affairs as they exist in the field. The quantitative approach was used to get information from the respondents using questionnaires. While the qualitative approach was used using interview guide to get the in-depth ideas of the respondents in relation to the variables of the study. This design is simple and easy to execute yet can yield convenient information needed by the study (Muijs, 2004). The design also deemed appropriate for use because it relies on individuals' reports of their knowledge, attitudes or behavior.

#### **3.2 The Target Population**

The target population of the study was 145 which included early childhood teachers and head teachers and Inspector of Schools. in Mukono Municipality. In Mukono Municipality there

are 68 registered pre-primary schools. The researcher used twenty (20) pre-primary schools with overall teacher's population of 120, 20 head teachers and 5 Inspectors of Schools.

### 3.3 Sample Size

The sample size was determined using Slovene's formula. Table 3.1. has the data.

**Table 3.1:** Target Population and Sample Size.

Category of respondent	Population	Sample size	Sampling technique
ECD teachers	120	92	Simple Random Sampling
Head teachers	20	20	Purposive Sampling
Inspectors of schools	5	5	Purposive Sampling
Total	<b>145</b>	<b>117</b>	

**Source : Primary data (2022 )**

### 3.4 Sampling Technique

Sampling technique, is a sampling method where participants are selected from a group according to their characteristics/levels. Children in ECD centers are in three major levels, Baby class, middle class and top class. In the three levels, the children are at different stages of development thus they are not homogenous. The researcher selected the top-class pupils only as respondents to represent the population. Mukono Municipality has approximately sixty-eight (68) pre- primary schools (office of the DEO Mukono Municipality (2022)). Through random sampling technique, the researcher shall select twenty (20) of the pre-primary schools was part of the sample. From each pre-school selected, the researcher used simple random sampling to select ECD teachers and purposive sampling for head teachers and inspector of schools.

The following sampling strategies was used in the study: the simple and intentional random sampling strategies that are detailed below.

A non-random sampling method called "purposeful sampling" selects respondents based on certain criteria. Purposive sampling, according to Patton (1990), is common in qualitative

research. The head teachers of the pre- primary schools and inspector of schools was chosen using a purposive sample technique.

Simple random sampling, a small group of people (a sample) was selected at random from a larger population. Every person is chosen at random and solely by chance, with every person having the same chance of being chosen at any point throughout the sampling process and every subset of people having the same chance of being chosen for the sample as every other subset of people (Yates et al, 2008). The pre – primary teachers shall be selected by simple random sampling. Thus, 120 respondents were made up the sample size. The adoption of the random selection approach ensures that each respondent has an equal probability of being chosen. Because it is simple to encourage the participants to be as honest and truthful as possible, the researcher got first-hand knowledge.

### **3.5 Research Instruments**

In this study, the data was collected mainly through Interview guides and questionnaires.

#### **3.5.1 Questionnaire**

A researcher made questionnaire was used to gather data. A closed-ended questions on a four -point Likert scale with the options 4-Strongly agree, 3-Agree, 2-Disagree, and 1-Strongly disagree shall be included in this instrument. It was utilized to gather data from the pre- primary teachers, head teachers and inspector of schools.

#### **3.5.2 Interview**

A list of questions is used as an interview guide when an investigator speaks with participants face-to-face in order to verbally collect data (Amin 2005). Data from selected pre- primary teachers, head teachers and inspectors of schools were interviewed Face-to-face encounters are favored since they are flexible and enable questioning and the clarification of some specific areas in relation to the study.

### **3.6 The Validity and Reliability of Research Instruments**

This subsection explains how the study adhered to the standards of validity and reliability, which are the cornerstones of any reliable research.

#### **3.6.1 Validity of the Research Instruments**

The degree to which research findings genuinely match the phenomenon being studied is known as validity (Mugenda and Mugenda, 2003). This reflects how well an instrument's item sample corresponds to the concept being measured.

The most used index in quantitative evaluation is CVI (Larson, 2015). A measurement of the study questionnaire's validity determines if the items were relevant for measuring the targeted variable (Cohen et al., 2007). Although there are other methods for evaluating validity, the expert judgment Content Validity Index (CVI) with a cut off of 0.70 was employed in this investigation (Nunnally& Bernstein, 1994).

The formula developed by Nunnally and Bernstein (1994) was used to calculate the Content Validity Index (CVI): By dividing the number of items in the instrument that were judged as relevant by the total number of items in the questionnaire/instruments, the content validity index (CVI) is calculated.  $CVI = 13/18 = 0.72$  which was above 0.7 hence the tool was taken to be valid.

#### **3.6.2 Reliability of the Research Instruments**

Pilot testing was done to establish the reliability of the instruments. Reliability refers to the consistency of the scores obtained. Reliability has two aspects, stability and equivalence. Test–retest method was used to test the reliability of the instrument. This was done by administering the questionnaire twice to the group under pilot study after two weeks. Before embarking on the study, the researcher administered the questionnaire on pre- primary schools in Lugazi Municipal council who were not part of the main study. This was done because the pre-

primary schools in Lugazi Municipality had similar characteristics to the target population. After piloting, the researcher made the necessary adjustments to ensure the instrument was clear enough and elaborate to help gather the intended information from the respondents. Cronbach Alpha was used to determine the reliability of the research instruments. The pre-test result was 0.827 which was above 0.7 hence the tool was considered to be reliable.

