AN ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS IN BUNYALA- BUSIA COUNTY, KENYA

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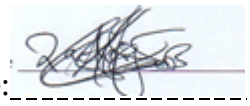
DECLARATION AND APPROVAL

Declaration by the student

This project is my original work and has never been presented for a degree in any other university or for any other award.

Signature:  Date: 25th April 2023

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We confirm that the work reported in this project was carried out by the candidate under our supervision.

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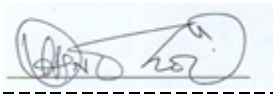
Signature:  Date: 28th April 2023

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DEDICATION

To my loving mother Martha, dearest wife Imelda, lovely daughter Pesh and son Lawy Junior for their ultimate kindness, support, motivation, endurance and prayers.

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Exceptional appreciation goes to the good God for enabling my studies.

I recognize my supervisors Dr. Josephine Kirimi and Dr. Hudson Ouko Ong'ang'a and also Dr. Ann Muiru for their direction in composing this thesis. Their guidance was the key foundation of success of this thesis.

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ABSTRACT

Children's development is contributed to by play amongst other parameters. Their cognitive, affective and psychomotor abilities are fortified by play. By adopting play as a classroom tool in early childhood, learner's participation levels improve. Learner's participation can be gauged by; confidence levels, turn taking, numeracy skills and manipulative competencies. However, over time, adequate inculcation of play in early childhood classrooms is yet to be achieved. This underscored the need of this study. The study assessed play as a strategy on pre-schoolers' classroom participation in public pre-primary institutions of Bunyala sub-county, Busia County, Kenya. The location of the study was Bunyala sub-county in Busia County. The guide objectives of this study were: to establish the types of play used as a strategy on pre-schoolers' classroom participation, to investigate the types of play materials used by pre-schoolers' in public pre-primary schools and to explore public pre-primary school teachers' preparedness in using play as a strategy on pre-schoolers to improve classroom participation. The findings of the study would be useful to pre-school teachers, the parents/community, the government et al. Methodology adopted was descriptive survey research design. Social-Cultural Development Theory (Vvygotsky, 1978) guided the study. Conceptual framework was employed to establish how the study variables interrelate. Research targeted a population of 27 public pre-primary centres. Of this population, 2 were used in piloting while in 25 actual study was conducted. The parameters of analysis were 25 heads of public pre-primary centres, 50 teachers of public pre-primary centres and 100 pre-schoolers. The sampling techniques adopted were purposive and simple random. Data was collected using questionnaire and observation guide. Reliability of the instruments was addressed through piloting in 2 public pre-schools. To ascertain the reliability coefficient of the study instruments, test retest method to about 0.7, was adopted. Expert judgment of supervisors gauged the validity of the research instruments. Measures of central tendencies were applied alongside inferential analysis for quantitative data. For qualitative data, content analysis was adopted. Regarding types of play, the study found out that all pre-unit teachers were engaging their learners in various play forms though unevenly with physical type being the most common (91%). The study also found out that there were various play materials available for the pre-school learners mostly the local ones. The study however, further established that there was acute shortage of some play materials especially the commercial ones. The findings from regression analysis revealed that 80.2% of the variations on classroom performance can be explained by type of play, type of play material used and teacher preparedness. The study finally, established that there were serious challenges facing play as a strategy on pre-schoolers' classroom participation. It was concluded that pre-unit learners in Bunyala Sub-county were not adequately exposed to all forms of play besides inadequacy of play materials. The study recommended that play materials should be availed and pre-unit learners get exposed to them. A similar study to be carried out in urban setting to compare the difference since this was done in rural pre-unit centers.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACEI	**:**	Association for Childhood Education International
BC	**:**	Before Christ
BUCODEV	**:**	Busia Community Development
CECE	**:**	Centre for Early Childhood Education
DEO	**:**	District Education Officer
DICECE	**:**	District Centre for Early Childhood Education
ECDE	**:**	Early Childhood Education
ECE	**:**	Early Childhood Education
KNPC	**:**	Kenya National Population Centre
NACECE	**:**	National Centre for Early Childhood Education
NACOSTI	**:**	National Commission for Science Technology and Innovation
NAEYC	**:**	National Association for the Education of Young Children
NGO	**:**	Non-Governmental Organization
SPSS	**:**	Statistical Package for Social Sciences
UNCRC	**:**	United Nations Convention on the Rights of the Child
US	**:**	United States
ZPD	**:**	Zone of Proximal Development

CHAPTER ONE

INTRODUCTION

The section detailed out various procedural outlays of this study in conformity with the international guidelines of presenting a research proposal. Such accepted international research guidelines relevant for the chapter are; study background, problem statement, study purpose, objectives & research questions of the study, justification & significance, scope of the study, study limitations, as well as study assumptions.

1.1 Background to the Study

To a young one, play usually is most important in life. This play setting can either be outdoors or indoors. Moreover, the form of play changes with age. In addition, there comes a time when a child needs aid of an adult to fully engage in its plays. Through effective play, pre-primary school learners build ideas and exploit their environment thus tapping their classroom participation.

According to Maria Montessori (1870-1952) in 'The Structured Play Theory', pre-primary scholars are usually facilitators of their own learning through active play. For this reason, it would be a win strategy to structure a play setting with a definite learning outcome in order to induce higher learner participation in a pre-primary classroom. Strategies that teachers use to promote learner participation in class using play may be influenced by a number of things such as the age of learners, their learning abilities, environment and the topic being studied among others. However, the most effective strategies are those proven to work over large scale trials. Prensky (2017) observed that strategies such as games, role play, word puzzles among others are some of the most effective strategies that have been employed to promote learner participation in class using play.

According to Nguyen (2021), application of sports in learning can significantly enhance learners' involvement, effectively nurture their social and emotional education as well as motivating them to take risks especially among the young learners. The use of games such as multiple-choice quiz game in USA was found to be improving learners' approaches in regard to education and boosted their educational scores. Furthermore, investigation has shown that simulated games do enhance concentration and devotion for learners with ADHD.

In line with An (2018), the use of playoffs in the pre-school classroom promote total inspiration. With playoffs, the learners develop even much enthusiasm effectively accomplishing assignments set for them. She emphasizes that games help the learners especially the young ones in building teamwork and accountability in class. Sung & Hwang (2019) assert that playing games is one of the most effective strategies that promote learner participation in a learning environment. According to them, using different games as a strategy involves different compelling storylines which rapidly peg learners thus effectively enhancing learning. They further state that play-related instruction may be effected via both the assumption of the current entertaining playoffs in the saleable market for instructive usage or the advancement of informative games with practical and progressive study hypotheses at play. Overly as per the academic space, classroom playoffs are categorized as vacational, instructive and scholastic-rest.

Another strategy closely related to games is role play. According to Gee (2019), the use of role play in a learning situation provides the pre-school learners with the chance of adopting and performing someone else's duty situationally. This may be done singularly or collectively. As a strategy of using play to promote learner participation, playing out duties involve learners in practical states which would otherwise be hectic, unaccustomed

and strenuous in gauging their attitudes in regard to their peers. Acting out roles by young ones enhance practical settings which aid young ones in learning and relating with their immediate environment (Gee, 2019). Matthew, (2021) explains that pre-school instructors may apply role plays in a classroom setting to aid their learners develop varied viewpoints as they comprehend them partly as bigger and wholesome thought structures. Harbour & Connick (2020), summarize the role of role play in promoting learner participation as follows. Role plays arouse learners, develop other schooling strategies especially the ones that support play, give practical settings towards aiding learners acquire abilities such as discussion, negotiations, collaboration, inducement and team work. They also provide learners with the chances aimed at precarious peer reflection.

Word puzzles are equally significant strategies in promoting pre-school learner participation in class through play. They too enhance pleasurable education chances in children. To the behaviorists, young one's mental growth is enhanced majorly as he or she interacts with the social environment which is aided by puzzling. Through the later, unswerving instruction and interaction with the environment is fostered in young ones thereby transforming the outlook of the later. In Canada, the use of puzzles among lower grade learners is structured in such a way that learners acquire specific skills as they manipulate the designed puzzles such as jig-saws (Linehan et al, 2018).

Swarts (2022) says that the use of puzzles among junior learners is considered very important because: it enhances hand-eye coordination where young children learn the connection between their eyes and hands. It propels growth of children's small as well as large muscles such as handwriting and walking. It also enhances the skill of effective problem solving as it requires learners to look at different fragments and locate their suitability. As they do this, they are actually developing the skill of problem solving.

Puzzle games also make it possible for the young learners to recognize shapes and sort them accordingly. Finally, it enhances the act memorization and task completion thus enhancing classroom participation.

In Africa, the use of effective strategies such as games in play has not been fully implemented in a number of pre-schools though it has been reported that many African countries are currently making tremendous steps towards embracing them. This has been pointed out as one of the key contributing factors towards learning crisis in Africa. Pretorius *et al.* (2019) reports that there is acute learning crisis in Africa particularly in the Sub-Saharan region where it has been reported that despite the increase in the enrolment rates from 60% to 80% in the past 20 years, on average less than 20% of pre-primary school learners in the region pass the minimum level of proficiency in literacy and numeracy, compared to more than 50% of learners in Latin America and even higher numbers in East Asia.

In, 'Getting Children Ready for Primary Schools in Kenya Baseline Report (2016)', survey by Tayari Pre-primary Program; nature of play and play materials have a large influence on learners' classroom participation nationally. In contrast to the Tayari Pre-primary Program survey, the researcher seeks additionally, to bridge the unaddressed gap on teachers' preparedness.

Against this backdrop of the above studies cited, none had been conducted coincidental to the researcher's target area of Bunyala sub-county, Busia County, Kenya on play as a strategy on pre-schoolers' classroom participation in public pre-primary schools. The researcher intends to address gaps cited there above and bring up as one, a conclusive finding that will show in a nutshell the effects of; play, play materials and teacher's preparedness on pre-scholars' classroom participation indices.

1.2 Statement of the Problem

Play in context of pre-scholars encompasses a near reflex activity necessary for a real-life experience that influences classroom participation. This is according to Friedrich Froebel (1782-1852), in 'The Centred Play Approach Theory'. The constitution of Kenya, 2010, proclaims play and leisure opportunities to be basic right of a child. Not to be forgotten also are efforts of several child advocacy groups, in trying to ensure children get as much play opportunities in both school and home settings. However, many reports have indicated that in very many pre-primary learning centres, play as an instrument of enriching pre-schoolers classroom performance has not been given the seriousness it deserves. Njagi (2009 reviewed 2016) reported that in many ECDE centres in Kenya, many children play to meet growth requirements as elicited by the natural processes of growth and development but not to meet academic expectations since there are no properly laid down structures. Matterson (2011 reviewed 2018) adds that limited studies have been done on the relationship between the efforts to inculcate play in pre-scholar's classroom programs and pre-scholar's classroom participation in light of numeracy skills, turn taking abilities and confidence levels. According to Busia County Baseline Pre-school Survey Report (2016), a number of ECDE learner respondents taken for study from private ECDE centres where play as a strategy on classroom participation is elaborate and laid down structures are strictly followed, were found to be doing much better in their post ECDE learning than their counter parts from public pre-school institutions where play is not given the premium it deserves. This prompted the researcher to establish the cause of these academic disparities in pre-primary schools. Therefore, the researcher was justified to assess the role of play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala Sub-county, Busia county.

1.3 Purpose of the Study

The research aimed at assessing play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala sub-county, Busia County, Kenya.

1.4 Objectives of the Study

Objectives of the survey were these;

1. To establish the types of play used as a strategy on pre-schoolers' classroom participation in public pre-primary schools.
2. To investigate the types of play materials used to support classroom participation in public pre-primary schools.
3. To explore public pre-primary school teachers' preparedness in using play as a strategy on pre-schoolers' classroom participation.

1.5 Research Questions

The research perused to respond to three basic queries:

1. Which types of play are adopted on pre-schoolers' classroom in public pre-primary schools?
2. What are the types of play materials used on pre-schoolers' classroom in public pre-primary schools?
3. How prepared are public pre-primary school teachers in using play as a strategy on pre-schoolers' classroom participation?

1.6 Justification of the Study

Play is an important link in a young one's learning as well as growth. Emphatically, life cycle of majority of children falling in pre-school age category revolves around play and sleep majorly. This is according to Njagi (2009) and revised Ed (2016).

Recently, in Kenya there has been an unchecked expansion of pre-schooling facilities. It is a result of acceptance of value of pre-school instruction by both the government and other stakeholders. Although this should be lauded as forward kick towards the country's vision 2030; the delivery of worthy instruction in these institutions has been revealed to need a redo.

Active engagement of a pre-scholar is a direct function of effective classroom participation. To achieve acceptable levels of classroom participation by learners, its three main pillars need to be adhered to. These three pillars are; adequate free plays, relevant and varied play materials and teachers' preparedness.

This survey intended to evaluate the importance of these three pillars, in a nutshell as 'play strategy' and how it can be enhanced in public pre-schools to improve to acceptable levels, classroom participation of pre-scholars. This is against the backdrop that Bunyala being an allegedly ailing sub-county in regard to infrastructure and facilities is likely to hamper effective exposure of pre-schoolers to play thus the need for this study to establish this claim.

1.7 Significance of the Study

The study outcomes would form a concrete reference point of action to pre-school teachers on the need to structure for adequate 'play strategy' on public pre-schoolers' classroom set ups. Further on their personal levels, the teachers would find a reason for them to seek further professional training in order to acquire the necessary skills relevant for the use of play as a strategy on pre-schoolers' classroom set ups.

To the parents and community in general, there would be a change of attitude towards child play at home and around home. This would go further in strengthening the

children's wholesome development and improve their classroom participation while at school.

To the government, this would be a priceless finding to help its policy makers in drawing up viable pre-primary school educational policies and programmes that stimulate a greater development of these future leaders.

1.8 Scope of the Study

This investigation targeted 27 public pre-primary institutions in Bunyala Sub-county. Of this population, 2 were used in piloting of the instruments of the study; while in the remainder (25) actual study was done. The research concentrated on the head teachers of the public primary schools which house these pre-primary institutions, pre-primary teachers and pre-schoolers.

1.9 Limitations of the Study

According to Orodho (2004) on research limitations, these are factors beyond the investigator's control that will likely influence the outcome of this study.

Particularly:

1. Geographically, Bunyala sub-county is a swampy area. This coupled by poor transport infrastructure lowered mobility rate within the zone and affected data collection for the study. However, the researcher addressed this by intensifying his movements during relatively drier seasons.
2. There was a geographical barrier threat to the research work. The long distance between the supervisor's offices and study area merged with the point that the surveyor is a classroom instructor, both joined to lower effective one on one consultation. But the researcher relied on information technology items such as e-mail and mobile phone calls to improve his interaction with the supervisors.

3. There was a challenge of apathy among the respondents. Some respondents harboured feelings of mistrust given the nature of certain research information, which some adults involved in the study viewed as witnessing for their own failure. However, the researcher countered such feelings by offering appropriate sensitization and assuring the respondents of confidentiality as regards the research data received from them.

1.10 Delimitations of the Study

This investigation narrowed itself to assessing play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala sub-county, Busia County, Kenya. Particularly, this set in place the below as its various boundaries:

1. Geographically;

   Bunyala sub-county lies in Western region of Kenya in southern tip of Busia County. It borders Lake Victoria and Uganda to the west. River Nzoia divides the sub-county into the North and South zones.

2. Administratively;

   It is part of the seven sub-counties that make up Busia County. Particularly, the study area has six administrative locations namely:-Bunyala South, Khajula, Bunyala East, Bunyala West, Bunyala Central and Bunyala North.

3. As per Kenya National Population and Housing Census 2009, the study area has approximately sixty seven thousand inhabitants with majority being from middle-aged youths downwards. The survey centred on 27 public pre-primary institutions across Bunyala.

4. Pre-primary school learners' enrolment stands at 3312. The study targeted 81 teachers of public pre-primary schools, 27 head teachers of the primary schools

within which the pre-primary schools are set up, and 1002 pre-unit learners of the pre-primary schools.

5. In drawing up a generalization for Kenya as a whole, the statistics of the target population of Bunyala sub-county may not be a close mirror due to several variables. This therefore gives opportunity for the similar investigation to be duplicated in other counties which were not covered by the research.

1.11 Assumptions of the Study

This survey anticipated that:

1. Play could be incorporated in pre-school classroom set ups in the study area.
2. Adopting play as a strategy on pre-schoolers would significantly impact on their classroom participation.
3. There would be adequate and suitable play materials in the public pre-primary schools under study.
4. Responses to the study questions would be honest.
5. The sampled schools would be a close representative of the whole population.

1.12 Operational Definition of Key Terms

Play: -It's a free will pleasurable activity undertaken majorly for amusement; and particularly for the study among pre-primary children.

Strategy: -It is a methodology that one has for accomplishing a given intention specifically in pre-primary school.

Pre-primary school: - It is a formal set up which focuses on knowledge transfer to children under seven-years, as a preparation for their readiness for primary school learning.

Classroom Participation:- A wholesome immersion of both body and mind of a learner in classroom tasks that eventually results in gainful knowledge retention, skill achievement, grade transition, and task completion.

Centre: - An institution where learning and care for the pre-school children take place.

Respondents: -They are the informants from which feedback information sought for during the study is received.

Instruments: -They are the necessary tools employed for collection, analysis and exhibition of the study outcomes.

Analysis: - A systematic handling of the data collected from research that eventually produces information that may have remained implicit forever, except by the synthesis and proper presentation.

Pre-primary learners: –They are the children falling under pre-schooling majority age of 7 years, and are respectively undergoing learning in such available institutions.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This section presented hypothetical material appropriate for the assessment of play as a strategy on pre-schoolers' classroom participation. This is detailed out under sub sections of; concept of play among pre-schoolers, the variables of play, and a summary of the chapter.

2.1 Concept of Play among Pre-primary Scholars

Play is a chief commencement of understanding of the world by a child. It is a creative undertaking that wholesomely develops a child and sets it a firm foundation for classroom participation (Sullivan, 2014). It is a multifunctional activity through which a child masters the evolving world (Russo, 2016). Piaget's theory of cognitive and physical development and Vygotsky theory of socio-cultural experiences; both identify play to bring maximum education for children (Russo, 2016). However, the most effective strategies are those proven to work over large scale trials. Prensky (2017) observed that strategies such as games, role play, word puzzles among others are some of the most effective strategies that have been employed to promote learner participation in class using play.