**Table 3.2: Reliability Statistics**

Cronbach's Alpha	N of Items
.827	13

### **3.7 Data Collection Procedure**

To get written authorization to do research at the Mukono Municipality, the researcher obtained and present a letter of introduction from College of Education, Open, Distance and E-Learning. The letter was presented to the Education Office of Mukono Municipality Once it was approved the researcher presented the letter to the different pre-primary schools under study, The researcher personally distributed the questionnaires, in case questions arose it was easily clarified and the questionnaires was picked immediately after the respondents finished answering them. The researcher scheduled interviews so as to collect additional information from the selected respondents.

### **3.8 Data Analysis**

Data was analyzed using the following quantitative and qualitative methods:

#### **3.8.1 Quantitative analysis**

Editing started by going through each completed questionnaire and searching for questions that were completed, possible incorrect answers and instances where the questions had been misconstrued. Coding was used to group questions into appropriate responses.



Data from questionnaires were collected, organized, and coded before being placed into a computer for analysis. Statistical Package for Social Scientists was used in this (SPSS). The information provided on the questionnaires were duplicated, tallied, and analyzed. Mean and standard deviation tables were created to show how frequently different replies happened. The resulting primary data was unprocessed in nature.

Later editing and interpretation of the collected data guaranteed uniformity, readability, and consistency. Additionally, the results of the interviews were coded in frequency tables that were provided in this study along with percentage calculations. Quantitative data supplied into the computer was analyzed using the SPSS program, which stands for Statistical Package for Social Sciences. To provide descriptive statistics, such as means, and standard deviations, subscale scores and total scores of the scales were employed. The link between the variables were investigated using the Pearson Correlation at 0.05 level of significance. To interpret the obtained data, the following numerical values and descriptions was used.

**Table 3.3. Mean Range Interpretation table for the Music as medium of Instruction and Children’s Performance**

<b>Mean Range</b>	<b>Response Mode</b>	<b>Interpretation</b>
<b>3.26 – 4.00</b>	<b>Strongly Agree</b>	<b>Very Good</b>
<b>2.51-3.25</b>	<b>Agree</b>	<b>Good</b>
<b>1.76-2,50</b>	<b>Disagree</b>	<b>Unsatisfactory</b>
<b>1.00 – 1.75</b>	<b>Strongly Disagree</b>	<b>Very Unsatisfactory</b>

### **3.8.2 Qualitative Data Analysis**

After data collection, qualitative data analysis was conducted, and it focused on how the results connect to the study questions. There was a list of potential themes and codes. Following data collection, similar information was gathered together, and a report was created. One of the most popular types of analysis in qualitative research is thematic analysis.

It placed a focus on identifying, analyzing, and documenting patterns in data.

Themes, according to Trochim (2006), are patterns that appear in various data sets, are significant for describing a phenomenon, and are connected to certain research objectives.

### **3. 9 Ethical Considerations**

The subsequent ethical standard was applied:

To obtain permission to conduct research, a letter of introduction from the Research Committee of Kampala international university was delivered to Mukono municipality education officer. The Informed Consent Form was signed by the respondents.

The researcher took care to respect respondents' rights to privacy and obtain their informed consent throughout the study.

All borrowed ideas and data was cited throughout the study, and all responders were asked to provide factual information.

The research adhered to the fundamental ethical framework founded on the principles of respect for the rights and needs of respondents and inflicting no damage in accordance with national and international ethical standards for research.

It is important to take steps to increase the involvement and inclusion of all relevant groups, including women and men, as well as to provide informed consent, confidentiality, anonymity, and respondent safety.

Furthermore, anonymity must be maintained by making sure that study participants' identities, even those collected for identification purposes, are not listed in the report when verbatim quotes are used.

Honesty, the use of ethical and verifiable techniques in proposing, carrying out, and analyzing the research, as well as in reporting the findings, must be guaranteed.

Plagiarism is the practice of taking information from the works of other authors and researchers and claiming it as one's own. The researcher made sure a plagiarism check was conducted to confirm the work's originality.

### **3.10 Limitations of the Study**

Uncontrollable exogenous factors, such as respondents' honesty, personal bias, and uncontrolled environmental factors. The cost and length of the interview transcription process could increase. In-depth interviewing and observation are time-consuming and relatively expensive, and this study requires a longer verification process to extract comparable information/deeper engagement with the issues being investigated.

Since research instruments were researcher made, it was subjected to validity and reliability testing.

## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

#### **4.0 Introduction**

This chapter presents analysis, presentation, interpretation and discussion of the study findings on the effect of music as a medium of instruction on children's performance in learning areas in pre-primary schools in Mukono Municipality. The study objectives were: to find out the level of use of music as medium of instruction in ECE in Mukono municipality, to assess the children's performance in learning areas numbers, reading and writing in Mukono Municipality; and to establish the relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality, Uganda. The study hypothesized that there is no significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality. The study used descriptive correlation research designs with both qualitative and quantitative approaches. Data was collected from 159 respondents using a self-administered questionnaire. The chapter first presents socio-demographic characteristics and thereafter objectives of the study.

#### **4.1 Respondents Profile**

The study looked at respondents' demographic characteristics in order to ascertain the variations as well as would be taken into considerations during the discussion of the study findings.

**Table 4. 1: Frequency and Pacentage Showing Demographic Characteristics of the Respondents**

	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	29	18.2
Female	130	81.8
Total	159	100.0
<b>Age</b>		
20-30 years	86	54.1
31-40 years	62	39.0
41-50 years	11	6.9
Total	159	100.0
<b>Position</b>		
Head teachers	12	7.5
Teachers	145	91.2
Inspector of Schools	2	1.3
Total	159	100.0
<b>Work experience</b>		
1-5 years	115	72.3
6-10 years	34	21.4
11-15 years	10	6.3
Total	159	100.0
<b>Level of education</b>		
Secondary education	5	3.1
Certificate	92	57.9
Diploma	55	34.6
Degree	7	4.4
Total	159	100.0

n=159

In line with findings in Table 4.1, the gender of the respondents reveals that 130(81.8%) of the respondents were females while 29(18.2%) were males. This implies that majority of the

participants in the study were females. Therefore, preprimary schools have more female teachers as compared to male teachers since the male teachers are extremely few.

In regard to the age bracket of the respondents, majority 86(54.1%) of the respondents were aged 20-30 years, followed by 62(39%) were aged 31-40 years and 11(6.9%) of the respondents were 41-50 years old. This implies that majority of the preprimary teachers were aged 20-30 years.

As pertains to the position of the respondents Table 4.1 shows that majority 145(91.5%) of the respondents were teachers in pre-primary, followed by 12(7.5%) head teachers and 2(1.3%) were inspector of schools. Thus, an overwhelming majority of the respondents were teachers.

In regard to the work experience of the respondents a big majority 115(72.3%) of the respondents had an experience of 1-5 years, followed by 34(21.4%) who had 6-10 years and 10(6.3%) had 11-15 years of work experience. Many of the respondents had 1-5 years of experience in their work place.

Lastly, the study looked at the respondents' characteristics in terms of level of education, whereby majority 92(57.9%) of the respondents had certificate, followed by 55(34.6%) had diploma, 7(4.4%) had degree and 5(3.1%) had secondary education. This implies that an overwhelming majority of the respondents had certificate and above years level of education.

#### **4.2 Use of Music as a Medium of Instruction in ECE**

The first objective of the study was to find out the level of use of music as medium of instruction in ECE in Mukono municipality. The study surveyed the use of music as medium of instruction in ECE and therefore, the variable investigated was use of music.

**Table 4.2: Level of Using Music as a Medium of Instruction in ECE**

	<b>Mean</b>	<b>Std. Deviation</b>	<b>Interpretation</b>
We have music equipment in our school which we use to teach our pupils	3.01	.99	High
I use music to teach numbers to my pupils	3.26	.97	Very high
I use music to teach reading to my pupils	3.26	.96	
I am trained to use music as teaching strategy	2.92	1.04	High
Using music, the pupils can easily identify the letters of the alphabet	2.94	1.03	High
The school administrator encourages the use of music as a medium of instruction	2.97	1.08	High
<b><i>Aggregate mean and Std. Deviation</i></b>	<b><i>3.06</i></b>	<b><i>1.01</i></b>	<b><i>High</i></b>

n=159

In relation to the findings in Table 4.2, the study found out that the level of use of music as medium of instruction in ECE in Mukono municipality was high with a mean of 3.06 and standard deviation of 1.01. This implies that teachers in preprimary schools in Mukono Municipality use music as a medium of instruction in ECE. In this case, it was found that there are music equipment that can be used to pupils. Teachers use music to teach numbers as well as reading. And that the use of music enables the pupils to understand the letters of the alphabet. Therefore, music is key in teaching in ECE.

The findings uphold Hansen and Milligan (2012) who emphasize the need to train teachers and develop their music skills for a constructive and holistic teaching and learning on language skills. When teachers use music in teaching language, children easily learn auditory skills and later begin to develop interest in writing the sounds heard. This implies that use of music as a medium of instruction help to foster teaching. On the same note, Silton & Silton, (2015) found out that musical recording during learning of language increased children's interests to form learning groups. Therefore, children should have adequate language skills

informed by music skills to nurture talents and cope with modern technologies in society. Likewise, Wairimu (2015) in Kikuyu, Kiambu County involving 30 children and sixty preschool teachers found out that 71.7% of teachers asserted that use of songs increases children's vocabulary skills, listening skills, oral, fluency and memory abilities. However, the study did not explore the level of use of music in pre-primary schools.