According to Burke (2015), as young ones play, they pose and perform beyond their moderate ages and abilities. Linguistics also agrees that play is very key in pre-linguistic development. Play and pre-linguistic skills such as imitation of facial expressions, eye contact among others helps further in facilitating young ones' cognitive and linguistic abilities (Swigert, 2018).

Yet another excellent explanation of how play leads to growth and development was offered by, Donald, (2020). He explains that as a kid plays, he or she reacts way above his or her stage thus unearthing innovative techniques of executing chores. This perfects its confidence level and induces higher classroom participation. The child thus develops by the spirit of exploration birthed and strengthened by relevant play.

However, it is to be noted that due to low understanding, some stakeholders do not yet appreciate the value of play in wholesome development of a child.

2.1.1 Importance of Play to Pre-primary Scholars

United Nations High Commission for Human Rights (UNHCHR) elucidates the value of play as regards young ones' maximum growth worldwide (UNHCHR 2019). Nell & Drew (2013) observed that the more the learners play, the more they participate in learning. Play is an active free-will engagement in life. This fosters symbolic representation of real life; take for a case whereby a child may start pushing around a carton box as a vehicle. A push by new challenges coupled with acquired spirit of exploration freed by play, interplay to develop motor skills. Yet it is developed fine motor skills in hands, gained for example by handling small objects that build the critical coordination for writing skills.

More to refining gross motor skills, physical activity contributes to physical developments in a child such as; aerobic stamina, muscle development, power, organization, and spur of major organs. (Swartz, 2022) observed that play promotes physical health, in that, the likes of skipping, riding as well as cycling promote kids' stamina, agility, organization, balance as they generally keep them physically fit. Language development, arguably the highest form of development of a human, is greatly augmented by play among children who are learning to speak. This is in line with the

views of Swigert (2018) who views play as being among the maximum means of child instruction and linguistic development among themselves or with adults.

For children, cooperative play is the ideal setting for cultural interaction. It is the deep joy derived from play, which will force a child to be patient at trying to expressing itself and thus develop its language prowess. A teacher's role comes in handy, for instance by teaching words about the objects the children are interested in handling. By mimic, playing children develop a back and forth communication about their play. This slowly becomes complicated with time when now they begin to; develop new regulations, have particular duties, express their interests or objections, and chatter about amusing instances occurring as play progresses (Howard & Eisele 2016).

According to Fisher *et al* (2011), children who have experienced certain concepts through play boost their understanding of narratives. Ginsburg (2017) supports this by asserting that play gives room for children to maximally associate with their immediate social settings thus discovering their inner selves and worth which aid them to overcome their phobia. Because of such exposure, these children children do gain speed and ease when learning how to read or write a language.

Play helps boost a child's socialization skills. As they play, they are pushed to internalize how to act and do things in the society. It is an interesting way of them learning of their cultural expectations and their realities, (Vygotsky, 2005). In dramatic play, through varied role experimenting; a child learns how to get perspectives of others in the society. In this manner, he becomes ready to understand people and how to coexist with them. Howard & Eisele (2016) found that eminent socio-theatrical games relate to the growth of mental, collective as well as educational aptitudes.

Almon (2013) reported that play significantly prepares a child for adulthood world as it presents a variety of social situations. Cooperation and morality is fostered in play settings as cooperative play equips a child with skills on how to fit well into a group.

Play facilitates a greater percentage of socio-emotional growth of children during early childhood years. Through play, trust of non-family members, independence, initiative and self-assertion in socially acceptable ways is learnt (Pathway, 2017). A child's sense of security, and consequently their emotional development is heightened as it unwinds with manipulative items. This in turn improves classroom participation. Guiding children in mastering self-control as a means of obtaining higher cognitive functioning, is what Vygotsky (1978), thought as concerns the matters in this excerpt. Dinger (2014) observed that while playing with manipulative materials, a child learns prudency with its resources. Being in charge, it can formulate a world of its own and influence the outcome in it. Consequently, its motivation for participative learning grows

2.2 Empirical Literature

2.2.1 Types of Pre-scholars' Play

According to Bowdon (2015), children especially the ones in early childhood stages learn and develop through different types of play. He reports that the main general types of play among the pre-schoolers are physical, social and cognitive in nature which this study seeks to review in details through the literature below:

Motor play as a physical play encompasses both big motor physical undertakings such as kicking, hopping, chasing, & climbing; and fine motor physical activities like making strings with fingers.

Bowdon (2015), asserts that such is one of the utmost important in kids given its exceptional ability to enhance young one's mechanical strength and total infusion of

physiques, nerves, and mental indicators. Neuro-science has been in the forefront in showing the precarious connection between a motivating undertaking and the growth of the mind. Burke (2016) observes that there are standard sequences children follow when it comes to developing physical skills. This is most notable with babies as they learn to roll before crawling and stand before eventually walking. Physical play peaks towards the end of pre-school years and decays henceforth.

Another physical play is rough and tumble which occurs between the ages of 1-4 years, involves such play activities like rolling tyres or wire wheels, hoop swinging, cock fighting, wrestling, tug of war, kicking and throwing balls. According to Njagi (2010), rough and tumble play among pre-schoolers enhance use of muscle power hence improving the learners' mastery of skills as regards classroom participation.

Involvement in diverse bodily tasks ranging from mild to complex by young ones for at least an hour daily generates and enhances cognitive development (Janssen and LeBlanc, 2010). In spite of such merits, demographic-related surveys indicated that nearly half of the young ones in Australia and globally are far away from achieving this milestone (Hansen and Storjord, 2016). Learning institutions are deemed best environments for enhancement of the kids' bodily action. Many avenues such like but not limited to games, music and drama during the school calendar provide learners with chances of enhancing their physical development. Surveys have revealed mediations aiming at such distinct times could be worthwhile in heightening learner's bodily task degrees purposely meant to underscore to up to half of such tasks essential for achieving the set guidelines. Conversely, due to inadequacy of time during these discrete periods, more opportunities are needed so that the young ones may meet the expected levels of physical activities (Almon 2013)

Most of the physical tasks in classrooms among learners do provide an alternative means for these young ones to remain lively in the institution. Such has been made successful through the incorporation of the physical activity by the classroom teachers into learning session program by both infusing bodily tasks into classes and adding short spurts of physical tasks, either through course content with intervals or with none. Academic investigators and other educationists continually advocate for class-related physical tasks that enhance cognition, numeracy, literacy and general participation among pre-schoolers. In spite of reservations from some tutors and scholars about classroom-related physical activity posing dire retrogressive impacts on task performance by learners, it's crystal clear as indicated by numerous reviews that such physical activities positively enhance the holistic learners' classroom behaviour and development (McMullen, Kulinna and Cothran, 2014). However, any proof on class-related bodily tasks is still scanty.

After reviewing 11 studies, Norris *et al* (2015) wrapped up that the physical classes among children could impact positively, or be effect less on education-based results. Nevertheless, it was noted that the survey failed to consider alternative categories of classroom-related bodily tasks (e.g. lively pauses, joint outcomes in learners, failing to incorporate a meta-examination as well (Norris et al., 2015).

A detailed review on play types, structures and sequences is needful in regard to understanding the purposes and development of play from its simple to complex forms across the developmental age of learners. Groff (2015) presents a model with five elementary play systems: Firstly, is functional play or exploratory play presented as both physical and cognitive whereby a young one gets to understand and acclimatize to own environment. Functionally, exploratory plays are more or less social in nature for instance dumping, filling, stacking, water play, and outdoor play. Constructive play as a form of

mental play meant to make up a task as well as solve a problem, involves learners putting up things by assembling units or objects using blocks. Another cognitive play is dramatic play which basically employs pretence. The child is required to pretend to be somebody else, for example a youngster may pretend to be a doctor or a tutor. Notably dramatically, whatever system of interpersonal mingling among kids is not necessary. Socio-theatrical play is a kind of dramatic play where there are two or more players interacting socially about a certain subject and period as play progresses. Young ones sanction genuine forms of play undertakings. Another social type of play involves games with rules which comprise cooperative play, purposely either for winning or losing. Such games differ from the competitive games usually known as "sports" because they are substantiated by child-controlled rules. Playing such games among learners start with regulations phase at around six years old and run progressively into middle childhood. Such play culture indicates that kids comprehend the social rules of our society.

Computer-aided games as a teaching-learning strategy via the Computer-Assisted Instruction and which entails the use of drill-and-practice, tutorials and simulations through computer-based tools and applications alongside a teacher as a guide in a pre-school class setting to provide learning objectives, resources and assessment of learners, impact on learner's cognition, emotions, social, moral, psychomotor, creativity, interest and independence; all aspects of classroom participation (Institute of Play 2012)

According to Jane Hurst (2015), computer-aided games such like simulations, puzzles, kahoots, speech boxes, maths blasters, stealth shooters, role play, combat and sports among others through use of graphics, sounds, video and texts as applicable in disciplines like maths, science, language among others help develop pre-schoolers' multi-senses, self-direction, memory albeit other classroom participation indicators. All these are either

physical, social or cognitive in one way or another and are compounded under one umbrella of Computer-Assisted Instruction (CAI) as one among the many more teaching/learning strategies used by pre-school teachers in effecting play as a strategy on pre-school classroom participation in the study location; Bunyala sub-county.

Playing in itself is a vehicle that drives acquisition of socio-cultural values and aspirations that in turn informs and shapes resistance to behave morally among young ones. Pathways.org (2019) emphasizes that games are the vehicles for helping kids progress toward such learning goals set for them. It helps them in building the their lifelong aptitudes like problem solving, interaction and negation with others. This leads to the management of their emotions and eventually shapes their moral uprightness. According to Vygotsky (1978), as children play often, they frequently employ their fancy. Behavioural principles in play demand that young ones emulate others during play so as to perfect imaginary situations that help to enhance learning of societal norms. Quite advanced interactive play involving instances that continuously aim at enriching societal duties, aspirations, association and values is facilitated by learners continuously partaking make-believe play. The complexity of the play heightens the rules of the game hence calling for hardening on the learner's part so as to apply and regulate the tasks underway. Participation in own-initiated play activities by learners among informative learning set ups where players generate, exercise and relate them to reality in life is limited. Compliance by the child is hence determined or regulated either by hope of reward or fear of consequence like is in the circumstances of didactic classrooms. Adult regulation of the kids may in itself sound self-regulated when in real sense it's teacher-regulated (Dinger, 2014).

Young ones' social and emotional growth is best harnessed and enhanced through an ideal setting of play. Vygotsky (1978) asserts that such has and still is in the forefront in enhancing holistic growth in children given its high affinities in growth. Classroom participation through instruction, play and growth are inseparable and concurrent. Basic intrapersonal and interpersonal competencies for self-help, decision making, negotiation, appreciation, compromise, emotional control among others are acquired and cemented through child play.

According to Gray (2013), children through play, competently acquire skills though collaboratively and narrowly rather mindful of not hurting their fellow players. Additionally, young ones' coping strategies for emotional stability and holistic growth is enhanced best through play. Attitudinal uprightness, speech competencies, communal abilities as well as mental capabilities arising at formative ages do inform and fore tell fruitful educational results (Rhoades, Warren, Domitrovich, & Greenberg, 2011). Learners' interpersonal skills for interaction with other fellow pre-school classmates were shaped and influenced by the child play as asserted by the above cited publication.

2.2.2 Play Materials as a Strategy on Pre-schoolers' Classroom Participation.

Instructional resources do not just serve as quasi ingredients in enhancing young ones' self-expression or handling rather exciting as well as lively units operating in discourse within human beings for joint change of each other (Barad, 2011). Newly developed materials gives relevance to classroom instruction thus binding the learner and his or her world. Based on this viewpoint, learning and agency in children rather people generally are coexistent and mutual amid living as well as non-living units— a procedure that physicist Barad referred to as intra-action.

First-hand resources defeat the logic of cause and effect associations, bearing in mind those occurrences get generated through “a host of intertwining structures” (Coole & Frost, 2010: 9). Innovativeness arises out of compound sources and over numerous timelines, spawning vibrant associations between people and materials over time. Learners and the material world thus become inseparable rather progressively one and the same.

Varied instructional resources have been proved as having special ability to bring out exceptional as well as varied education lanes among kids (Odegard, 2012, Pacini-Ketchabaw et al., 2016). For instance, it has been proved that when children play with wooden blocks, there are high chances that they will start learning around arrangements of things, how to balance things alongside stature by heaping, enlisting, and assembling. Optionally, when young ones interact with expansive paper sheets during play, they are likely to start learning something related to gravity, mass, and figure forms by movement and throwing of such objects like paper sheets. This is true because when children play with different materials, that close interaction with those materials leads to learning of different physical properties of these materials and what they can do in the world such as how they can be balanced given their weight and how they can be moved or rolled.

As learners play with the material, the latter’s sensory and beauty qualities are likely to change thus enhance chances for more experimentation which in turn could see learners prolong their learning over time.

Lynch (2015) explains that play resources fall in two main classes viz indoor and outdoor. The materials are different in designs and nature and are used in carrying out different types of play leading to acquisition of different skills and academic achievements.

According to American Academy of Pediatrics (2014), young children in preschools should be allocated ample play periods alongside amorphous resources for liberal interaction. ECDE caregivers are advised to avail and use appropriate play materials to motivate learners to engage liberally with them in varied areas and situations. In the absence of such play materials, even the best teachers are rendered inefficient.

Individuals acquire skills via all the five human senses. Application of multiple senses concurrently instils and cements communication lastingly. Diverse resources charm diversely to individuals. In regard to pre-school education, such assertion becomes viable given that youngsters' understanding majorly is achieved through interaction with items as well as circumstances that constantly provide them a fresh know-how. Jane (2019) observed that play-based instruction instill and promote individual and collective experiential acquisition, pragmatism, self-discovery and exploration in children. Additionally, it enhances learners' security, worth, sociability, turn taking, manipulation and confidence levels. Caregivers should permit pre-primary school learners to engage spontaneously in different tasks as they also provide them with playing materials for their optimal involvement in sensible and utmost play-based learning that promote their collective and expressive growth.

Dinger (2014), observed that use of play materials by preschool children has a social emotional effect on them as they help the children in acquiring life skills. Usage of resources in children's play propels their interaction, awareness, esteem, motor control and coordination geared towards enriching children's morality and overall development. Playing materials such as building blocks, toys, beads, bean bags and counters among others offer the young learners the opportunity to manipulate different objects that eventually sharpen their skills in different ways. However, there is much literature on the

play materials but little on the relationship between these play materials and how they impact on learners' classroom participation. The study aims to establish that relationship.

2.2.3 Teachers' Preparedness as a Strategy on Pre-schooler's Classroom Participation

The role of a teacher in the delivery of curriculum is more important than the curriculum itself especially among the young learners who believe that the teacher knows everything. The impact of a teacher on the implementation of the curriculum largely depends on the teacher's education and his preparedness to impart knowledge. Dinger (2014) views instruction execution and instructor training as inseparable. According to Iowa Department of Education (2015), teacher preparedness in preschool learning activities include interpretation of the objectives and content in the curriculum, planning and managing the learning situations through which intension are translated into actual practice.

This requires teachers to be highly skilled in order for them to maximize children's potential. It calls for the skills of a teacher as he/she is expected to manipulate materials and classroom space to allow learners to be fully engaged. The instructor ought to avail thought-provoking materials to stimulate youngsters into play. A consistently organized material in appropriate space will enable the learners to clearly see their choices and settle for them. However, a teacher's experience is again called in action so as to strike the delicate balance needed by children for independent exploration of the play surrounding coupled with resources that deem most exciting without undue guidance from a senior.

Preparedness is a necessary factor among those who interact with the pre-schoolers. The aptitudes in these stakeholders are critical in assessing whether the children in question are showing typical and expected reactions when they are playing. Russo (2016) asserts

that well prepared teachers help in observing learners in the perspective of daily proficiencies as they interact with different play materials. Hence, a positive means for the teacher to be aware of the learners' undertakings in a class environment. A teacher's preparedness is key to choosing play materials which inspire and stimulate the children to play creatively with others or on their own (Matterson, 2011). According to Ginsburg (2013), some play such as structured ones are teacher centred, and are guided by the teacher. Their success is directly dependent on the teacher's preparedness to handle them. As children play, mediations by instructors may range from helping with creative and critical thinking, probing, readdressing immoral conduct as well as fascinating kids into play items. Learners with varying degrees of learning difficulties should also be fully integrated into play scenarios by their tutors as play progresses.

Learners' programme of study usually is offered rather enhanced based on play as instructors bring about play subjects, give resources, as well as enabling learners magnify their thoughts. Through assisting kids in preparing duties, inspiring kids in dialoguing with their fellows, asking broad-based quizzes, as well as being tangled in play, the instructor prolongs as well as does boost knowledge. For instance, among such duties of an instructor in charge is to develop mastery of the particular competencies as well as facts that young ones are required to cultivate. The moment learners' play starts, teachers swing into action by ensuring there is adequate social interactions and also assisting the children in joining play. It's also necessary that a teacher narrates children's actions during play. Instructor's presence, mediation and proximity to the learners as play progresses enhances the regularity, duration, and intricacy of learners' play, with high degrees of speech and mental aptitudes (McAfee & Leong, 2010).

Research has indicated that there is maximum benefit arising from the incorporation of play and participatory learning. The level of benefit depends on the facilitation which can be very efficient when enhanced using a wisely structured classroom setting. An instructor majorly aims at reducing conflict and confusion in order for the children to get constant stretch as well as spacious venues for play. Young ones at this stage are seen as competent people capable of generating information in play arena as long as the instructor's support and interactions with their fellow children is assured. Play is then seen as a vehicle through which play and aesthetic resources, the concepts of age mates coupled with such an outward environment is explored. This methodology to curriculum is geared towards ensuring holistic learner growth with learning experiences arraigned logically. For instance, a class of pupils visiting a train museum alongside their teacher may instead of putting their main focus on the different rail segments, a mere deed of memorization learning, their instructor may deliberately shift that concentration to the duties of the train employees and the crew who include but not limited to the captain, conductors, the engineers and even the passengers. This is in itself is a sure means of ensuring that the kids' play accelerates maximum progress and improvement as well as intricate play aligning on props (Russo, 2016)

Instructors are advised to carefully plan for play among the children applying appropriately their information on development in establishing the relevant time of life as well as stages of the children and even their cultural aspects within the class. Play effectively performs many purposes in enhancing young ones' societal as well as affective progression when they take up fresh duties which demand first-hand interpersonal abilities notwithstanding their fellows' viewpoints. Kids assign duties, exchange venues as well as resources, exhibit diverse stand points, solve stalemates as

well as swaying their age mates to adopt given duties. This way, free expression of hard feelings and mental dispositions which otherwise kids find hard to manage is enabled.

2.3 Theoretical Framework

The survey anchored itself on 'Social-Cultural Development Theory' (Vygotsky, 1978); that holds that children use play for social growth. It asserts that through play, learners make encounters with others by use of language and role play. The proponent further argues that effective child participation is due to the relations between the social and cultural surrounding and the child himself. Such interfaces are those from external environment like teachers, parents, playmates and siblings as regards their preparedness, experiences, motivation and attitudes. Vital play materials like toys, bean bags, beams, rollers and the culturally-particular practices like viable attitudes and values which the learners engage in gauged by the engagement or play time available largely influence play as a strategy on pre-schoolers' classroom participation.

According to Vygotsky, learners are lively allies in such dealings, constructing their own knowledge, experiences, values, attitudes and skills through cognitive, physical and social play. He believes that learners' mastery of social skills in play for classroom participation is influenced by the Zone of Proximal Development (ZPD) as well as scaffold activities which include external support given by both physical and socio-cultural environment to the learner through the type of play whether cognitive, physical or social, the teacher, the play materials or the caregiver's mediation through material sharing, manipulation and interactive play. This aids in linking what the child can do independently and what he or she cannot. Vygotsky alludes that 'A child's greatest achievements of; self-confidence, turn taking, manipulation and numeracy aspects like sorting and counting as well as task completion as indicators of classroom participation

are dependent on play hence are the dependent variables. Therefore, classroom participation and development of pre-schoolers should be supported via play by the play type whether physical or social, the teachers' motivation, skills, influence, the parents' attitudes and play materials.

Another theory dubbed 'The Social-Stage Play Theory' (Parten, 1932) argues that play among the 2-5 year-olds occurs in six socially-designated stages based on age and ability. Parten postulates that the social play types which pre-schoolers engage in among them; solitary, onlooker, parallel, associative and cooperative call for teacher's preparedness as regards the selection of play materials commensurate to the pre-schoolers' age and ability. Basically therefore, the afore-mentioned variables of play types, play materials and teachers' preparedness which stand out as the independent variables evidently impact on the child's classroom participation that hold as the dependent variable with regard to confidence levels, turn taking abilities, manipulative competencies, numeracy skills and task completion rates. Hence in conjunction with the former theory, it becomes relevantly applicable to this study since the two postulations above broadly strive to establish the relationship between play as a strategy on pre-shoolers' classroom participation in pre-primary schools.

2.4 Conceptual Framework

This survey was based on the under in conceptual frame work indicating the association amid play and pre-schoolers' classroom participation. According to Mutai (2016), conceptual framework is a graphical and diagrammatic association amid indicators in the study to enable a quick grasp of the underlying concepts. It outlines the connection amid independent and dependent study indicators. The independent variables are those indicators not seen as banking on any other variable in the scope of study which in this

case reflect different play aspects including the types of play, types of play materials used by the learners and teachers' preparedness on play among children in ECDE centers. The dependent variable on the other hand is one that banks on another factor under study which in this case is the pre-schoolers' level of classroom participation in learning in light of task completion, turn taking, confidence level, manipulation and numeracy skills. The intervening variables are those that connect the independent and dependent variables in a study but not observable which in this case include the initiatives by the stakeholders to improve on the use of play among the public ECDE learners. Such initiatives include gender sensitization, embracing viable government play-based policies, purchase of play materials and creating awareness on the importance of play to the children.

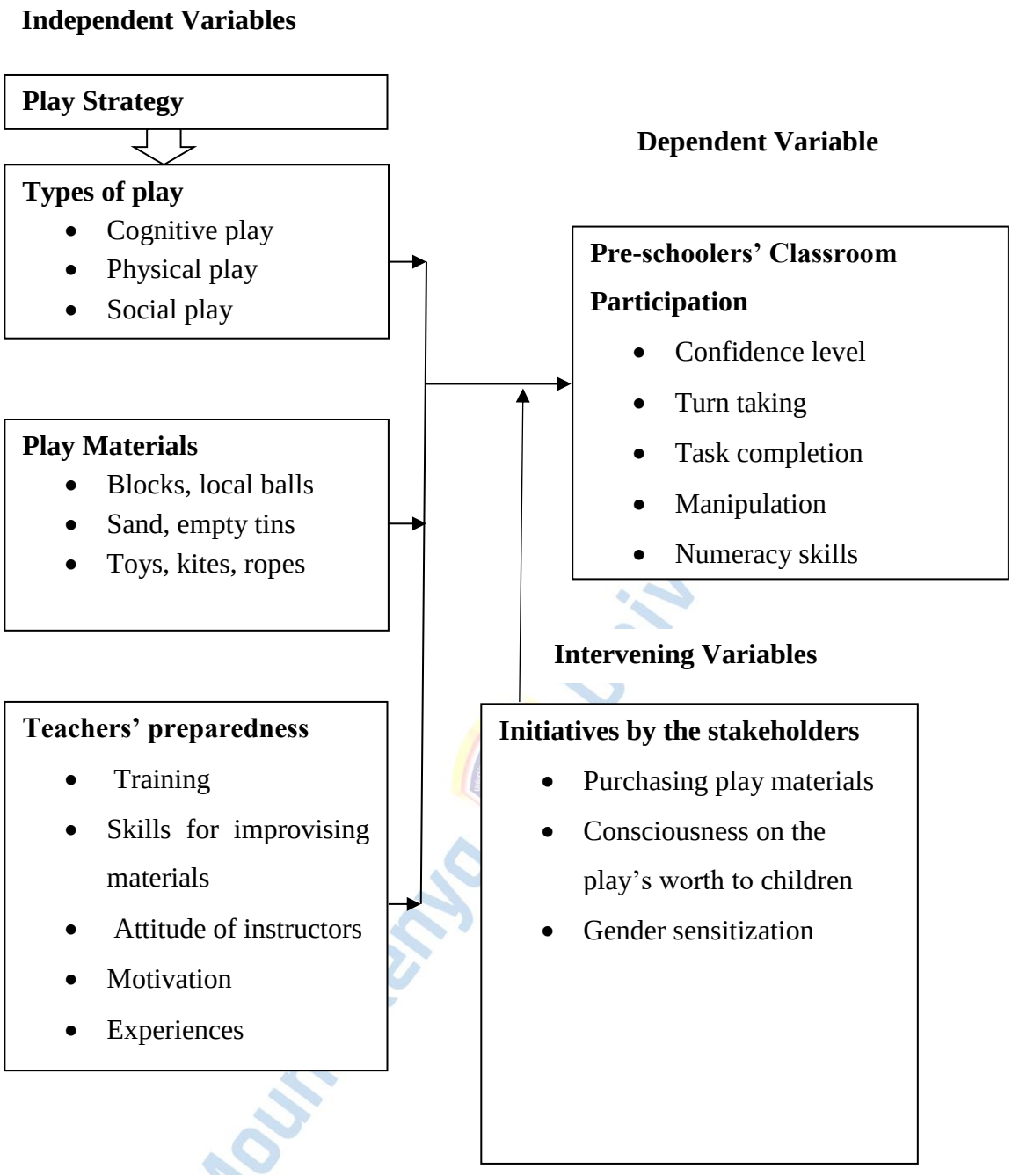


Figure 1: Conceptual Framework

Source: Researcher, 2019

2.5 Research Gaps

Play are of diverse types which if pre-schoolers are exposed to, the impact on classroom participation is immense. Various researchers have explicitly explained the importance of these types of play and their relevance to the classroom participation.

Play stimulates attentiveness of children to the process at hand (Nell & Drew, 2013). Many researchers agree with the statement. However, very little had been done to point out how different types of play at the disposal of pre-schoolers could serve as a strategy on their classroom participation as regards self confidence level, turn taking abilities, numeracy skills, manipulative competencies and task completion.

Play materials enhance and make play more meaningful among children. Research has shown that these play materials vary from one environment to another. Those that are bought are not affordable to every house hold; however they can be improvised by the children themselves, their teachers and even parents. This study aimed at establishing how these play materials can be part of a strategy on pre-schoolers' classroom participation, an area that had not been exhaustively addressed by researchers.

The role of ECD teachers in preparing pre-schoolers for their future academic work cannot be overlooked. Bee (2009 reviewed 2017), reported that teachers' preparedness in discharging duties related to play is as important as the curriculum itself. Literature has shown that parents take their young children to school with high hopes that teachers would change the lives of their children. However, many people are not concerned with the kind of training ECD teachers undergo. For teachers to be sufficiently prepared to handle play as a strategy on pre-schoolers' classroom participation, there ought to be training on the same at the ECD teachers' training centers, enhanced teacher motivation, positive attitudes and proper teacher vigilance.

2.6 Literature Review Summary

The investigator reviewed varied text regarding the assessment of play as a strategy on pre-schoolers' classroom participation in pre-primary schools. The reviewed literature

has shown that play is one of the most crucial elements of pupils' classroom participation in early childhood education as it significantly benefits the children in many ways.

As regards the types of play, the study established numerous play forms at pre-schoolers' disposal. The study established that these types of play promote different aspects of classroom participation among the pre-schoolers. The study however, concluded that not all types of play are of benefit to the learners as it was established that some types of play can be very harmful to the kids hence the need to monitor play activity the pre-schoolers are delving in.

On materials of play used by the pre-schoolers, it was found that pre-schoolers resonate well with those materials of their age and those that they can manipulate easily. Play materials such as building blocks were found to be some of the most appropriate for their age.

Regarding teachers' preparedness on pre-schoolers' classroom participation in learning, it was found that teachers' preparedness play as much important role as the curriculum itself. The teachers are expected to structure out scenarios which provide spontaneity and unstructured play encounters and monitors them closely for maximum gain. It was found that play at school without proper vigilance acquired by teachers in training, demotivation, disinterest and negative attitudes may not be useful since such competencies are necessary in guiding learners. Finally, it was established that Computer-Assisted Instruction (CAI) through use of computer-based games employed as a teaching method under a teacher's guidance and direction, is among the many other strategies in use to effect play as a strategy on pre-schooler's classroom participation and which in itself is a body of new knowledge generated by the study under way. This research thus

sought to asses play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala sub-county, Busia County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presented various methods which the researcher employed in collection, analysis and presentation of information gathered from the study.

3.1 Research Methodology

The study adopted a mixed methodology. This is an emergent methodology that encompasses both qualitative and quantitative approaches to generate information out of multiple sources within a single investigation (Creswell & Clark, 2011).

Because of the goals of this study, qualitative methodology was used to analyse majorly data or characteristics for which numerical value cannot be assigned such as data from observation guide viz; naming, sorting or grouping of play types, materials and strategies. For the data whose values are numerical as of the questionnaire such like inferential statistics, quantitative approach was employed thus necessitating the use of a mixed methodology for this study.

Qualitative method emphasizes on words which help in interpretation of mainly social world, Bryman (2004). Its goal is to provide insight to a social setting, (Creswell, 2007).

3.2 Research Design

The investigator found descriptive survey as the most suitable design for the research. This design basically aims at finding out the who, what, where and how of a phenomenon of a study (Cooper, 2006). Serem & Boit (2013) assert that descriptive survey design should be the most appropriate in gathering first-hand information in a relatively big populace under observation.

The researcher collected information from a sample data that represented the whole population in the research field.

3.3 Location of the Study

The survey delineated public ECDE institutions in Bunyala Sub-county of Busia County. Bunyala sub-county is among the seven administrative sub-counties in Busia County. This stretches close to 130.40 km² with a populace of 66,723 as per the 2009 National Population Census (2009 Kenya National Population and Housing Census). The region's economy is anchored on fishing industry. Some residents though are also involved in small scale farming and sand harvesting. The sub-county has 27 public pre-primary institutions (DEO, 2017). Bunyala sub-county has four administrative units. The sub-county boasts of learning institutions encompassing 1 constituent campus, 1 polytechnic, 2 vocational institutes, 1 teachers' college, 12 high schools, 2 special primary schools, 37 primary schools (public and private) and 42 pre-primary institutions (public and private) (DEO, 2017). The study locale's selection was influenced by the Busia County Baseline Pre-school Survey Report (2016) which revealed a significant disparity in academic performance between those pre-school learners with foundation in play as a strategy on classroom participation and their counterparts without. Investigator's acquaintance of the region under study that eased the bond between him and the informants hence facilitating information harnessing too was a consideration. To support the above, Singlehton (2013) views a perfect location as one connected to the investigator's concern, simply reachable as well as which has high affinity amid the surveyor and the informants.

3.4 Target Population

It is the cluster of entities/institutions that possess at least one characteristic that is of concern to the investigator (Cooper, 1996). The study locale's selection was influenced by the up-surging number of public pre-primary institutions and subsequent recognition

of the same by both national and county governments. For the case of Bunyala sub-county, the parent factor of commonality in regard to play strategies among the population was at play thus the question of quality versus quantity therefore begged. Moreover, acquaintance of the investigator with the research field was of importance in developing bond with the respondents and thus smoothening data collection.

The choice was informed by prior work of Singlehton (2013), which proposes that the setting be that which is associated with the investigator's concern, simply reachable and permits establishment of immediate rapport.

Since there are only 27 public pre-primary institutions in Bunyala sub-county, all of them were involved in the study. The table below summarizes the target population of the survey in Bunyala Sub-county.

Table 1: Target Population

Target Population of Bunyala Sub-county	Number
Head teachers	27
Teachers of Public ECDEs	81
Public ECDE Learners	3312

Source: Researcher 2018

3.5 Sampling Procedures and Sample Size

3.5.1 Sampling Procedures

Purposive and simple random sampling techniques were employed. Heads of public primary schools in which the ECDE institutions are situated were sampled using purposive sampling technique. This involved a purposeful targeting of the persons of benefit to the study (Kombo & Tromp, 2006). They were selected as the managers of these pre-primary institutions. In this way, the desired sample in the study was satisfactory to the desired needs.

To obtain the desired teacher and learner samples in the study, the researcher asked for the lists of teachers and learners in each centre and randomly picked on the ones to include in the study. This was done with full knowledge of gender awareness to avoid any form of bias.

According to Sidhu, (2002); a simple random sampling involves a random and non-repetitive selection from the population. This randomness and once selection solved the challenge of bias. It provided participants with equal opportunities and rid the sample off of preconception and unfairness hence was deemed fit for adoption as the suitable sampling procedures.

3.5.2 Sample Size

Testing the entire populace during a research may not be possible. However, Frankel & Wallen (2009), assert that one can get accurate findings when a reasonable representative sample is used. They say that larger sample sizes are necessary when groups must be broken into sub-groups. Simple random and purposive sampling procedures were applied in selecting sample size of 25 head teachers of public primary schools that house these public pre-primary centres, 50 teachers of these public pre-primary school learners and100 pre-unit schoolers from among the entire public ECDE learners for the research.

On the required learners' sample, the researcher asked for a list of learners in each pre-unit class and randomly picked on 4 learners. This was done with the full awareness of gender to avoid being gender insensitive.

This way, the final sample size which was obtained contained all the important characteristics of the parent population in the right proportion and bias was avoided as the researcher did not meet the learners or teachers before the sampling. According to

Mugenda & Mugenda (2003), sampling 10 to 20 % of the reachable populace is normal. Although this range changes with the size of the population under study in which case the principle was applied. It also observes that when the population is so small, it is best to take the whole of it, as sampling would be meaningless. The whole population of heads of public primary schools where these ECDE centers are located was used. Table 2 shows the sampling frame as sourced from the Bunyala sub-county education office.

Table 2: Sample Size and Frame

Target Population in Bunyala Sub-county	Procedure of Sampling	Sample size in Bunyala Sub-county
Heads of the public pre-schools	100/100*27	25
Public pre-primary school teachers	61/100*81	50
Public pre-unit learners	10/100*1002	100
Total		**175**

Source: Researcher 2019

3.6 Instruments of Research

The researcher employed questionnaires and observation guide to elicit information out of the informants.

3.6.1 Questionnaires

A questionnaire is a data tool that relies upon gauging upon a particular viewpoint. It can quickly collect large information in a given time duration (Orodho, 2004). It is the common way of gathering data in survey research (Ary*et al*, 2009).

The survey depended on administration of questionnaires namely: Questionnaire for Heads of Institutions (QFHOI) (Appendix I) and Questionnaires for Teachers (QFT) (Appendix II). The (QFHOI) was administered to 25 heads of public primary schools within which these pre-schools are based while (QFT) was administered to 50 teachers

of these public pre-primary schools. These questionnaires were classified into sections A and B: to cater for demographics of the heads and teachers and to cater for the objects of the research respectively. Both questionnaires enclosed open ended and structured questions. All the objectives of the study were catered for the in the questionnaires in view of the dependent variables viz; task completion, turn taking, confidence levels and manipulation skills.

3.6.2 Observation Guide for the Pre-schoolers

This instrument was used to collect primary data through observation. According to Roller & Lavrakas (2015), observation is a method of observing social actions and interactions in their natural phenomena. The duo asserts that this type of tool is useful when descriptive data is needed. The researcher used observation guide which captured the principal issues and components of the aspects under the study. In each center, 4 learners were sampled with the help of teachers for the observation. Investigator called for a list of learners in pre-unit class. He then randomly picked 4 learners taking into consideration gender balance.

The observation focused on the relevant areas of the study; being play types the learners are engaged in, available materials of play under their manipulation, learners' levels of involvement in the play and the impact of such plays on the learners' classroom participation in view of the dependent variables viz; task completion, turn taking, confidence levels and manipulation skills.

3.7 Piloting

The research tools were pre-tested in two of the total twenty-seven public pre-primary institutions which were not incorporated in the real investigation. Pilot findings revealed that majority of the respondents; 25 head teachers (93%) and 75 pre-primary instructors

(93%) in the piloted centres across the study locale hinted serious gaps in regard to play use as a strategy in light of materials and teacher preparedness. Piloting therefore gave a chance of effecting needed modifications to the tools. Piloting ensures clear statement of research instruments and uniformity of meaning to all respondents (Mugenda & Mugenda, 2003). According to Orodho (2010), it has the advantage of enabling meaningful observations by detecting deficiencies in the instruments. The researcher was therefore able to rephrase vague questions to reveal the relevance of the projected diagnostic procedures. By piloting, validity and reliability of the study instruments was determined.