Similarly, a study by Barrett et al. (2019) found out that 46% of kindergarten never learned how to sing or play musical instruments, which resulted in difficulties in conducting music activities with children. Consistent findings have been reported in a survey study conducted with 1,019 Hong Kong kindergarten teachers (Bautista & Ho, 2022). It was found that only around half of the sample had learned how to play a musical instrument, sing, and/or dance for at least two years, and that teachers with lower educational qualifications were less likely to have had such prior music education experiences. Another cause relates to the limited provision of music education courses within ECE teacher preparation programs, which are mainly designed to train generalists.

During the interviews the respondents were asked how often music is used as a teaching strategy at school, *“One of the respondent said that it depends on the subject ,atter for the day”* While another noted that *‘music is being used in preprimary as a means of instruction that enables the learners to concentrate in class’*. In addition, another respondent observed that *‘music is vital since it makes learners to recall different names, letters, numbers and to know what they are learning’*. Therefore, as one respondent pointed out music was always used *depending on the nature of subject content, whereby content that calls for use of music, it was used for instruction while if the content does not call for the use of music, then other ways of*



*instruction was used.* This was a key element showing that teachers acknowledged the use of music as a strategy in instruction in preprimary.

Based on the respondents' responses it is clear that music was essential as a teaching strategy in preprimary. Thus, teachers of ECE often use music during instruction as a means of helping learners to be active as well as to help them learn. It promotes happiness, enjoyment and makes learners to recall what they have learnt.

Respondents were further asked on teachers musical skills at school, and one of the respondents noted that *skills in music may not be a problem since as a teacher I guide the learners to sing and follow in suit. At least I have an idea on how to sing and many of the teachers have talents in singings which makes it easy to use songs in instruction.*

Another respondent observed that, *the little knowledge in singing helps teachers to guide leaners as they sing in order to help them learn different things.* Furthermore, another respondent summed the idea of teachers singing skills by saying: that *singings promote children's talents and helps teachers to teach.* Therefore, *there are teachers who extremely good in music and use it to teach freely than those who have problems in music and their voices are not good in singing which amuses children.* This means that some teachers find it hard to sing and using music while many others are talented to use *music since singing is part of their hobby.*

### **4.3 Children's Performance**

The second objective of the study was to assess the children's performance in learning areas numbers, reading and writing in Mukono Municipality. The variable investigated was children's performance.

**Table 4.3: Children’s Performance in learning areas Numbers, Reading and Writing**

	Mean	Std. Deviation	Interpretation
Music as a medium of instruction enables children to identify numbers correctly	3.14	.90	High
The use of music helps children to count numbers correctly	3.20	.92	High
Music as a medium of instruction enables children to identify letters correctly	3.16	.92	High
Music as a medium of instruction has improved children's attitude towards learning	3.19	1.03	High
Using music as medium of instruction improve children to read words correctly	2.92	.96	High
The use of music improves the children's writing ability	2.64	1.03	High
Using music in teaching has improved children's performance in numbers, reading and writing	3.05	1.05	High
<b>Aggregate mean and Std. Deviation</b>	<b>3.04</b>	<b>0.99</b>	<b>High</b>

n=159

Based on Table 4.3, it was found out that there was a high level of children’s performance in learning areas numbers, reading and writing in Mukono Municipality as shown with a mean of 3.04 and standard deviation of 0.99. This implies that pupils in preprimary are able to identify numbers, count numbers, read as well as write letter symbols through the use of music as a medium of instruction. The findings indicate that respondents felt that music as a medium of instruction enables children to identify numbers correctly, to count numbers correctly as well as identify letters correctly. In addition, music as a medium of instruction has improved children's attitude towards learning and to read words correctly plus improving children’s writing ability. Therefore, use of music in teaching improves children's performance in numbers, reading and writing in preprimary.

In reference to the arguments, the findings are in support of Colwell (2000) who found that American students who were not taught mathematics using musical instructions performed

poorly in math tests as compared to their colleagues' who were taught using music. Likewise, Lewis and Aiken (2000) add that a student's personal attitude towards music and mathematics integration in the classroom environment and mathematics anxiety could be a factor that influences their achievement in the subject.

In a similar manner Uwezo East Africa (2012) notes that a third of pupils who were taught with adoption of music possessed basic numeracy skills. This means that music plays a role in promoting pupils' performance in preprimary. Furthermore, in a longitudinal study by Williams *et al.*, (2015) found out that collaborative informal music-making in the home environment from around the ages of two and three can lead to better literacy, numeracy, social skills, and attention and emotion regulation by the age of five. It was concluded, that when an adult, typically a parent, engages a child in playing with him with music, such as improvising a counting song or making new rhymes to a familiar song, the unique combination of face-to-face interaction, creativity and sound results in learning that is reinforced by positive, empathic emotional relationship.