3.7.1 Validity

It is the degree of real replication of the indicators being surveyed, of the real world. Simply validity is how well a tool processes that which is purposed to. Construct validity was employed where short and straight forward questions were used to gauge study outcomes based on observations. Questionnaires were simplified as well as eased for understanding by using brief and modest sentences. They were arranged from simpler to challenging questions.

3.7.2 Reliability

The investigator applied test re-test technique in gauging the reliability of his tools. He administered the instruments to selected respondents and re-administered the same instruments after some period of time to gauge consistency with which the questions were answered.

Particularly, he piloted two pre-primary institutions after which in a week's time, again same tools were run in the very institutions. Those instruments were considered reliable

after reasonable consistency was realised. In this survey, a Cronbach Alpha correlation co-efficient of 0.7 was taken to be good degree of consistency of the tool (Roscor, 2003).

3.7.3 Credibility

This is established by representing multiple constructions adequately, and pursuing and presenting them well (Lincoln & Guba, 2003). The researcher made this research credible by carrying out inquiry tactfully and in an amiable manner that reduced dissonance from the respondents. Additionally, he had his findings sanctioned by the constructors of the compound truths under study.

3.8 Data Collection Procedures

By grant of authorization by the relevant department of Mount Kenya University; as a consequence, relevant permit from the National Commission for Science Technology and Innovation (NACOSTI) was acquired. This meant as well, a go ahead from County Director of Education of Busia County. He then sought permission from the managers of the institutes sampled for the research that cleared him to carry out the study in their institutions.

Actual data was then collected on the pre-arranged dates; where instruments were administered to the respondents directly, and as well allowing ample time for response. Consequently, a good return ratio was realised and clarifications were made where respondents sought such.

3.9 Data Analysis Procedures

On data management, cleaning was done on primary data to remove inaccuracies made by respondents. Thereafter, coding to transform responses into explicit groupings and reducing the data into manageable summaries, followed.

On the analysis of the quantitative data, descriptive statistics was employed while content analysis was applied on qualitative data. Content analysis makes replicable and valid inferences by interpreting and coding textual material (Pollock & Rindova, 2010).

To convert qualitative data into quantitative form, systematic evaluation of texts was done. Statistical Package for Social Sciences (SPSS version 21) was employed in analysing the quantitative statistics by using mean and standard deviation. Inferential statistics such as correlation and regression analysis were employed to check on the association amid the study indicators. Presentation of the research findings was done via tables, pie-charts and bar-graphs, as relevant to the situation at hand.

3.10 Ethical Considerations

The investigator upheld ethical guidelines by observing the secrecy and confidentiality of informants especially from the information given on questionnaires. The identities of informants on the instruments were avoided thus participants remained anonymous throughout the survey. Parental permission was obtained for the pre-school children who were involved in the study before administering an observation guide to the children while assuring them that their participation was voluntary, protected and private. The researcher introduced himself through introduction letters and identification cards. Along, he stated the mission and purpose of the study. Material facts got through other areas and writers in backing the appropriateness of this study were accredited by way of citations and plagiarism was reduced. The researcher sought consent from relevant authorities to conduct research.

Surprise entry into relevant institutions was avoided by arranging with the heads of the institutions for dates of data collection. To ensure equity in treatment of respondents, a wait list was provided. Privacy and manipulation of respondents was at all cost upheld

and avoided respectively. In line with Creswell, 2014, the study results would be presented to appropriate authorities as well as the willing contributors.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.0 Introduction

This study aimed at assessing play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala sub-county, Busia County, Kenya. Data gathered from the educators (head teachers and ECD teachers) and ECD learners are presented here. The data are presented using frequencies and inferential statistics in tables and figures. The presented data are based on themes derived from the study objectives which were;

1. To establish the types of play used as a strategy on pre-schoolers' classroom participation in public pre-primary schools.
2. To investigate the types of play materials used to support classroom participation in public pre-primary schools.
3. To explore public pre-primary school teachers' preparedness in using play as a strategy on pre-schoolers' classroom participation.

4.1 Questionnaire Return Rates

The target population was 25 head teachers, 50 pre-primary teachers and 100 public pre-unit learners. The researcher issued questionnaires to 25 head teachers and 50 teachers selected to participate in the survey and also conducted observation to 99 learners. This was the total questionnaires and observation guides which the investigator retrieved from the participants; 170/175x100 (97%). The head teachers' return rate percentage was 24/25x100 (96%). The pre-primary teachers' return rate percentage was 47/50x100 (94%) while the learners' return rate percentage was 99/100x100 (99%). Broadly, from the 175 participants targeted for the research, 170 responded giving a feedback percentage of 97%, which in line with Kothari (2012) could be employed in justifying research

deductions as well as giving dependable outcomes. The findings were as distributed in Table 3 below.

Table 3: Questionnaire Return Rate

Respondents Category	No. in the Sample Size	No. of Responses	Response by Percentage
Head teachers	25	24	96
Pre-primary	50	47	94
teachers	100	99	99
Pre-unit learners			
Total	**175**	**170**	**97**

Source: Field Data, 2019

Mugenda and Mugenda (2003) asserts that a response rate of 50 per cent is adequate for analysis and reporting, a rate of 60 per cent is good and a response rate of 70 per cent and above is outstanding. The above return rate was representative and was taken as being superb.

4.2 Demographic Characteristics of Respondents

Participants' population statistics was anchored on the levels of education, period of service in the teaching profession and the period of service in their present locations. The data obtained helped in assessing play as a strategy on pre-schoolers' classroom participation in public pre-primary schools within Bunyala sub-county.

4.2.1 Distribution of Respondents by Level of Education

The survey pursued to establish the academic qualifications of the participants. The findings were as follows.

Table 4: Distribution of Respondents by Level of Education

	Head teachers		Pre-unit teachers	
Level of Education	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Certificate	4	17	29	62
Diploma	10	42	18	38
Degree	8	33	0	0
Masters	2	8	0	0
Total	**24**	**100**	**47**	**100**

Source: Field Data, 2019

Table 4 above summarizes the professional qualifications of the participants. As of the findings above, there is evidently an overwhelming number 20(83%) of the head teachers holding diploma and above i.e. diploma 10(42%), degree 8(33%) and masters 2(8%). Only 4(17%) of the head teachers are holders of P1 certificate. It can be resolved that all the head teachers selected for the research had acquired sufficient training to enable them effectively manage the ECD centres under their care. The survey too also established 29(62%) of the pre-unit instructors as certificate holders while significant 18(38%) had done their diplomas in ECD related trainings. Again this effectively meant that all the pre-unit teachers sampled for the study had acquired the prerequisite qualifications thus best placed in effectively delivering ECD learning program.

Reviewed studies reveal competent teachers as being more dedicated given their cognizance of developmental stages of their learners, their individual requirements and the specific remedies to their various challenges (Akintayo et al, 2013)

4.2.2 Distribution of Head-teacher Respondents by Period of Being Head

The research pursued information from the head teachers the period they had taken as the heads of primary schools. The findings were as shown in Table 5 below.

Table 5: Distribution of Head-teacher Respondents by Period of Being Head

Period of Service as a Head	Frequency	Percentage
Less than 2 years	2	8
2-5 years	5	21
6-10 years	10	42
11-15 years	4	17
Over 15 years	3	12
Total	**24**	**100**

Source: Field Data, 2019

From the above findings, it is clear that the bulk of the head teachers 17(71%) selected for the survey had served as head teachers for more than 6 years with 6-10 years leading with 10(42%), 11-15 years 4(17%) and those who had served as heads for more than 15 years scoring 3(12%). Only 2(8%) of those head teachers had served for less than 2 years. This in essence meant that overwhelming majority of head teachers had served as heads of primary institutions for long thus could provide dependable information regarding ECD activities.

Table 6: Distribution of Head-teachers by Period of Service in the Current Station

Period of Service in the Current Station	Frequency	Percentage
Less than 1 year	3	13
1-2 years	8	33
3-4 years	7	29
5-6 years	3	13
7-8 years	2	8
9-10 years	1	4
Over 10 years	0	0
Total	**24**	**100**

Source: Field Data, 2019

According to the above table, it can be concluded that many head teachers 8(33%) had served in their current stations for a period between 1-2 years. It is worth noting that another significant percentage 7(29%) had served for a period between 3-4 years. Notably, no head teacher had worked in their present locations for over 10 years. All these

statistics have been influenced by the on-going rampant transfers of head teachers and the current delocalization policy by TSC. However, all the head teacher respondents assured the researcher that they were firmly in charge of their schools and were always monitoring ECD activities hence they were at better position to still give very reliable information.

4.2.3 Distribution of Pre-primary Teachers by Period of Service in the Current Station

The research wanted to find out from the pre-primary teachers sampled for the study the period they had taken in their current stations. Their responses were as presented in Table 7 below.

Table 7: Distribution of Pre-unit Teachers by Period of Service in the Current Station

Period of Service in the Current Station	Frequency	Percentage
Less than 2 years	3	6
2-5 years	13	28
6-10 years	17	36
11-15 years	8	17
Over 15 years	6	13
Total	**47**	**100**

Source: Field Data, 2019

The above grid shows the bulk of the pre-unit teachers sampled for the study 30 (28% and 36%) had served in their currents stations for periods between 2-5 years and 6-10 years respectively. Only 3(6%) of those respondents had served for a period less than 2 years. This meant that majority of the pre-unit teachers selected for the survey had served adequately long to give reliable information regarding play as a teaching strategy in their current centres.

Findings as per the Objectives of the Study

This research purposed to realize the intents below:

1. To establish the types of play used as a strategy on pre-schoolers' classroom participation in public pre-primary schools.
2. To investigate the types of play materials used to support classroom participation in public pre-primary schools.
3. To explore public pre-primary school teachers' preparedness in using play as a strategy on pre-schoolers' classroom participation.

4.3 Types of Play for Pre-schoolers' Classroom Participation

4.3.1 Engagement of Pre-schoolers in Play

The survey sought information from the pre-unit teacher informants whether they engage their learners in play. Their responses were as presented in Figure 2 below.

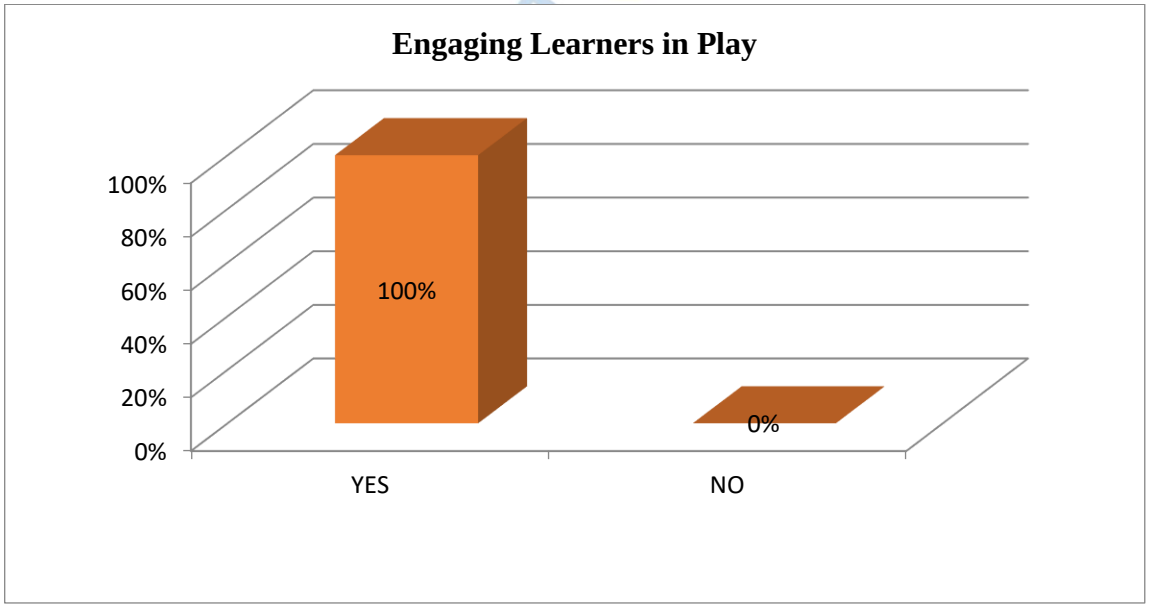


Figure 2: Engagement of Pre-schoolers in Play

Source: Field Data, 2019

All the pre-unit teachers who participated in the research 47(100%) indicated that they were regularly engaging their pre-schoolers in various play both in-door and out-door plays. This confirmed that all the pre-unit teachers sampled for study acknowledged the importance of play among the young learners. This finding is in line with Bryant and Clifford (2000) who assert that young ones who exhibit greater and worthy interpersonal relations with play items display better educational and communal growth in ECDE centres, specifically those in local surroundings poised with compound societal and ecological risks.

4.3.2 Types of Play Pre-schoolers are involved in

In order to establish the types of play the pre-primary kids in the sampled centres were involved in, pre-unit teachers were asked to name some of the examples of plays the pre-schoolers were involved in. The findings were as presented in Table 8.

Table 8: Types of Play Pre-schoolers are involved in

Types of Play	Frequency	Percentage
Physical play	43	91
Social play	37	79
Cognitive play	19	40

Source: Field Data, 2019

As of Table 8, evidently, overwhelming number 43(91%) of the pre-unit teacher respondents stated that they engaged their pre-schoolers in various forms of physical plays such as tapping objects as they hide and seek, tug of war, skipping ropes among others. Another overwhelming majority 37(79%) indicated that they as well engaged their pre-schoolers in types of social play like role play, singing games and many more. However, only 19(40%) of the informants revealed that they engaged the pre-schoolers in different forms of cognitive play such as language play. The findings concur with

Hirsh-Pasek and Golinkoff (2008) that most forms of social and physical play offer the best opportunities for youngsters to learn through first hand experiences and that they motivate, stimulate and support children in their development of skills.

Reviewed literature indicates that the uneven, inequitable and inadequate exposure of pre-shoolers to all forms of play is propelled by the acute unavailability of play infrastructure and pre-school teachers' preparedness an assertion that's in tandem with an investigation by Tarimo (2013), that assessed use of play by pre-primary teachers to improve classroom participation, in Kilimanjaro region of Tanzania which established a low classroom scores for cases in which there was no play and cases where teacher's preparedness was not enough.

4.3.3 Types of Play that Energise Pre-schoolers

On plays that energise pre-schoolers, again overwhelming majority of pre-unit teacher respondents 39(83%) reported that physical play was energising and stimulating the pre-schoolers much more than any other type of play. This was attributed to the fact that most of the forms of physical play are free style and do not require learners to think much.

4.3.4 Types of Outdoor and Indoor Plays Pre-schoolers are involved in.

Heads of the ECD centres sampled for the study were asked to state some of the outdoor and indoor forms of play the pre-schoolers in their centres were being involved in. The findings were as presented in Table 9.

Table 9: Types of Outdoor and Indoor Plays Pre-schoolers are involved in

Outdoor Plays			Indoor Plays		
Type of Play	**Frequency**	**Percentage**	**Type of Play**	**Frequency**	**Percentage**
Physical play	23	96	Physical play	11	46
Social play	20	83	Social play	17	71
Cognitive play	9	38	Cognitive play	21	88

Source: Field Data, 2019

In regard to table 9, conclusively, 23(96%) and 20(83%) of the head teachers reported that their pre-schoolers were so much into physical and social play forms of play respectively during their outdoor activities. However, the opposite seemed to be the case in indoor sessions where majority of head teachers 21(88%) indicated that the pre-schoolers in their centres engaged much more in cognitive forms of play than other play categories.

4.3.5 Influence of Types of Play on Classroom Participation

In determining the degree to which varied types of play influences on classroom participation among children**,** the respondents were given different statements and asked to show the degree to which they concurred to every sentiment in regard to their centres. A five point likert scale of 1-5 was adopted where: 1- represented 'Strongly disagree', 2 -'Disagree', 3- 'Neutral', 4-'Agree' and 5- 'Strongly agree'.

'Strongly disagree' was therefore interpreted as an equivalent of mean score ranging from 0.0 to 1.0, 'Disagree' with mean score ranging from 1.1 to 2.0, 'Neutral' with a mean score ranging from 2.1 to 3.0, 'Agree' with a mean score ranging from 3.1 to 4.0 and 'Strongly agree' with a mean score ranging from 4.1 to 5.0. A standard deviation more than one (> 1) indicated significant differences in the feedbacks from participants. The findings were as presented in Table 10.

Table 10: Influence of Types of Play on Classroom Participation

Statement	N	Mean	Std. Deviation
Cognitive play helps children learn the nature of their surrounding thus improving classroom participation	170	4.11	.655
Cognitive play helps children in combining pieces or entities thus improving their classroom participation	170	4.05	.734
Social play exposes children to negotiation skills thus improving classroom participation	170	3.98	.757
Physical play increases children's physical activity levels thus improving their classroom participation	170	3.89	.749
Physical play has affirmative impacts on enhancing on-task and decreasing off-task classroom performance and selective attention among pre-school children	170	3.87	.713
Social play helps children in understanding and accepting the perspectives of other thus increasing their classroom participation.	170	3.85	.698
Mean	170	3.96	0.718

Source: Field Data, 2019

The findings on Table 10 above reveals participants strongly agreeing with the statements that cognitive play helps children learn the nature of their surrounding thus improving classroom participation (Mean 4.11) and that Cognitive play helps children in combining pieces or entities thus improving their classroom participation (Mean 4.05). It was also established that the informants agreed with the statements that social play exposes children to negotiation skills thus improving classroom participation, physical play increases children's physical activity levels thus improving their classroom participation, physical play has affirmative impacts on enhancing on-task and decreasing off-task performance and discerning responsiveness among pre-school children and that social play helps children in understanding and accepting the perspectives of other thus increasing their classroom participation (Mean between 3.1 to 4.0). These findings are in line with those of Singer, Michnick Golinkoff, & Hirsh-Pasek, (2006) who found that socio-cultural values and aspirations among young ones that in turn direct them to cede

to the outward forces thus behaving in culturally-acceptable manner are greatly informed and shaped by involvement in play.

4.3.6 Alternative to Use of Play as a Strategy on Pre-schoolers' Classroom Participation

The study strove to establish from both the pre-unit teacher and head teacher respondents how they were coping with classroom participation of the young ones in the absence of play. The findings were as presented in Table 11.