Therefore, children's performance in learning areas numbers, reading and writing in Mukono Municipality was generally high due to the use of music in preprimary. Selection of musical activities and contents represents quality aesthetic and artistic environment, which enhances music-aesthetic values and taste in children. Primarily on the socio-affective area, which encourages the development of psycho-motor areas on the basis of a child's musical activity, indirectly, however, these effects result in the child's cognitive development.

During interviews, respondents were asked their opinion about children's performance in numbers, reading and writing areas. One of the respondents noted *that use of music is good in helping children learn and perform well*. For instance, another pointed out that *use of music*

*makes children to master what is being taught like numbers, letters, sounds and symbols. Thus, using music for instruction helps pupils to learn and pass their assignments, remember what they have learnt as they sing it and write the numbers or count the numbers and letters of the alphabet. Another respondent observed that, using music is a prudent way of naturing children to pass and show that they have learnt. At the same time once the children are used with such songs, they sing them even at home which helps them to master the work they have learnt.*

The findings implies that teachers acknowledge that use of music help learners to master numbers, reading words and writing words in preprimary.

#### **4.4 Relationship between Music as Medium of Instruction and Children’s Performance**

The last objective of the study was to establish the relationship between music as medium of instruction and children’s performance in ECE learning areas in Mukono Municipality, Uganda. The study investigated music as a medium of instruction and children’s performance in ECE. The study hypothesized that there is no significant relationship between music as a medium of instruction and children’s performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality.

**Table 4. 4: Relationship Between Music as a Medium of Instruction and Children’s Performance in ECE at 0.05 level of significance**

Variables correlated	Significance	Interpretation	Decision
Use of Music as Medium of Instruction in ECE VS Children's Performance in Learning Areas	0.000 .677**	Significant	The null hypothesis rejected and Alternative hypothesis accepted

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 4.4 presents the result on the relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality. In calculating the scores using Pearson Product Moment with a statistical package SPSS indicates that there is a significant relationship between the study variables. In this case, use of music as a medium of instruction in ECE has r. value of 0.677 and p. value of 0.000 which was significant at 0.01 significant level (2-tailed). This implies that use of music as medium of instruction influences children's performance in ECE learning areas in Mukono Municipality. The influence therein is that use of music as a medium of instruction has a significant relationship with children performance in numbers, reading and writing among the pupils in preprimary. In calculating the coefficient of determination,  $0.677 \times 0.677$  which is  $0.458329 \times 100 = 45.8329$  which implies that use of music as a medium of instruction in ECE accounts for 45.8% of the children performance in their ability to identify numbers, count numbers, read and to write letter symbols. The other remaining percent (54.17%) can be accounted by other factors that were not considered or handled in this study.

Thus, use of music as a medium of instruction in ECE enhances children's performance. The findings are in line with Azwihangwisi *et al* (2017) who note that participation in school music instruction might benefit pre - primary school learners' development of early reading abilities especially so when instructional activities are purposefully structured to benefit cognate conceptual skills, with crucial implications for policy development and the organization of subject matter content knowledge in primary schooling. More so, the findings affirm Ghana's policy that music promotes movement in child development. Thus, Music and movement has been inculcated in their curriculum. The same applies to other countries such as United States of

America, United Kingdom, South Africa, Germany and such other countries that have put substantive effort in catering for ECD.

In light of the findings, Kelley and Sutton-Smith (1987) notes that lack of awareness by the ECD teachers as to the importance of music and movement as well as lack of adequate support from the various stakeholders such as parents, ECD centers administration and the government hinder implementation of music and movement. From a pedagogical standpoint, ECE teachers are highly motivated to engage in practical experiences of music teaching and learning, including micro-teaching activities (Vannatta-Hall, 2010), live and video-mediated lesson observations in actual classrooms (Bautista et al., 2019; Koutsoupidou, 2010; Lenzo, 2014), and hands-on implementation of innovative lesson ideas (Barrett et al., 2021; Kos, 2018; Rajan, 2017). ECE teachers also highly value mentoring as a strategy to improve their music-specific pedagogies. In a study conducted in United States, pre-primary. Thus, use of music as a medium of instruction improves children's performance.

### **Testing hypothesis**

Based on the study findings in Table 4.4, show that use of music as a medium of instruction in ECE has a significant relationship with children's performance as shown, whereby computation by computing the scores using Pearson Correlation Coefficient with a statistical package SPSS indicates  $r. = .677$  and  $p.= 0.000$ . The nature of relationship is average. This means that use of music as a medium of instruction in ECE that is teachers' attitude towards music, teachers' experience and use of educational technology helps and boosts children performance to identify numbers, count numbers, read and to write letter symbols. Since the significant level of 0.000 was less than 0.05 then the null hypothesis is rejected which states that there is no significant relationship between music as a medium of instruction and children's

performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality and the alternative hypothesis is accepted which states that there is a significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality.

It is key therefore to note that use music as a medium of instruction enhances children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality. Teachers who promote use of music enhance their children's performance in ECE. In line with the findings Moyles and Adams (2000) pointed out that adequately trained teachers in music creates self-confidence, self-esteem and serves as a source of inspiration to the children. This develops a learning community which focuses on inquiry about rhythms, sounds and meaning of sounds, hence promoting language skills.