Table 11: Alternative to Use of Play as a Strategy on Classroom Participation

Alternatives	Frequency	Percentage
Story telling	63	89
Riddling	57	80
News telling	49	69
Proverbs	49	69
Role play	54	76

Source: Field Data, 2019

The above table 11 summarizes results on the alternative ways of handling classroom participation in the absence of play. Overwhelming majority 63(89%) of the respondents indicated that they were using story telling. Another overwhelming majority 57(80%) reported that they were employing riddling as an alternative. News telling and proverbs among pre-schoolers registered 49(69%) in each case. Role play registered 54(76%) as an alternative way in the absence of play in classroom participation. The results agree to Nikolaos Lazaridis' report (2007) that asserted that children who were engaged in riddling, proverbs and sayings as forms of play remembered proverbs better when there were visual representations of proverbs along with the verbal forms of those proverbs and sayings.

4.3.7 Impact of Integration of Play as a Strategy on Pre-schoolers' Classroom Participation

Seeking to find out the effect that integration of play as a strategy has on pre-schoolers' classroom participation, pre-unit teachers were asked to indicate whether the impact was negative or positive depending on their honest opinion and assessment. The findings were as presented in Figure 3 below.

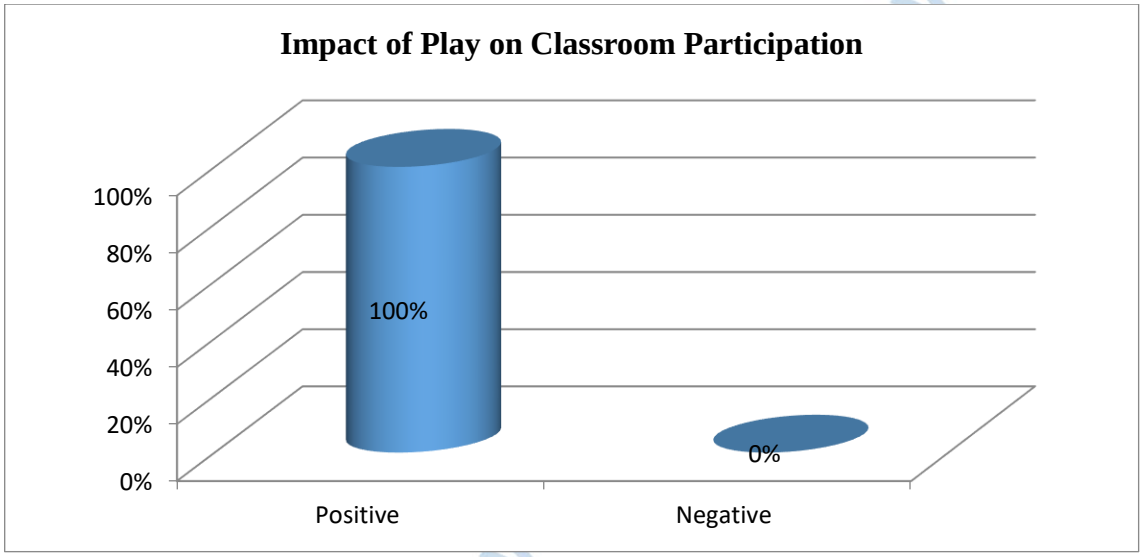


Figure 3: Impact of Play on Classroom Participation

Source: Field Data, 2019

In regard to figure 3, all the pre-unit teachers 47(100%) who partook the research indicated that the impact of play on classroom participation was positive. All the pre-unit teachers involved in the study 47(100%) acknowledged that in order for classroom participation to be more effective and enhancing, the pre-schoolers should be engaged in various forms of suitable play. Ginsburg (2013) in his study to establish the relationship between play and instruction agrees with the findings as he asserts that the impact of play on classroom participation is enormously vital to growth due to its input on the holistic development of the young ones.

4.3.8 Ways of Engaging Pre-schoolers in Play

The research strove to determine some of the ways the pre-unit teachers were using to engage their learners in play. The findings were as presented in Figure 4 below.

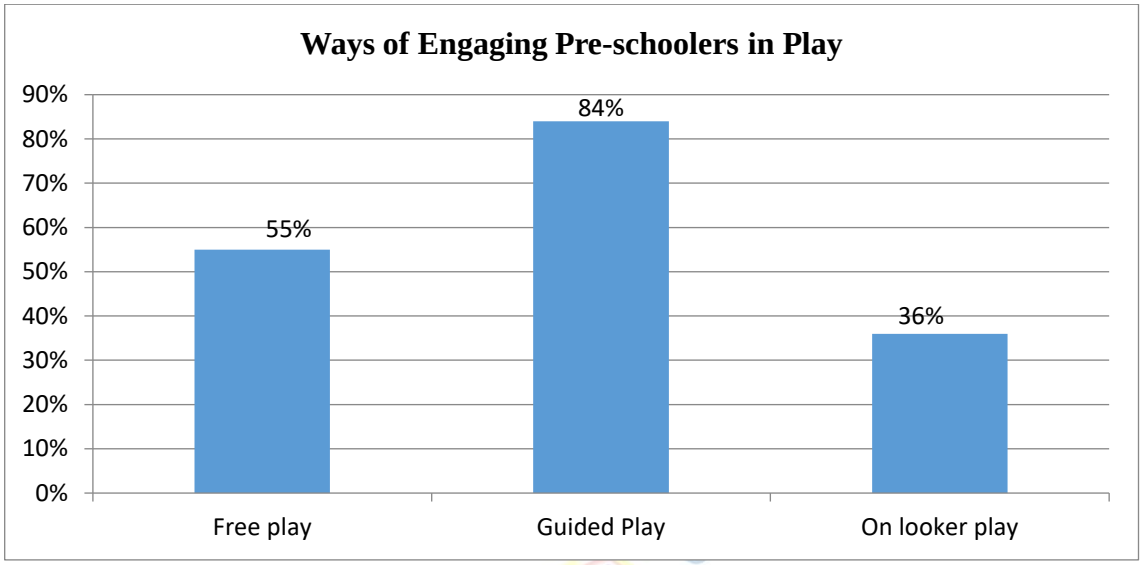


Figure 4: Ways of Engaging Pre-schoolers in Play

Source: Field Data, 2019

Conclusively in reference to figure 4 there above, an overwhelming bulk of pre-unit tutors 39(84%) indicated that they engaged pre-unit learners in guided play. Significant 26(55%) reported that they were involving their pre-schoolers in free play. Only 17(36%) reported that they were involving their pre-schoolers in onlooker play. The findings agreed to Fisher (2012) position that guided play for children's instruction was more beneficial than other forms of play as well as direct induction. His findings were based on a study where preschoolers were taught through play forms like guided, free or otherwise directly about object outlines and forms using sticks, placards and counters. More learning on shapes through guided play or direct instruction was realized as opposed to induction through free play just as it was the case for those who learned about typical

object forms and outlines (for instance., that three-dimensional diagrams of single extensive interior slant remains so whatever the case)

4.4 Types of Play Materials Used for Pre-schoolers' Classroom Participation.

4.4.1 Types of Play Materials Available at the Center

The study pursued to establish from head teachers and pre-unit teachers sampled for the study some of the play materials which were available at their various schools for use in pre-scholars' classrooms. The findings were as presented in Table 12 below.

Table 12: Types of Play Materials Available at the Center

Play Materials	Frequency	Percentage
Small stones and sticks	68	96%
Balls	57	80%
Skipping ropes	59	83%
Swings such as merry-go-round, beam balances	29	41%
Bean bags	62	87%
Old tires	55	77%
Clay soil	54	76%
Plasticine	13	18%
Slides	19	27%
Old sacks	32	45%
Toys such as dolls, small plastic cars,	21	30%
Wooden blocks	23	32%
Bottle tops	57	80%
Drums	13	18%
Shakers	32	45%
Straws	54	76%
Painters such as crayons	30	42%

Source: Field Data, 2019

Table 12 above gave a summary of findings on types of play materials available at the sampled centers. It was found out that play materials majorly utilized by the learners were small stones and sticks 68(96%). This was attributed to the fact that small stones and even sticks are naturally found in the environment schools. The second most available play materials reported were bean bags 62(87%). This was also attributed to the fact that bean

bags are easy to make. Skipping ropes followed closely at 59(83%). Balls and bottle tops scored 57(80%) each. The findings however, revealed too that there was acute shortage of some play materials such as plasticine and drums 13(18% each). This was attributed to the expensive nature of these materials making them scarce.

4.4.2 Adequacy of Play Materials

The study sought to establish from both the heads and pre-unit teachers the adequacy or inadequacy of the play materials among the centers that were sampled for the survey. The findings were as presented in Figure 5 below.

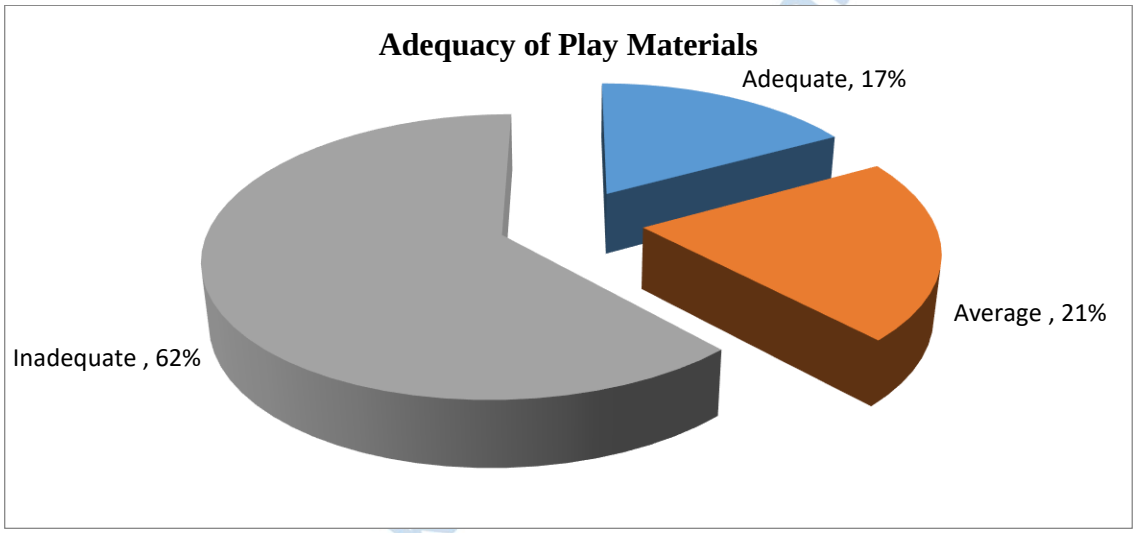


Figure 5: Adequacy of Play Materials

Source: Field Data, 2019

The above figure presents revelations on the adequacy or inadequacy of play materials. It revealed that quite a number of pre-unit teacher participants 44(62%) categorically indicated that play materials were inadequate in their centers. Only 12(17%) indicated that the play materials were adequate in their ECDE centers. Among those respondents, 15(21%) reported that play materials were averagely available in their centers. The outcomes agreed to Wathu *et al's* (2017) on Availability and Use of Play Materials, and their Influence on Social and Emotional Development of Pre-School Children in

Kyangwithya Zone, Kitui County where it was revealed that quite a number of centres sampled had play materials. Though, those play materials were scarce which then hindered social play for learners' growth.

4.4.3 Parents' Participation in the Purchase of Play Materials

Head teacher participants were required to point out the degree to which parents were participating in the purchase of play materials in their centers. The findings were as presented in Figure 6 below.

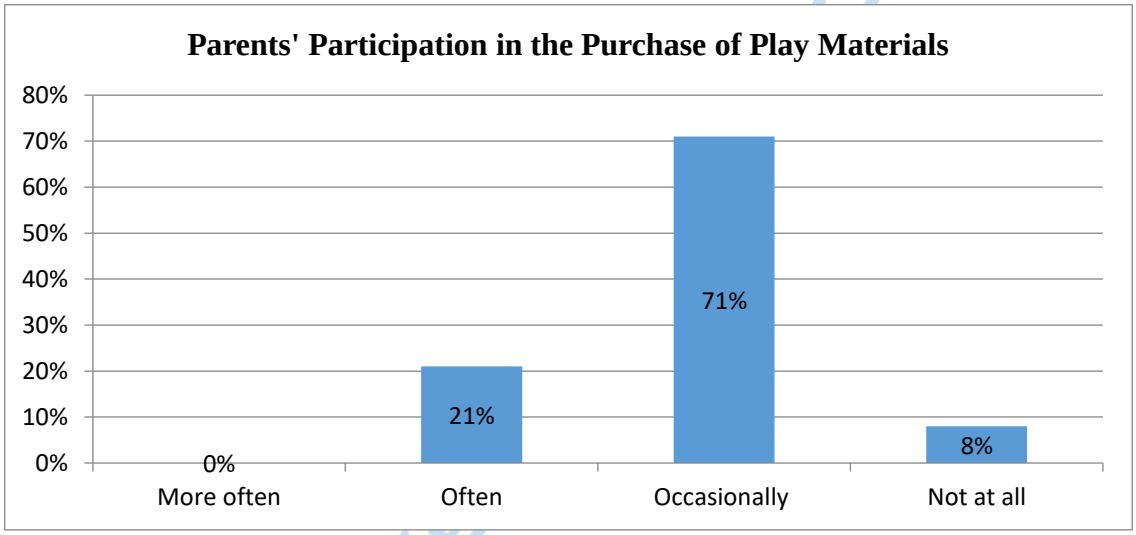


Figure 6: Parents' Participation in the Purchase of Play Materials
Source: Field Data, 2019

Head teacher respondents according to Figure 6 reported that not even one parent was purchasing the play materials more often 0(0%). 5(21%) of the head teacher respondents indicated that the parents under their jurisdiction were buying play materials often. Overwhelming majority of the heads 17(71%) however stated that parents in their schools only bought play materials occasionally as many parents argued that they did not have money to purchase those items. Insignificant 2(8%) of the head teachers said that their parents were not buying the required play materials at all. The revelations agreed to Wathu *et al's* (2017) on Availability and Use of Play Materials, and their Influence on

Social and Emotional Development of Pre-School Children in Kyangwithya Zone, Kitui County where it was found that quite a number of the parent respondents in public pre-units were not buying their children play materials and many of them were not even aware that play materials were a requirement in pre-school learning.

4.4.4 Influence of the Type of Play Materials on Classroom Participation

To assess the influence of the type of play materials on classroom participation, the informants were provided with varied statements then querried to show the degree to which they concurred to every sentiment in regard to their centres. The findings were as presented in Table 13 below.

Table 13: Influence on the Type of Play Materials on Classroom Participation

Statement	N	Mean	Std. Deviation
Play with wooden blocks open up learning around arrangement, balance, and height through stacking, placing, and constructing thus promoting classroom participation	170	4.18	.713
A material's sensory and aesthetic properties may also transform as a child plays with it, generating opportunities for further experimentation thus promoting classroom participation	170	4.11	.603
Play with large paper sheets invites learning around gravity, weight, and shape through movement and throwing thus promoting classroom participation	170	4.08	.635
Use of different play materials allows children to extend and make their learning more complex over time thus promoting classroom participation	170	3.89	.770
Mean	**170**	**407**	**0.680**

Source: Field Data, 2019

The results on Table 13 shows participants strongly agreeing to the sentiments that play with wooden blocks open up learning around arrangement, balance, and height through stacking, placing, and constructing thus promoting classroom participation (Mean 4.18), play with large paper sheets invites learning around gravity, weight, and shape through movement and throwing thus promoting classroom participation (Mean 4.08) and that a material's sensory and aesthetic properties may also transform as a child plays with it, generating opportunities for further experimentation thus promoting classroom participation (Mean 4.11). The survey also found that the participants agreed with the statement that use of different play materials allows children to extend and make their learning more complex over time thus promoting classroom participation (Mean 3.89). These findings conform to Pacini-Ketchabaw et al.,'s (2016) who established that diverse instructional resources can uncover distinctive and divergent education and participation lanes among pre-schoolers.

4.4.5 How to Deal with Shortage of Play Materials

Both head teachers and pre-unit teachers were asked to state how they were handling pre-schoolers with shortage of play materials. The findings were as presented in Table 14 below.

Table 14: How to Deal with Shortage of Play Materials

How to Deal with Shortage of Play Materials	Frequency	Percentage
Improvising play materials	41	58
Sharing the few available among pre-schoolers	49	69
Borrowing from other centres	31	44
Asking for donations from well-wishers	33	46
Purchasing play materials where necessary	29	41

Source: Field Data, 2019

In reference to table 14 there above, it's evident that in the absence of certain play materials, 41(58%) of both head teachers and pre-unit teachers indicated that they would improvise such play materials. Another majority 49(69%) of the respondents said that they would make the pre-unit learners to share the few available play materials at their disposal. 31(44%) of those respondents who answered this question reported that they would borrow such play materials from other centres to temporarily bridge the gap. Other respondents (46% and 41%) said that they would ask for donations from the well-wishers and purchase where it would be possible respectively.

Reviewed literature shows that there is acute shortage of play materials across most of the sampled pre-schools in the study locale. This is most probably due to the high costs due for purchasing the commercial-based materials, lack of improvisation skills among the pre-school teachers and utter ignorance among the common parent folk on the need for acquisition of play materials for the pre-schoolers' learning. The revelations agreed to Wathu *et al's* (2017) on Availability and Use of Play Materials, and their Influence on

Social and Emotional Development of Pre-School Children in Kyangwithya Zone, Kitui County.

4.5 Teachers Preparedness in Using Play as a Strategy to Improve Pre-schoolers' Classroom Participation.

4.5.1 Other Professional Knowledge on Play as a Strategy on Pre-schoolers' Classroom Participation

The investigation pursued to establish from the pre-unit teachers if they had any other professional knowledge on play as a strategy to improve classroom participation. The findings were as presented in Table 15 below.

Table 15: Other Professional Knowledge on Play

Knowledge	Frequency	Percentage
Drama	21	45
Music	19	40
First Aid	13	28
None	26	55

Source: Field Data, 2019

In regard to table 15, quite a number of the pre-unit teacher respondents 26(55%) reported that they had not acquired any other professional knowledge on play as a strategy in classroom participation while 21(45%) indicated that they had acquired some knowledge in drama which is closely linked to play such as role play. Other pre-unit teachers indicated that they had acquired additional professional knowledge on music and First Aid 19(40%) and 13(28%) respectively. Those respondents who had acquired additional professional knowledge on play apart from general training on ECD matters reported that the additional professional knowledge was contributing significantly in the way they were handling play among the pre-schoolers. These findings conform to the Sifuna, D. (2016) survey on the relationship between professionalism and teacher preparedness in Mumias

East sub-county, Kakamega County which revealed that professional knowledge on play enhances caregivers' preparedness a great deal.