Boahene and Baffoe (2014) found out that preschools that promote use of music enable their learners to learn and discovered that only teachers with music skills could promote learning in children about music. Likewise, there is increasing evidence that active engagement with music can increase phonological skills (Gromko, 2005; Schlaug et al. 2005), literacy (Butzlaff, 2000), numeracy (Hallam, 2010) and creativity (Koutsoupidou& Hargreaves, 2009).

### **Qualitative Data**

Through the interview guide the findings shows that music is being used in preprimary as a means of instruction that enables the learners to concentrate in class. It was pointed out that music is vital since it makes learners to recall different names, letters, numbers and to know what they are learning. Likewise, it was noted that music makes children happy and active in class which improves lesson progress and pupils' participation in class. Thus, teachers of ECE often

use music during instruction as a means of helping learners to be active as well as to help them learn.

In regard to teachers' music skills, it was found out that skills in music may not be a problem since teachers guide the learners to sing. Also, the little knowledge in singing helps teachers to guide learners as they sing in order to make them learn different things. More so, singings promote children's talents and helps teachers to teach. In addition, it was found out that there are teachers who extremely good in music and use it to teach freely tan those who have problems in music and their voices are not good in singing which amuses children. This means that some teachers find it hard to sing and using music while many who are talented use music since singing is part of their hobby.

Respondents noted that use of music is good in helping children learn and perform well. For instance, many pointed out that use of music makes children to master what is being taught like numbers, letters, sounds and symbols. Thus, using music for instruction helps pupils to learn and pass their assignments, remember what they have learnt as they sing it and write the numbers or count the numbers and letters of the alphabet. It is a prudent way of naturing children to pass and show that they have learnt. At the same time once the children are used with such songs, they sing them even at home which helps them to master the work they have learnt.

In seeking to know the challenges encountered when using music in teaching in ECE, many of the respondents noted that there is lack of materials to be used. Others pointed out that most of the schools have many children which makes it hard to follow each learner when singing and putting into practice what they have sang. Schools lack enough materials such as manila papers, markers and other related resources that teachers can use to write the letters, numbers and



other things needed. Other challenges include lack of enough space to use for singing since classes are congested and there is also lack of space outside.

## **CHAPTER FIVE**

### **DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.0 Introduction**

This chapter presents the summary, conclusion and recommendations based on the study findings on the effect of music as a medium of instruction on children's performance in learning areas in pre-primary schools in Mukono Municipality.

#### **5.1 Discussion of the Findings**

The study objectives were: to find out the level of use of music as medium of instruction in ECE in Mukono municipality, to assess the children's performance in learning areas numbers, reading and writing in Mukono Municipality; and to establish the relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality, Uganda. The study hypothesized that there is no significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality. The study used descriptive correlation research designs with both qualitative and quantitative approaches. Data was collected from 159 respondents using a self-administered questionnaire.

##### **5.1.1 Use of Music as a Medium of Instruction in ECE**

The study found out that the level of use of music as medium of instruction in ECE in Mukono municipality was high with a mean of 3.06 and standard deviation of 1.01. This implies that teachers in preprimary schools in Mukono Municipality use music as a medium of instruction in ECE. In this case, it was found that there are music equipments that can be sued to pupils. Teachers use music to teach numbers as well as reading. And that the use of music

enables the pupils to understand the letters of the alphabet. Therefore, music is key in teaching in ECE.

The findings are in line with Barrett et al. (2019) that 46% of kindergarten never learned how to sing or play musical instruments, which resulted in difficulties in conducting music activities with children. Consistent findings have been reported in a survey study conducted with 1,019 Hong Kong kindergarten teachers (Bautista & Ho, 2022). It was found that only around half of the sample had learned how to play a musical instrument, sing, and/or dance for at least two years, and that teachers with lower educational qualifications were less likely to have had such prior music education experiences. Another cause relates to the limited provision of music education courses within ECE teacher preparation programs, which are mainly designed to train generalists.

Consistent findings have been reported in a survey study conducted with 1,019 Hong Kong kindergarten teachers (Bautista & Ho, 2022). It was found that only around half of the sample had learned how to play a musical instrument, sing, and/or dance for at least two years, and that teachers with lower educational qualifications were less likely to have had such prior music education experiences. Another cause relates to the limited provision of music education courses within ECE teacher preparation programs, which are mainly designed to train generalists. Many universities and colleges offer no music training whatsoever to prospective ECE teachers (Altinkaynak *et al.*, 2012).

### **5.1.2 Children's Performance**

The study found out that there was a high level of children's performance in learning areas numbers, reading and writing in Mukono Municipality as shown with a mean of 3.04 and standard deviation of 0.99. This implies that pupils in preprimary are able to identify numbers,

count numbers, read as well as write letter symbols through the use of music as a medium of instruction. The findings indicate that respondents felt that music as a medium of instruction enables children to identify numbers correctly, to count numbers correctly as well as identify letters correctly. In addition, music as a medium of instruction has improved children's attitude towards learning and to read words correctly plus improving children's writing ability. Therefore, use of music in teaching improves children's performance in numbers, reading and writing in preprimary.