4.5.2 Ways of Acquiring Additional Professional Knowledge on Play

Pre-unit teacher respondents who had acquired additional professional knowledge on play were required to state how they acquired the knowledge. Their responses were as given in Figure 7 below.

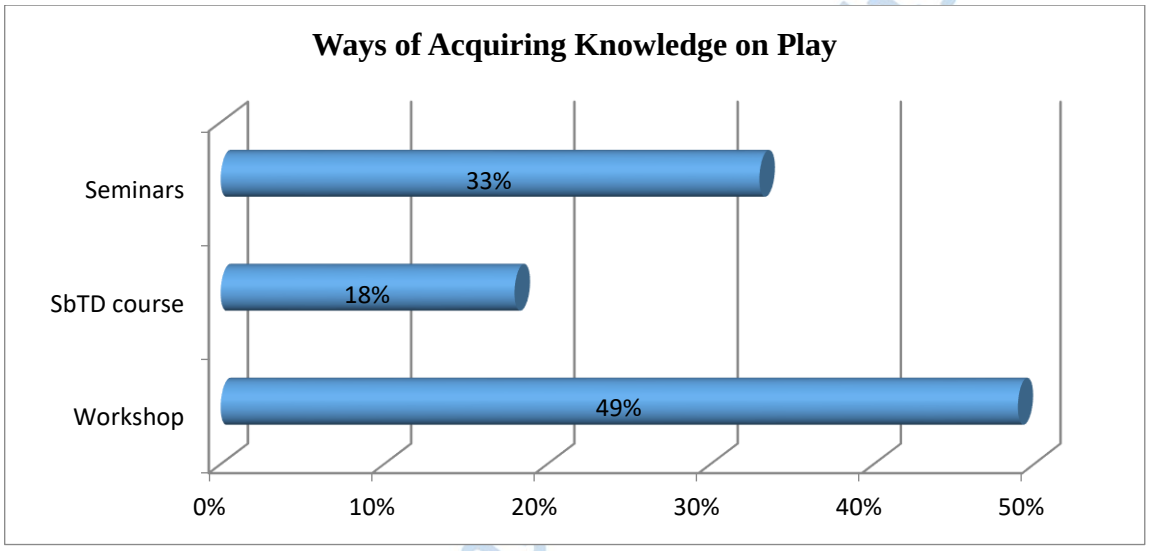


Figure 7: Ways of Acquiring Additional Professional Knowledge on Play

Source: Field Data, 2019

Figure 7 above shows the main ways through which pre-unit teachers were acquiring additional professional knowledge on play as a strategy on classroom participation. From the findings, many of those pre-unit teachers who had acquired the additional knowledge on play 10(49%) had done so through workshops. Among them, 7(33%) acquired it through seminars. Only 3(18%) had acquired their knowledge through SbTD course.

4.5.3 Influence of Teacher Preparedness on Classroom Participation

In establishing the influence of teacher preparedness on classroom participation, the participants were required to show the degree to which they concurred to every sentiment listed in regard to their centres. The findings were as presented in Table 16 below.

Table 16: Influence of teacher Preparedness on Classroom Participation

Statement	N	Mean	Std. Deviation
Teacher interventions during play take on many possibilities from assisting with problem-solving, questioning, redirecting undesired behaviours, and enticing children into play themes.	170	4.13	.614
Teachers are prepared to teach play skills to children who have difficulty entering into a play scenario thus promoting their participation in classroom	170	4.05	.838
Teachers help children when planning roles, encouraging children to talk to peers, posing open ended questions, and becoming involved in play thus extending and enhancing learning.	170	3.98	.614
Teachers help in selection and improvising play materials for children to facilitate the play sessions thus ensuring that everyone participates thus promoting learning	170	3.95	.734
Mean	**170**	**4.03**	**0.700**

Source: Field Data, 2019

The findings on Table 16 shows that the respondents strongly agreed with the statements that teacher interventions during play take on many possibilities from assisting with problem solving, questioning, redirecting undesired behaviors, and enticing children into play themes (Mean 4.13) and that teachers are prepared to teach play skills to children who have difficulty entering into a play scenario thus promoting their participation in classroom (Mean 4.05). Participants also echoed the assertions that teachers help children when planning roles, encouraging children to talk to peers, posing open ended questions, and becoming involved in play thus extending and enhancing learning (Mean 3.98) and that teachers help in selection and improvising play materials for children to facilitate the

play sessions thus ensuring that everyone participates thus promoting learning (Mean 3.95). These findings are in line with that of Kostelnik, Whiren, Soderman, & Gregory, (2007) who found that instructors assign duties, instructional resources, exchange divergent perspectives, arbitrate and sway learners in taking up given responsibilities thus promoting learning.

Literature reviewed shows that quite a number of the pre-school teachers were ill-prepared in regard to skills, expertise, experience and motivation that are key to enhancing learner classroom participation. This is evidenced by confession from the teacher respondents that they strive to acquire additional knowledge on play strategies through workshops, seminars and SbTD courses; findings that conform to a study of US by Anderson (2018), reported low levels of classroom participation where there was either no play employed or the teacher had inadequate preparation. This was evidenced by a high rate of failure in task accomplishment, low confidence levels and poor turn taking abilities

4.5.4 Challenges Facing Play as a Strategy on Pre-schoolers' Classroom Participation

In an attempt to establish some of the challenges facing play as a strategy on pre-schoolers' classroom participation, the following findings were reached.

Table 17: Challenges Facing Play as a Strategy on Classroom Participation

Challenges	Frequency	Percentage
Inadequate materials	67	94
Lack of space	40	56
Poor levels of preparedness from the teachers	37	52
Disinterest from the pre-schoolers	30	42
Inadequate pre-unit teachers	60	85
Injuries associated with plays	36	51

Source: Researcher 2019

Table 17 above gives a summary of the response of both the head teachers and pre-unit teachers regarding the challenges related to play as a strategy on classroom participation. The findings revealed that inadequacy of play materials and inadequacy of personnel (pre-unit teachers) 67(94%) and 60(85%) respectively proved to be the biggest challenges. Lack of space, poor levels of preparedness of teachers and injuries, all scored slightly above 50% ((40)56%, (37)52% and (36)51%) respectively. Less than 50% (42%) however, stated that disinterest among the pre-schoolers was a challenge. Majority of respondents argued that disinterest wasn't a serious challenge as those learners were willing to play to participate in forms of play that made them happier and stimulant. From the findings, it can be concluded that some challenges are more serious than others and it would be better if they were addressed with immediate effect, findings similar to Wathu *et al* (2017) backed up by Anderson (2008) which emphasized that the biggest challenge facing effective use of play in enhancing learning among pre-schoolers was lack of funds to purchase play materials, employ more pre-unit teachers and avail better and sufficient infrastructure for pre-schoolers.

4.5.5 Mitigation Measures to Challenges Related to Play

Both head teacher and pre-unit teacher informants were required to propose the necessary mitigation measures to the challenges related to play as a strategy on pre-schoolers' classroom participation. The findings were as presented in Table 18 below.

Table 18: Mitigation Measures to Challenges Related to Play

Challenges	Frequency	Percentage
Making finances available by the state, parents as well as donors to buy the needed play materials	69	97
Acquiring enough space for the pre-schoolers to play on	51	72
Sending teachers to workshops and seminars to study more on play as a strategy on classroom participation	64	90
Creating awareness among the pre-schoolers so that they understand the importance of play to them	44	62
Employing more pre-unit teachers to address the shortage gap	60	85
Guiding pre-schoolers during play sessions and ensuring close monitoring to avert any form of injuries.	47	66

Source: Field Data, 2019

According to table 18 above, all the research informants wanted some measures to be taken in order for play to be fully incorporated in classroom participation. Almost all the respondents 69(97%) suggested that funds should be made available in order for the necessary play materials to be purchased. They suggested that the government through the relevant ministries in conjunction with other stake holders like parents and other well-wishers should ensure that such funds are made available. Another overwhelming majority 51(72%) proposed that more spacious grounds should be created for the pre-schoolers to find space where they can play freely. Again almost all head teachers and teachers sampled for the study 64(90%) unanimously agreed that pre-unit teachers should be sent to workshops and seminars to acquire more knowledge on play to help them improve the standards of learning among pre-schoolers by maximizing the benefits of

play on classroom participation. Another overwhelming majority of both the head teacher and teacher respondents 60(85%) suggested that more pre-unit teachers should be employed by the relevant bodies such as the county governments to help in ensuring that play promotes classroom participation. Finally, 47(66%) of the respondents in this case suggested that caregivers or pre-unit teachers should guide pre-schoolers during play sessions to avert avoidable injuries. The above findings are in line with Tarimo (2013) study on 'A bridge to the gap between play and its hindrances' in public pre-schools in Kilimanjaro region of Tanzania.

4.5.6 Likert Scale Rating on Pre-unit Learners' Tasks as Observed

The pre-unit teacher respondents were asked to rate the tasks (activities) observed from the pre-schoolers as they played on a scale of 1 to 3; (Able, 3. Attempted, 2. Not able, 1) to determine their extent of performance on play as a strategy on classroom participation. Averages of tasks were determined so as to give a comprehensive sense of all the informants. Means less than 2.0 implied that the respondents believed that the pre-schoolers were not able to perform the tasks. Means greater than 2.0 and less than 2.5 implied that the respondents believed that the pre-schoolers attempted their tasks. Means greater than 2.5 and less than 3.0 implied that the respondents believed that the pre-unit learners were able to perform their tasks effectively. The pre-unit teacher participants were tasked to score on a likert scale their observation on the performance of the sampled learners on play as a strategy on pre-schoolers' classroom participation. Table 19 below summarises their findings.

Table 19: Likert Scale Rating on Pre-unit Learners' Tasks as Observed

Statement	Able (3)	Attempted (2)	Not able (1)	Total F	Total S	Av. S	% S
The learner can sort and group play materials based on size	17	26	4	47	107	2.28	76
The learner can manipulate play materials during play	29	16	2	47	121	2.57	86
The learner can share materials with other learners	31	15	1	47	124	2.64	88
The learner can name play materials	15	23	9	47	100	2.13	71

Source: Field Data, 2019

In regard to table 19, it is conclusive that regarding sorting and grouping of play materials based on size, shape and colour, teacher respondents scored 2.28 points on the likert scale (76%). This means that majority of pre-schoolers observed, attempted to sort and group play materials according to size, shape and even colour. On manipulation of play materials, teachers scored 2.57 points on the likert scale (86%). This indicates that majority of the pre-schoolers who took part in the research were able to manipulate materials during play sessions. Regarding sharing materials with other learners, teacher respondents scored 2.64 points on the likert scale (88%). This depicted that super majority of the learners again were able to share play materials with other learners without problems. Finally, on naming play materials, the pre-unit teachers sampled for the study scored 2.13 points on the likert scale (71%). This means that majority of the learners observed, attempted to name play materials at their disposal. The above findings are in consistence with those of Isenberg & Quisenberry (2002), who observed that play materials give instructors alongside their young learners emotional as well as bodily

luxury and satisfaction during manipulation, sorting, grouping and naming; an assertion echoed by (Odegard, 2012, Pacini-Ketchabaw et al., 2016).

4.5.7 Impact of Play on Pre-schoolers' Classroom Participation

Both head teacher and pre-primary teacher respondents unanimously indicated that play was impacting very positively on the pre-school learners' classroom participation. Super majority 68(96%) of the respondents argued that play was stimulating the learners and making them very

ready for other aspects of participatory learning. According to Lindon (2001) on the impact of play on the pre-schoolers' classroom performance, play has got far reaching positive impact on both academic performance and the general health of children, a similar conformity to the findings of the study at hand. Physical play is important because it reduces the risks of heart diseases and it also stimulates the brain cells and encourages performance.

4.6 Competence of the Pre-unit Learners on Different Types of Play

For the purposes of establishing the competence levels regarding pre-unit learners, an observation guide was constructed and the researcher filled it in as he observed the learners undertake the tasks. The findings were presented in three different tables based on each type of play.

Table 20: Competence of the Pre-unit Learners on Forms of Physical Play

Forms of Physical Play	Able		Attempted		Not Able	
	F	P (%)	F	P (%)	F	P (%)
Wrestling	33	33.3	42	42.4	24	24.2
Sack racing	21	21.2	40	40.4	38	38.3
Throwing, catching and kicking ball	57	57.5	30	30.3	12	12.1
Running	61	61.6	27	27.2	11	11.1
Kyte making	23	23.2	31	31.3	45	45.4

Source: Field Data, 2019

Table 20 above indicates majority of the learners observed 42(42.4%) having attempted wrestling while 33(33.3%) were able to wrestle. However, 24(24.2%) were observed to be unable to wrestle. On sack racing, the researcher observed that majority 40(40.4%) again attempted the race. A significant 38(38.3%) could not sack race at all. Regarding throwing, catching and kicking ball, the researcher observed that majority 57(57.5%) was able to undertake those tasks without difficulties. The researcher also observed that majority of the learners 61(61.6%) was able to run well as part of their play. Only 11(11.1%) were observed to be having difficulties hence were not able.

Table 21: Competence of the Pre-unit Learners on Forms of Social Play

Forms of Social Play	**Able**		**Attempted**		**Not Able**	
	F	P (%)	F	P (%)	F	P (%)
Solitary games	42	42.4	37	37.3	20	20.2
Onlooker games	36	36.3	44	44.4	19	19.1
Parallel games	29	29.2	59	59.5	11	11.1
Cooperative games	51	51.5	29	29.2	19	19.1

Source: Field data, 2019

In reference to Table 21, evidently majority of the learners 42(42.4%) were able to participate in solitary games with 37(37.3%) attempting while 20.2% were observed to be unable. On onlooker games, the researcher observed that many of the learners 44(44.4%) attempted most of those games while 36(36.3%) were observed to be able. However, 19(19.1%) were observed to be unable. Regarding parallel games, the researcher observed that majority of the pre-unit learners 59(59.5%) attempted the games while 29.2% were able to play the games effectively. Only 11(11.1%) were not able to play those games. Finally, on cooperative games, the researcher observed that majority 51(51.5%) played these games without difficulties. The researcher also observed that 29(29.2%) could attempt the games while 19(19.1%) were no able at all. These findings above are in agreement to those of Singer and Singer's study (1990) reviewed (2005) on

the general impact of play on the learner competency which found out that play positively impacts on learner's classroom participation.

Table 22: Competence of the Pre-unit Learners on Forms of Cognitive Play

Forms of Cognitive Play	Able		Attempted		Not Able	
	F	P (%)	F	P (%)	F	P (%)
Language games	21	21.2	53	53.5	25	25.2
Pretence	33	33.3	47	47.4	19	19.1
Drama/Role play	37	37.3	21	21.2	41	41.4
Building blocks	39	39.3	39	39.3	21	21.2
Threading	41	41.4	38	38.3	20	20.2
Rote counting	22	22.2	34	34.3	43	43.4

Source: Field Data, 2019

Table 22 above summarizes the findings on competence of pre-unit learners on forms of cognitive play. The findings established that quite a number of the pre-unit learners 53(53.5%) attempted language games while 21(21.2%) were indeed able to play the games. 15(25.2%) were observed to be unable to play the games. Regarding pretence games, the researcher observed that 47.4% attempted the games, 33(33.3%) played them while 19(19.1%) were completely unable. On drama/role play, the researcher observed that many 41(41.4%) was not able. This was majorly attributed to shyness among the youngsters. It was observed that 37(37.3%) could participate in the drama effectively. Concerning play with building blocks, the researcher observed that those who were able and those who attempted registered 39(39.3%) in each case. However, 21(21.2%) were observed to be unable. On threading, the researcher observed that bulk of the learners engaged in the survey 41(41.4%) were able to play with threads well. Significant 38(38.3%) were observed to have attempted games involving threads while 20(20.2%) were not bale. Finally, on rote counting games, majority of the learners 43(43.4%) were

not able to rote count. It was observed that 34(34.3%) attempted while 22(22.2%) rote counting (they were able), findings which are in agreement to those of Momoh (2007) study on the effect instructional activities like role play on participation.

4.6.1 Classroom Participation among Pre-school Children

To assess the level of classroom participation among children, the participants were provided with varied sentiments and required to show the degree to which they concurred to every sentiment listed in regard to their centres. The findings were as presented in Table 23.

Table 23: Classroom participation among Pre-school Children

Statement	N	Mean	Std. Deviation
The use of different play materials has improved classroom participation among pre-school children	170	4.05	.799
Teachers are equipped with skills and knowledge on the use of play and incorporation of play materials thus promoting classroom participation among children	170	4.02	.713
Different types of play employed by teacher among pre-school children has promoted classroom participation	170	4.13	.640
Mean	**170**	**4.07**	**0.717**

Source: Field Data, 2019

The findings on Table 23 above shows that the respondents strongly agreed with the statements that the use of different play materials has improved classroom participation among pre-school children (Mean 4.05), teachers are equipped with skills and knowledge on the use of play and incorporation of play materials thus promoting classroom participation among children (Mean 4.02) and that different types of play employed by teachers among pre-school children has promoted classroom participation (Mean 4.13). These findings are in line with those of McAfee & Leong (2010), who established and advocated for the availability of the instructors to monitor learners as play progresses

which in turn promote language and mental aptitudes notwithstanding regularity and period of such play among children.

4.7 Inferential Statistics

In an effort to gauge the association amid the research indicators, the investigator employed inferential statistics viz correlation and regression analysis. Correlation analysis purposely catered for the association amid the research indicators. This showed the direction and strength of the associations. Conversely, regression analysis was done to show the strength of the independent variables in explaining the dependent variables i.e what percentage of performance was explained by indicators like material requirement, manufacturing resource, enterprise resource and time in regard to their planning.

4.7.1 Correlation Analysis

The correlation coefficient values range between -1 and +1. A perfect positive linear correlation between two variables is indicated by a correlation coefficient of +1 whereas a correlation of -1 shows a negative linear correlation between two variables using nominal variable measuring technique. The findings from correlation analysis were as presented in Table 24.