In reference to the findings, Uwezo East Africa (2012) notes that a third of pupils who were taught with adoption of music possessed basic numeracy skills. This means that music plays a role in promoting pupils' performance in preprimary. Furthermore, in a longitudinal study by Williams *et al.*, (2015) found out that collaborative informal music-making in the home environment from around the ages of two and three can lead to better literacy, numeracy, social skills, and attention and emotion regulation by the age of five. It was concluded, that when an adult, typically a parent, engages a child in playing with him with music, such as improvising a counting song or making new rhymes to a familiar song, the unique combination of face-to-face interaction, creativity and sound results in learning that is reinforced by positive, empathic emotional relationship.

Likewise, Colwell (2000), found that American students who were not taught mathematics using musical instructions performed poorly in math tests as compared to their colleagues" who were taught using music. Lewis and Aiken (2000), adds that a student's personal attitude towards music and mathematics integration in the classroom environment and mathematics anxiety could be a factor that influences their achievement in the subject.

### **5.1.3 Relationship between Music as a Medium of Instruction and Children's Performance**

The study found a significant relationship between music as medium of instruction and children's performance in ECE learning areas in Mukono Municipality. In calculating the scores using Pearson correlation Coefficient with a statistical package SPSS. The use of music as a medium of instruction in ECE had r. value of 0.677 and p. value of 0.000 which was significant at 0.01 significant level (2-tailed). This implies that use of music as medium of instruction influences children's performance in ECE learning areas in Mukono Municipality. The influence therein is that use of music as a medium of instruction has a significant relationship with children performance in numbers, reading and writing among the pupils in preprimary. In calculating the coefficient of determination,  $0.677 \times 0.677$  which is  $0.458329 \times 100 = 45.8329$  which implies that use of music as a medium of instruction in ECE accounts for 45.8% of the children performance in their ability to identify numbers, count numbers, read and to write letter symbols. The other remaining percent (54.17%) can be accounted by other factors that were not considered or handled in this study. Since the significant level of 0.000 was less than 0.05 then the null hypothesis is rejected which states that there is no significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality and the alternative hypothesis is accepted which states that there is a significant relationship between music as a medium of instruction and children's performance in numbers, reading and writing in Early Childhood Education at Munkono Municipality.

In light of the findings, Kelley and Sutton-Smith (1987) notes that lack of awareness by the ECD teachers as to the importance of music and movement as well as lack of adequate support from the various stakeholders such as parents, ECD centers administration and the

government hinder implementation of music and movement. From a pedagogical standpoint, ECE teachers are highly motivated to engage in practical experiences of music teaching and learning, including micro-teaching activities (Vannatta-Hall, 2010), live and video-mediated lesson observations in actual classrooms (Bautista et al., 2019; Koutsoupidou, 2010; Lenzo, 2014), and hands-on implementation of innovative lesson ideas (Barrett et al., 2021; Kos, 2018; Rajan, 2017). ECE teachers also highly value mentoring as a strategy to improve their music-specific pedagogies. In a study conducted in United States, pre-primary. Thus, use of music as a medium of instruction improves children's performance.

Moyles and Adams (2000) pointed out that adequately trained teachers in music creates self-confidence, self-esteem and serves as a source of inspiration to the children. This develops a learning community which focuses on inquiry about rhythms, sounds and meaning of sounds, hence promoting language skills. Boahene and Baffoe (2014) found out that preschools that promote use of music enable their learners to learn and discovered that only teachers with music skills could promote learning in children about music. Likewise, there is increasing evidence that active engagement with music can increase phonological skills (Gromko, 2005; Schlaug et al. 2005), literacy (Butzlaff, 2000), numeracy (Hallam, 2010) and creativity (Koutsoupidou & Hargreaves, 2009).

## **5.2 Conclusions**

In line with the study findings, teachers in preprimary schools in Mukono Municipality use music as a medium of instruction in ECE, whereby music equipment that can be used to pupils. More so, pupils in preprimary are able to identify numbers, count numbers, read as well as write letter symbols through the use of music as a medium of instruction as a result of using music as a medium of instruction. Use of music as medium of instruction influences children's

performance in ECE learning areas in Mukono Municipality. The influence is positive whereby children performance in numbers, reading and writing are among things children can do as a result of use of music when learning.

### **5.3 Recommendations**

Based on the study findings the researcher makes the following recommendations:

Use of music as a medium of instruction is key in preprimary. Therefore, teachers who teach children in ECE should continue to use music as a medium of instruction. School administrators should identify teachers with problems in using music in order to help them improve the strategy through seminars and workshops and providing materials that can promote use of music

The ability of children to count numbers, read numbers, identify numbers and write letter symbols. Thus, it is role of teachers to help children achieve this by using different strategies that can promote it. Thus, they should continue to use music in improving children's performance.