Table 24: Correlation Analysis

Correlations					
		Classroom Participation	Type of play	Type of play material used	Teacher preparedness
Classroom Participation	Pearson Correlation	1	.828**	.106	.304**
	Sig. (2-tailed)		.000	.000	.000
	N	170	170	170	170
Type of play	Pearson Correlation	.828**	1	.399**	.396**
	Sig. (2-tailed)	.000		.000	.000
	N	170	170	170	170
Type of play material used	Pearson Correlation	.106	.399**	1	.786**
	Sig. (2-tailed)	.000	.000		.000
	N	170	170	170	170
Teacher preparedness	Pearson Correlation	.304**	.396**	.786**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	170	170	170	170

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

Source: Field Data, 2019

The findings from correlation analysis on Table 24 above shows that classroom participation in Bunyala sub-county is positively associated with type of play with r = 0.838 and p value of 0.000, an indication that it is statistically significant with p value less than 0.05 (< 0.05). This implies that with relevant types of play, pre-schoolers perform well thus registering good learning results. This is echoed by Rhoades (2011) whose study revealed that appropriate play types were significantly associated to higher classroom participation through impacting positively on the learners' socio-emotional, cognitive, linguistic skills and abilities.

The findings further show that there is a positive correlation between classroom participation and type of play materials used with r = 0.106 and a p value of 0.000

(statistically significant). Thus, play materials and pre-schoolers' learning outcomes are strongly associated. Basically this means that play materials have a strong positive association with learners' classroom participation thus improving the later in the study area, These outcomes are supported by Momoh (2007) in his survey on the impact of instructional resources on learners' educational performances in WASC assessment in Kwara state.

The findings finally established that classroom participation had a positive relationship with teacher preparedness with r =0.304 and p value of 0.000. The results hence imply that teacher preparedness qualities in Bunyala sub-county have positive impact on pre-schoolers' classroom participation. These findings are in line with Dahlberg (2007) in his study on teacher qualities and commitment to duty who revealed that teacher qualities or basically preparedness is strongly related to learners' classroom participation. The p values obtained are therefore indications that there were significant positive relationships between the variables studied.

4.7.2 Regression Analysis

The investigator conducted compound regression analysis in a bid to gauge the extent to which the variables studied impacted on the classroom participation among children in pre-school where nominal variable measuring technique was employed. The independent variables studied included: type of play, type of play materials used and teacher preparedness while the dependent variable was classroom participation under this model;

$Y = B_0+B_1X_1+B_2X_2+B_3X_3+e$

B_0= constant

B_1, B_2, B_3, = regression coefficients

Y= Classroom participation

X_1= Type of play

X_2 = Type of play materials used

X_3= Teacher preparedness

e = Error term

Table 25: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.895[a]	.802	.798	.596

a. Predictors: (Constant), Teacher preparedness, Type of play, Type of play material used

Source: Field Data, 2019

The findings on Table 25 above show that, R Square was 0.802 and R was 0.895 at 0.05 level of significance. The coefficient of determination indicates that 80.2% of the variations on classroom performance can be explained by type of play, type of play materials used and teacher preparedness. The remaining 19.8% can be elucidated by other indicators not under survey. It can therefore be deduced from the R square and adjusted R values that above average variation between the study variables can be explained by the model. Further Analysis of Variation (ANOVA) was done where ordinal variable measurement technique was used as presented on Table 26.

Table 26: ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	239.065	3	79.688	223.987	.000[b]
	Residual	59.058	166	.356		
	Total	298.124	169			

a. Dependent Variable: Classroom Participation

b. Predictors: (Constant), Teacher preparedness, Type of play, Type of play material used

Source: Field Data, 2019

The outcomes on Table 26 indicate the significance of F statistics as 0.000, which is less than 0.05 and the value of F (223.987) being significant at 0.05 confidence level. The ANOVA test outcomes presented in Table 26 show that the regression model adopted in this study was feasible in predicting the relationship between pre-schoolers' play and classroom participation.

Table 27 below presents the beta coefficients of all independent variables versus the dependent variable.

Table 27: Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.603	.187		3.228	.002
	Type of play	1.153	.049	.897	23.564	.000
	Type of play material used	.502	.051	.555	9.815	.000
	Teacher preparedness	.378	.055	.385	6.823	.000

a. Dependent Variable: Classroom Participation

Source: Field Data, 2019

The regression model is written as: Classroom participation = 1.153* type of play +0.502* type of play material + 0.378* teacher preparedness.

The Beta Coefficients in the regression show that all the variables tested: type of play, type of play material used and teacher preparedness have positive relationship with classroom participation. All the variables test therefore were statistically significant with p-values less than 0.05; the outcomes that agree to those of Bredekamp et al (2009) who revealed that relevant play, play materials and teacher preparedness positively impact on learners' classroom participation.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This research strove to assess play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala sub-county, Busia County, Kenya under these objectives: to establish the types of play used as a strategy on pre-schoolers' classroom participation, to investigate the types of play materials used by pre-schoolers in public pre-primary schools and to explore public pre-primary school teachers' preparedness in using play as a strategy on pre-schoolers' classroom participation.

Descriptive survey was used as the research design and questionnaires alongside an observation guide used to collect data. The overall sample size had 25 head teachers, 50 pre-unit teachers and 100 pre-schoolers. The participants were of different academic ratings with quite number of them having been in their current duty stations way above 2 years hence deemed knowledgeable about the ECD activities in their schools and were therefore expected to give very reliable information.

5.1 Summary of the Findings

5.1.1 Summary of Findings on Types of Play for Pre-schoolers' Classroom Participation.

Regarding types of play for pre-schoolers' classroom participation, the researcher found that all the pre-unit teacher respondents who were engaged in this question (100%), were engaging their learners' in play. The study established that physical play was the most common one 43(91%) among the three types of play that were found to be in use. Social play became the second as was supported by 37(79%) of the teacher respondents. Cognitive type of play was found to be the most unfamiliar with the learners as was supported by 40% of the respondents who answered this question. Many teachers argued

that its unfamiliarity was due to its mental challenge that it was posing to the learners hence many learners were avoiding its forms. The survey too revealed that forms of physical play were energising as well as stimulating the pre-unit learners than other forms of play.

The researcher further found that pre-schoolers were involved in both outdoor and indoor plays. The study established that pre-schoolers took part mostly in physical and social play (96% and 83%) respectively than cognitive play (38%) in outdoor games but more involved in cognitive play (88%) than social and physical play (71% and 46%) respectively in indoor games. The study again revealed that in the absence of play, teachers would employ alternative activities such as storytelling, riddling, news telling, proverbs and role play to ensure classroom participation is maintained.

5.1.2 Summary of Findings on Impact of Integration of Play as a Strategy on Pre-schoolers' Classroom Participation

Regarding impact of play as a strategy on pre-schoolers' classroom participation, the researcher found that there was a hundred percent positive impact as held by 100% of the informants who specified so. The researcher further found that on ways of engaging pre-schoolers in play, guided play was found to be the most common and effective. This was proved by 39(84%) of the respondents who indicated so. Free play scored slightly above average 26(55%). Respondents argued that guided play was much safer and also allowed room for monitoring of progress of learners as they played. Minority 17(36%) indicated that they would employ onlooker games.

5.1.3 Summary of Findings on Types of Play Materials Used for Pre-schoolers' Classroom Participation.

On types of play materials used for pre-schooler's classroom participation, the researcher found that there were many local play materials at the learners' disposal. Super majority of the respondents 68(96%) reported that small stones and sticks were the most common among the pre-unit learners. The researcher also found that play materials ranged from the locally available ones to improvised and commercial ones. Commercial ones were found to be the rarest ones as reported by 13(18%) of the respondents as many learners could not afford them. The researcher further established that play materials lacked in many centres making it difficult for the teachers to improve on classroom participation. This was proved by 44(62%) of the respondents who categorically stated that the play materials were inadequate.

Regarding parents' participation on the purchase of materials, the researcher found that majority of parents 17(71%) would purchase play materials only occasionally contrary to the expectation. Only 5(21%) of the parents were reported to be purchasing play materials often as expected. It was also reported that some 2(8%) of the parents were not economically empowered thus heightening it to purchase these materials.

The researcher also found that pre-unit teachers had devised some ways of dealing with shortage of play materials though they were reported not to be very effective. Sharing of the available play materials and improvisation were found to be the most preferred. This was supported by 49(69%) and 41(58%) respectively.

5.1.4 Summary of Findings on Teachers' Preparedness in Using Play as a Strategy on Pre-schoolers' Classroom Participation.

On teachers' preparedness, the researcher found that quite a number of pre-unit teachers had no other professional knowledge on play apart from the college training as evidenced by 26(55%) of the teacher respondents who revealed that they did not have such knowledge. Among the minority who had acquired that knowledge, the study established that many of them had additional knowledge in drama and music. This was supported by 21(45%) and 19(40%) respectively of those pre-unit teachers who responded to this question. Additionally, majority of those teacher respondents who had other professional knowledge on play had acquired it through workshops as was indicated by 10(49%) of the respondents in this case.

5.1.5 Summary of Findings on Challenges Facing Play as a Strategy on Pre-schoolers' Classroom Participation

On challenges facing play as a strategy on classroom participation, the study established that indeed there were serious challenges. The study found that inadequacy of play materials was the biggest challenge. This was evidenced by the 67(94%) of both head teachers and the pre-unit teachers who mentioned it as a challenge. The study also found that shortage of pre-unit teachers was another very serious challenge as was supported by 60(85%) of the respondents. Other challenges established were lack of space for free play and poor levels of preparedness from the teachers as evidenced by 40(56%) and 37(52%) of the respondents respectively.

The survey too revealed that these challenges could be mitigated. The study found that mitigation measures such as availing of funds by the state as well as varied interested parties for the purchase of play materials was suggested by super majority 69(97%). The

study further established that sending teachers to workshops and seminars to study more on play as a strategy on classroom participation was also proposed by overwhelming majority 64(90%). Other mitigation measures established by the study included creation of awareness among the pre-schoolers so that they could understand the importance of play as well as employment of more pre-unit teachers to bridge the gap of teacher-learner ratio as suggested by 44(62%) and 60(85%) of the respondents.

5.1.6 Summary of Findings on Likert Scale Rating on Learners' Tasks as Observed

Regarding findings on likert scale rating on learners' tasks as observed, the study established that majority of the learners 26(76%) attempted to sort and group play materials according to size, shape and colour. Still on the observation, the research revealed that quite a number of the pre-schoolers observed 29(86%) were able to manipulate play materials during play sessions as another super majority of learners 31(88%) were observed to be able to share play materials during play time without problems. The study further found that another majority of learners 23(71%) attempted to name some of the play materials they were playing with.

5.1.7 Summary of Findings on Impact of Play on Pre-schoolers' Classroom Participation

On the impact of play on pre-schoolers' classroom participation, it was revealed that overwhelming number of the head teacher and teacher respondents reported that play had serious positive impact on pre-schoolers' classroom participation as held by 68(96%) of the respondents interviewed. The respondents indicated that play was reenergising and stimulating the youngsters apart from helping drive learning concepts home.

5.1.8 Summary of Findings on Competence of the Learners on Different Types of Play

On competence of the learners on different types of play, the study established that majority of pre-unit learners 42(42.4%) attempted various forms of play as in the case of wrestling, physical play with significant number 51(51.5%) being able to perform those forms of play effectively as in the case of cooperative games, social play. The study however, found that some pre-schoolers were not able to perform some play tasks as was supported by respondents in kyte making, physical play 45(45.4%) and rote counting, cognitive play 43(43.4%).

5.1.9 Summary of Findings from Inferential Statistics on the Relationship between Play and Classroom Participation

Finally, on the relationship between play and classroom participation, the findings from correlation analysis showed classroom participation is positively associated with type of' play with r = 0.838 and p value of 0.000, an indication that it is statistically significant with p value less than 0.05 (< 0.05). The findings further indicate a positive correlation between classroom participation and type of play materials used with r = 0.106 and a p value of 0.000 (statistically significant). The findings finally revealed that classroom participation had a positive relationship with teacher preparedness with r =0.304 and p value of 0.000. The p values obtained are therefore indications that there were significant positive relationships between the variables studied. The findings from regression analysis revealed that 80.2% of the disparities on classroom performance may be described by type of play, type of play material used and teacher preparedness. The remaining 19.8% can be explained by other variables which were not studied. This was a signal that the indicators studied were strong predictors on classroom participation among pre-school children.

Summatively, as the key contribution of the study or new knowledge in the field of research underway, the study established that computer-aided games such like simulations, puzzles, kahoots, speech boxes, maths blasters, stealth shooters, role play, combat and sports among others through use of graphics, sounds, video and texts as applicable in disciplines like maths, science, language among others help develop pre-schoolers' multi-senses, self-direction, memory albeit other classroom participation indicators. All these are either physical, social or cognitive in one way or another and are compounded under one umbrella of Computer-Assisted Instruction (CAI) as one among the many more teaching/learning strategies used by pre-school teachers in effecting play as a strategy on pre-school classroom participation in the study location; Bunyala sub-county.

5.2 Conclusions

In regard to the outcomes of the research, it is summed up that pre-unit learners in Bunyala sub-county were not being exposed adequately and evenly to all forms of play as recommended. Conclusively, physical play was energising and stimulating to the pre-schoolers much more than any other type of play. This was attributed to the fact that most of the forms of physical play are free style and do not require learners to think much.

This is as was evidenced by 43(91%), 37(79%) and 19(40%) of the respondents for physical, social and cognitive play respectively. This was majorly attributed to inadequacy of play materials and shortage of pre-unit teachers in the ECD centres where these young learners go as supported by 67(94%) and 60(85%) of the respondents respectively.

The survey summed that the commonest play materials utilized by the learners were small stones and sticks 68(96%). This was attributed to the fact that small stones and even sticks

are naturally found in the environment schools. Additionally, there was serious inadequacy of play materials among the ECD centres in Bunyala sub-county as reported by 44(62%) of the respondents who were queried on the adequacy of play materials in public pre-schools. This was claimed to have been occasioned by inadequate funding by the government and reluctance of parents to participate in purchasing these essential materials of learning among the pre-schoolers as testified by 69((97%) and 2(8%) of the respondents respectively.

Finally, it was concluded that though teachers are prepared to instil play abilities in learners, they have considerate difficulties entering into a play scenario thus promoting their participation in classroom; an affirmation that public pre-school teachers in Bunyala sub-county were not adequately armed with the necessary skills rather were ill-prepared on play as evidenced by 26(55%) of the pre-unit teacher respondents. The researcher revealed that majority of them had general training on ECD matters but very minimal additional professional knowledge on play.

Generally, the study concluded that play is a very important component of classroom participation among the pre-schoolers. The study too concluded that with the right type of play, adequate play materials in place, prerequisite teachers' preparedness and integration of technology in regard to computer-aided games, pre-schoolers are guaranteed active and effective classroom participation thus boosting their classroom performance all factors held constant.

5.3 Recommendations for Practice

In reference to the research results, the following commendations were drawn;

1. On types of play, it is recommended that pre-schoolers should be exposed to all types of play equitably, evenly and adequately. This is due to the fact that these types of play accomplish different roles in the pre-schoolers' classroom participation. For instance, as psychomotor games which are forms of physical type of play, help in developing coordination between body parts and the brain, social type of play helps these learners to co-exist with other members of the society harmoniously.
2. On the availability of play materials, the study recommended that different types of play materials should be made available for the pre-schoolers. This survey recommended that the government via its relevant ministries need to allocate more funds to help in purchasing play materials. Still on this, it's recommended that pre-unit teachers should embrace the use of locally available play materials and improvise where possible to enhance adequacy.
3. Regarding the preparedness of teachers in using play as a strategy to improve classroom participation, the research recommended that in order for play to be more instrumental and helpful in facilitating classroom participation, the pre-unit teachers should be equipped with the necessary knowledge on play. The study recommended that seminars, workshops and other insights on play should be organised for these teachers to gain more skills on how to handle play among pre-schoolers.

5.4 Recommendations for Policy

For effective use of play in promoting classroom participation, a few policy measures ought to be implemented among them being the following:

1. Both the National and County governments should consider allocating and disbursing funds both as capitation and grants on time to the public pre-schools as envisaged in their respective governments' policy frameworks to timely address challenges in regard to play as suggested by the study.
2. The National ECDE Policy Framework and Standards Guidelines 2006 should be fully enforced by the national government to give the arrangements for such execution and incorporation of play in classroom work.

5.5 Suggestions for Further Research

The investigation having been conducted in public rural ECD centers, the researcher therefore suggests that a comparable survey should be conducted in a town environ for contrast between the two in terms of play as a strategy on pre-schoolers' classroom participation.

Further research can also be conducted to establish the impact of digital use of play on pre-schoolers' educational achievement.

REFERENCES

Almon, J. (2013). *The vital role of play in early childhood education*. Retrieved from waldorfresearchinstitute.org/pdf/BAPlayAlmon.pdf

American Academy of Pediatrics (2014). The social emotional development of young children. Psychology today. The need for pretend play in child development. New York: Public Health

An, Y. (2018). *Games to promote inquiry learning*. In J. M. Spector (Ed.), Encyclopedia of educational technology. Thousand Oaks, CA: SAGE Publications.

Bodrova E., & Leong, D. (2007). *Tools of the mind: The vygotskian approach to early childhood education* (2nd ed.). Upper Saddle River, NJ: Merrill/ Prentice Hall.

Bowdon, J. (2015, May). The common core's first casualty: Playful learning. *Phi Delta Kappan*, 96(8), 33-37.

BredeKamp, S. & Copple, C. (Eds.) (2009).*Developmentally appropriate practices in early childhood education programs*. Washington, DC:

Burke, C. (2015). Play in Focus: Children researching their own spaces and places for play. Children, Youth and Environments, 15(1), 27-53. Retrieved from http://www.jstor.org/stable/10.7721/chilyoutenvi.15.1.0027

Burke, C. (2016). Play in Focus: Children researching their own spaces and places for play. Children, Youth and Environments, 15(1), 27-53. Retrieved from http://www.jstor.org/stable/10.7721/chilyoutenvi.15.1.002

Campos, A., Rocha, N., Cicuto F., & Savelsbergh, G. (2010). Development of reaching and grasping skills in infants with Down syndrome. *Research in Developmental Disabilities: A Multidisciplinary Journal*, *31*, 70-80.

Coole, D. & Frost, S. (Eds.). (2010). New materialisms: Ontology, agency, and politics. Durham, NC: Duke University.

Dinger, D. (2014). Play counts. Retrieved from http://www.playcounts.com

Donald, K.B. (2020). *Parent-Child Play: Descriptions and Implications.* New York: State University of New York Press.

Fleer, M. (2010); Concepts in Play; *A cultural Historical View of Early Learning and Development*; Cambridge; Cambridge University Press.

Gee, J.P. (2019) 'Learning by design: games as learning machines', Digital Education Review, Vol. 2, No. 1, pp.5–16.