The study found a significant positive relationship between use of music as a medium of instruction and children's performance; however, the relationship was moderate. Therefore, there is need for teachers to fully utilize music as a medium on instruction in ECE as away of ensuring that children excel.

There is need for enough teachers to help and cater for all learners. In situation where there are big classes with many children.

The school administrators need to provide materials that can foster use of music as a medium of instruction in pre-primary teachers in order to promote performance of children.

#### **5.4 For Further Research**

This study used teachers in investigating use of music as a medium of instruction and children performance who may not provide a fully picture of what happens and therefore there is need to use different aspects in ascertaining the impacts in future. Such as use of experiment.

Most of the schools surveyed were private and therefore there is need to use government schools to see whether the findings are the same.

Much still needs to be learned about preschoolers' performance in Mukono Municipality and how use of music as a medium of instruction affects children's performance by carrying out an experimental study to underscore the effects among the variables of the study.

Researcher need to study other factors apart from use of music as a medium of instruction in ECE that affects children's performance.



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## **APPENDIX I : LETTER TO THE RESPONDENTS**

**Dear Sir/ Madam;**

### **Greetings**

I am a student of master of education in early childhood education of Kampala International University. Part of the requirements for the award is a thesis. My study is entitled “music as medium of instruction and children’s performance in learning areas’ in early childhood education in Mukono Municipality, Uganda. May I request you to participate in this study by answering the questionnaires? Kindly do not leave any options unanswered. Any data you will provide shall be for academic purposes and no information of such kind shall be disclosed to others. Thank you.

Respectfully

Yours

Kugonza Sarah

(2020-01-00897)

## **APPENDIX II INFORMED CONSENT**

I am giving my consent to be part of the research study of Ms. Kugonza Sarah entitled “music as medium of instruction and children’s performance in learning areas’ in early childhood education in Mukono Municipality, Uganda.”

I shall be assured of privacy anonymity and confidentiality and that I will be given the option to refuse participation and the right to withdraw my participation any time. I have been informed that the research is voluntary and that the results will be given to me if I ask for it

Signature \_\_\_\_\_

Name \_\_\_\_\_

Date \_\_\_\_\_

MAP OF THE AREA OF STUDY

### APPENDIX III : MAP OF MUKONO MUNICIPALITY





**APPENDIX IV : RESEARCH INSTRUMENTS**

**DIRECTION:**

Please help us clarify your response by supplying the following facts about yourself and your opinions on the issues raised by ticking the appropriate box. There if no right or wrong answer therefore any particular response is target.

**Section A ; DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

- i) Gender a).Male                    b) female
- ii) a) Age a) 20- 30 years old   b) 31- 40 years old   c) 41- 50 years old   d) above 50 years old
- iii) Position            a) Head Teacher b) Teacher c) Inspector of Schools
- iv) Work Experience            a) 1-5 years b) 6-10 years c) 11-15 years d) above 15 years.
- v) Highest level of education attained
  - a) Secondary education b) certificate   c) diploma    d) bachelor’s degree e) master’s degree.

**Section B: MUSIC AS A MEDIUM OF INSTRUCTION ON CHILDREN’S PERFORMANCE**

Instructions:

Please write your rating on the space at the end of each option which corresponds to your best choice in terms of effect of music as a medium of instruction on children’s performance in ECD learning areas in Mukono Municipality. Kindly use the scoring system below.

Response mode	Rating	Description
Strongly Agree	4	You agree with no doubt
Agree	3	You agree with some doubt
Disagree	2	You disagree with some doubt
Strongly Disagree	1	You disagree with no doubt at all

**i) The Use of Music as a Medium of Instruction in ECE in Mukono Municipality**

Items	SA	A	D	SD
We have music equipment in our school which we use to teach our pupils				
I use music to teach numbers to my pupils				
I use music to teach reading to my pupils				
I am trained to use music as teaching strategy				

Using music, the pupils can easily identify the letters of the alphabet				
The school administrator encourages the use of music as a medium of instruction				

**ii). Children’s Performance in Learning Areas such as numbers, reading and writing in Mukono Municipality**

<b>Items</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>
Music as a medium of instruction enables children to identify numbers correctly				
The use of music helps children to count numbers correctly				
Music as a medium of instruction enables children to identify letters correctly				
Music as a medium of instruction has improved children’s attitude towards learning				
Using music as medium of instruction improve children to read words correctly				
The use of music improves the children’s writing ability				
Using music in teaching has improved children’s performance in numbers, reading and writing..				

## **APPENDIX VI; INTERVIEW GUIDE**

- i) How often is music used as a teaching strategy at your school
- ii) In your opinion is the use of music in teaching early childhood important? Give reason
- iii) Comment on the teachers musical skills at your school
- iv) What is your opinion on performance of children in numbers, reading and writing areas when you use music as medium of instruction?
- v) What challenges do you encounter when using music in teaching early childhood education?

Thank you