Ginsburg, K. (2013). *The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds*. Retrieved June 21, 2014, from http://pediatrics.aappublications.org/content/119/1/182.short

Gray, P. (2013). Free to learn: Why unleashing the instinct to play will make our children happier, more self-reliant and better students for life. New York, NY: Basic Books.

Groff, J. (2015) Better Learning in Games: A Balanced Design Lens for a New Generation of Learning Games [online] http://citeweb.info/20151584354 (accessed 21 December 2022).

Hansen, D.S. and Storjord, D. (2016) Learning through a Game-Exploring Fun and Learning in a Project Management Game, Master's thesis, Norwegian University of Science and Technology [online] https://brage.bibsys.no/xmlui/handle/11250/2411523 (accessed 17 January 2017)

Harbour, E., & Connick, J. (2020). *Role playing games and activities rules and tips.* https://www.businessballs.com/roleplayinggames.htm

Hirsh-Pasek, K., Golinkoff, R., Berk, L., & Singer, D. (2008).*A mandate for playful learning in preschool: Applying the scientific evidence*. Oxford: Oxford University Press.

Howard, J. and Eisele, G. (2016) *Exploring the presence of characteristics associated with play within the ritual repetitive behaviour of autistic children*. International Journal of Play 1 (2)

Institute of Play (2012) Groundbreaking Video Game Design Lab will Research and Develop Video Games to Engage Students and Measure Learning [online] http://www.theesa.com/ newsroom/release_detail.asp?releaseID=175 (accessed 17 January 2017)

Iowa Department of Education. (2015). Statewide voluntary preschool program for four-year old children. Retrieved from https://www.educateiowa.gov/pk 12/earlychildhood/Statewidevoluntary-preschool-program-four-year-o

Jane, K., (2019). Playing at home. The talk of pretend play. In D.K Dickson & P.0 Tabors (Eds), Beginning literacy with language: Young children learning at home and school. Baltimore MD: Paul H. Brookers

Janssen I, and LeBlanc AG. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. Int J Behav Nutr Phys Act.;7

KIE (2007).*National ECDE Syllabus & Workbook*; Nairobi: Jomo Kenyatta Foundation

Kothari, C. (2003). *Research Methodology; Methods and Techniques*; New Delhi; New Age International (P) Limited Publishers.

Linehan, C.,Bellord, G., Kirman, B., Morford, Z. H. & Roche, B. (2018, October). Learning Curves: Analysing Pace and Challenge in Four Successful Puzzle Games. In

Lynch, M. (2015). More play, please: The perspective of kindergarten teachers on play in the classroom. *American Journal of Play*, 7(3), 347-369. Retrieved from http://www.journalofplay.org/sites/www.journalofplay.org/files/pdf-articles/7-3-articlemore-Play-please.pdf

Matterson, E. (2011 Reviewed 2018). *Play with purpose for under-sevens*. Harmundsworth: Penguin Publisher.

McAfee & Leong, D. (2010). *Assessing and guiding young children's development and learning* (5th ed.). Boston, MA: Pearson.

McAfee, H. & Leong, D. (2010).*Assessing and guiding young children's development and learning* (5th ed.). Boston, MA: Pearson.

McMullen J, Kulinna P, Cothran D. (2014). Physical activity opportunities during the school day: classroom Teachers' perceptions of using activity breaks in the classroom. J Teach Phys Educ.;33(4):511–27.

Mugenda, O. & Mugenda, A. (2003).*Research Methods; Qualitative and Quantitative Approaches*, Nairobi (K); Longhorn Press.

Nell, M., & Drew, W. (2013).*From play to practice: Connecting teachers play to children's learning*, Washington, DC:

Njagi, B. (2009). *Child Growth and Development II 3-8 yrs*, Nairobi (K): Longhorn Publishers Ltd Pages 7-9.

Norris E, Shelton N, Dunsmuir S, Duke-Williams O, Stamatakis E. (2015). Physically active lessons as physical activity and educational interventions: a systematic review of methods and results. Prev Med.;72:116–25.

Odegard, N (2012). When matter comes to matter – working pedagogically with junk materials. Education Inquiry, 3(3), p.387-400.Barad, K (2011). Posthumanist performativity: Toward an understanding of how matter comes to matter. Signs, 28(3), p.801-831.

Pacini-Ketchabaw, V., Kind, S., & Kocher, L. (2016). Encounters with materials in early childhood education. New York, NY: Routledge.

Pan, D. (2004). Children's play in Taiwan In *Children's play in diverse cultures*, ed. Jaipaul Roopnarine, James Johnson, and Frank Hooper, 31–50.

Pellegrini, A. (2009). *The role of play in human development*, New York: Oxford University Press.

Pellegrini, A. (2009). *The role of play in human development*, New York: Oxford University Press.

Prensky, M. (2017). *Digital game-based learning*. St. Paul, MN: Paragon House.

Pretorius, E., Jackson, M., McKay, V., Murray, S. & Spaull, N., (2016). Teaching reading (and writing) in the foundation phase. Retrieved from https://resep.sun.ac.za/wp- content/uploads/2017/10/RESEPp_Zenex-Teaching-ReadingWriting_Email.pdf.

Proceedings of the first ACM SIGCHI Annual Symposium on Computer-Human Interaction in Play (pp. 181-190).

Rhoades, B. L., Warren, K., Domitrovich, C. E., & Greenberg, M. T. (2011). Examining the link between preschool social-emotional competence and first grade academic achievement: The role of attention skills. Early Childhood Research Quarterly, 26(2), 182–191.

Rosoff, G. (2017). The Reality of Unreality: Using imagination as a teaching tool. The English Journal, 96(3), 58-62. doi:10.2307/30047296

Russo, L. (2016). "Standardized" Play and creativity for young children? The climate of increased standardization and accountability in early childhood classrooms. Counterpoints, 425, 140-156. Retrieved from http://www.jstor.org/stable/42981795

Saracho, O. (2012). An integrated play-based curriculum for young children. New York: Routledge.

Saracho, O. (2012). Handbook of Research on the Education of Young Children.

Serem, D., Boit, J. & Wanyama, M. (2013).*Understanding Research. A Simplified Form*; Eldoret (K); Utafiti Foundation Page 24.

Shonkoff, J., & Philips, D. (2010).From Neurons to Neighborhoods: The Science of Early Childhoods Development. Washington, DC: National Academy Press.

Smith, D. (2019). *How play influences children's development at home and school*. Oxford: Oxford University Press

Spaull, N. & Pretorius, E., (2019) Still falling at the first hurdle: Examining early grade reading in South Africa. Retrieved from https://nicspaull.files.wordpress.com/2018/11/nic-spaull- and-elizabeth-pretorious.pdf.

Sung, H.Y. and Hwang, G.J. (2019). 'A collaborative game-based learning approach to improving students' learning performance in science courses', Computers and Education, Vol. 63, pp.43–51, ISSN 0360-1315

Swartz, R. (2022). *Essence and Types of Play for Children*. Oxford: Oxford University Press.

Swigert, N. (2018). Activities Book: *The Early Intervention Kit (*pp. 1- 187). East Moline, IL: LinguiSystems Inc.

Uwezo Kenya 6th Learning Assessment Report (2016) on 'Are Our Children Learning?

Verdine, B., Lucca, R., Golinkoff, M., Newcombe, S. & Hirsh-Pasek.K. (2015) "The Shape of Things: The Origin of Young Children's Knowledge of the Names and Properties of Geometric Forms." *Journal of Cognition and Development* 12: 315–31.

Vygotsky, L. S. (1978). Mind in society: The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Wathu, W.M, Mwania, J.M & Mwinzi, J.M (2017). *Availability and Use of Play Materials, and their Influence on Social and Emotional Development of Pre-School Children in Kyangwithya Zone, Kitui County*

Whitbread, D. & Jameson, H. (2010). Play Beyond the Foundation Stage in the US; Malden head; Open University Press.

APPENDICES

Appendix I: Cover Letter

Date:……..

To_____

Dear Sir/Madam,

RE: DATA COLLECTION REQUEST FOR ACADEMIC PURPOSES

I am a Master of Education Degree (M.Ed) in Early Childhood Studies, student at Mount Kenya University.

As a necessary part for the conferment of degree in this field, I have been approved to submit a thesis on "ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS".

Towards this end, the researcher has selected your ECDE centre for the study.

Accept this letter as a formal request to you to permit the investigator access your premises and generate data required for this study. The data so gathered is purely for educational reasons. Your identity is secured and confidential in whatsoever way.

Looking forward to a cordial relationship with you and your staff during this period.
Receive my gratitude in advance.
Yours faithfully,

Okello A. Zachary

Mount Kenya University

Appendix II: Informed Consent Form

STUDY TITLE: An assessment of play as a strategy on pre-schoolers' classroom participation in public pre-primary schools in Bunyala-Busia county, Kenya.

Dear Respondent,

It is my delight to request you to participate in the survey titled herein.

I am a master's student at Mount Kenya University; currently in the process of undertaking project work.

The enclosed questionnaire has been designed to collect data specifically geared towards completion of the study as titled herein.

The researcher is requesting for your voluntary participation in the exercise as honest as possible. The researcher would like to assure you that your responses will remain confidential and anonymous.

The questions should take you roughly 30 minutes. Kindly respond to them in the best way you can.

You are requested to return the questionnaire as soon as you are done to allow onward processes by the researcher.

For your queries regarding the project, feel free to contact *the researcher*, (Okello A. Zachary cell no: 0724012079 email: zacharyokello06@gmail.com or my supervisors Dr. Josephine Kirimi email: JKirimi@mku.ac.ke and Dr. Hudson Ong'ang'a Ouko email:hudsononganga@gmail.com.

Further, for any ethical concerns, contact the Chairman, Mount Kenya University, Ethical Review Committee, P.O Box 342-01000, Thika.

I salute your support in advance.

CONSENT

I have read, understood and have voluntarily provided the data as sought for in this questionnaire to the best of my knowledge. I have done so with assurance that the researcher will use the data strictly towards purposes as outlined herein; and that I won't hesitate to pull out this agreement at any stage before the research is concluded.

Participant's signature _____Date_____

Investigator's signature _____Date _____

Appendix III: Questionnaire for the Heads of ECDE Centers (QFH)

You are requested to read this questionnaire carefully and proceed to complete it as honestly as possible. The researcher would like to assure you that your response will strictly remain private solely for study reasons. Please respond to the best of your knowledge; by ticking the appropriate box. Avoid indicating your identity on the instruments.

SECTION A: DEMOGRAPHICS

1. Highest education level: Certificate [ ] Diploma [ ] Degree [ ] Masters [ ]

2. For how long have you practiced?

Less than two years [ ] 2-5 yrs. [ ] 6-10 yrs. [ ]

11-15 years [ ] Over 15 years [ ]

3. How long have you served as a head in this institution? _____

SECTION B: OBJECTIVES

Objective One: Types of play for pre-schoolers' classroom participation

4. What outdoor plays do the pre-schoolers in your center engage in?

_____

_____

_____

5. Name some of the indoor plays that the pre-schoolers in your center engage in.

_____

_____

_____

6. The following are some statements of the effect of different types of play on classroom participation among learners in pre-school. Kindly show the degree to which you concur to every sentiment in regard to your school.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Physical play has positive effects on improving on-task and reducing off-task classroom behaviour and selective attention among pre-school children					
Physical play increases children's physical activity levels thus improving their classroom participation					
Social play helps children in understanding and accepting the perspectives of other thus increasing their classroom participation.					
Social play exposes children to negotiation skills thus improving classroom participation					
Cognitive play helps children learn the nature of their surrounding thus improving classroom participation					
Cognitive play helps children in combining pieces or entities thus improving their classroom participation					

7. In the event that your ECD teachers don't use play as a strategy on classroom participation, how do they address the gap?

_____

_____

_____

8. Which types of play stimulate the pre-schoolers most in your center?

_____

_____

_____

Objective Two: Types of play materials used for pre-schoolers' classroom participation

9. Which play materials are available at your school for use in pre-scholar's classroom?

_____

_____

_____

_____

10. Rate the adequacy of the materials identified in (9.) above, in upholding pre-primary scholars' classroom participation.

Adequate [ ] Average [ ] Inadequate [ ]

11. Rate your pre-scholar's parents' participation in the purchase of play materials for their children.

More often [ ] Often [ ] Occasionally [ ] Not at all [ ]

12. In the event of non-participation in the purchase of play materials by your parents, how do you cope with the situation?

Improvising [ ] Borrowing [ ] Sharing the few available [ ]

13. The following are some statements of the effect of different types of play on classroom participation among children in pre-school. Kindly show the degree to which you concur to every sentiment in regard to your school.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Play with wooden blocks open up learning around arrangement, balance, and height through stacking, placing, and constructing thus promoting classroom participation					
Play with large paper sheets invites learning around gravity, weight, and shape through movement and throwing thus promoting classroom participation					
A material′s sensory and aesthetic properties may also transform as a child plays with it, generating opportunities for further experimentation thus promoting classroom participation					
Use of different play materials allows children to extend and make their learning more complex over time thus promoting classroom participation					

Objective Three: Teachers' preparedness in using play as a strategy on pre-schoolers' classroom participation

14. Indicate the levels of education of your teachers.

Certificate [ ] Diploma [ ] Degree [ ] Untrained [ ]

15. Rate your pre-primary teachers' level of preparedness in using play strategy towards improving classroom participation.

Well prepared [ ]

Averagely prepared [ ]

Under prepared [ ]

Not prepared [ ]

16. In the event that teachers are not well prepared to use play as a strategy on pre-school learners' participation, how do they cope?

_____

_____

_____

_____

17. The following are some statements on the influence of teacher preparedness on classroom participation among pre-school children. Kindly show the degree to which you concur to every sentiment in regard to your school.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Teacher interventions during play take on many possibilities from assisting with problem-solving, questioning, redirecting undesired behaviors, and enticing children into play themes.					
Teachers are prepared to teach play skills to children who have difficulty entering into a play scenario thus promoting their participation in classroom					
Teachers help children when planning roles, encouraging children to talk to peers, posing open ended questions, and					

becoming involved in play thus extending and enhancing learning.					
Teachers help in selection and improvising play materials for children to facilitate the play sessions thus ensuring that everyone participates thus promoting learning					

18. What are some of the challenges related to play at your ECD center?

_____

_____

_____

_____

19. What mitigation measures would you suggest for the challenges in (18.) above?

_____

_____

_____

_____

20. The following are some statements on classroom participation among pre-school children. Kindly show the degree to which you concur to every sentiment in regard to your school

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Different types of play employed by teacher among pre-school children have promoted classroom participation					
The use of different play materials has improved classroom participation among pre-school children					
Teachers are equipped with skills and knowledge on the use of play and incorporation of play materials thus promoting classroom participation among children					

Appendix IV: Questionnaire for the Pre-Primary School Teachers (QFET)

You are requested to read this questionnaire carefully and proceed to complete it as honestly as possible. The researcher would like to assure you that your response will strictly remain private solely for study reasons. Please respond to the best of your knowledge; by ticking the appropriate box. Avoid indicating your identity and title on the instruments.

SECTION A: DEMOGRAPHICS

1. Level of Education: Certificate [ ] Diploma [ ] Degree [ ] Masters [ ]

SECTION B: OBJECTIVES

Objective One: Types of play for pre-schoolers' classroom participation

2. Do you engage your pre-schoolers in play?

Yes [ ] No [ ]

3. If the answer to the above question is yes, then name some of the examples of those plays.

_____

_____

_____

_____

4. Name some plays that energize your pre-schoolers.

_____

_____

_____

5. The following are some statements of the effect of different types of play on classroom participation among children in pre-school. Kindly show the degree to which you concur to every sentiment in regard to your centre.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Physical play has affirmative impacts on enhancing on-task and decreasing off-task classroom conduct and selective attention among pre-school children					
Physical play increases children's physical activity levels thus improving their classroom participation					
Social play helps children in understanding and accepting the perspectives of other thus increasing their classroom participation.					
Social play exposes children to negotiation skills thus improving classroom participation					
Cognitive play helps children learn the nature of their surrounding thus improving classroom participation					
Cognitive play helps children in combining pieces or entities thus improving their classroom participation					

6. In the event that you don't engage your pre-schoolers in play, how do you cope?

_____

_____

_____

7. How does the integration of play as a strategy impact on your pre-schoolers' classroom participation?

Positively [ ] Negatively [ ]

8. How do you engage your pre-schoolers in play at your center?

Free play [ ]

Guided play [ ]

On looker play [ ]

Others (specify) _____

Objective Two: Types of play materials used for pre-schoolers' classroom participation

9. Which play materials are available at your school for use in pre-scholar's classroom?

_____

_____

_____

_____

10. Rate the adequacy of the materials identified in (9.) above, in upholding pre-primary scholars' classroom participation.

Above Average [ ] Average [ ] Below Average [ ]

11. In the event that the available play materials are inadequate, how do you arrest the situation?

_____

_____

_____

_____

12. The following are some statements of the effect of different types of play on classroom participation among children in pre-school. Kindly show the degree to which you concur to every sentiment in regard to your centre.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Play with wooden blocks open up learning around arrangement, balance, and height through stacking, placing, and constructing thus promoting classroom participation					
Play with large paper sheets invites learning around gravity, weight, and shape through movement and throwing thus promoting classroom participation					
A material's sensory and aesthetic properties may also transform as a child plays with it, generating opportunities for further experimentation thus promoting classroom participation					
Use of different play materials allows children to extend and make their learning more complex over time thus promoting classroom participation					

Objective Three: Teachers' preparedness in using play as a strategy to improve classroom participation

13. How long have you been a pre-primary teacher in your current station? _____

14. To what level are you trained in ECDE education?

Certificate [ ] Diploma [ ] Degree [ ] None [ ]

15. Apart from general training in ECDE, what other professional knowledge on play as a teaching strategy do you have? Specify _____

16. How did you acquire the knowledge you have mentioned in question 13 above?

Workshop [ ] SbTD Course [ ] Seminars [ ] Others (specify) _____

17. The following are some statements on the influence of teacher preparedness on classroom participation among pre-school children. Kindly show the degree to which you concur to every sentiment in regard to your centre.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Teacher interventions during play take on many possibilities from assisting with problem solving, questioning, redirecting undesired behaviors, and enticing children into play themes.					
Teachers are prepared to teach play skills to children who have difficulty entering into a play scenario thus promoting their participation in classroom					
Teachers help children when planning roles, encouraging children to talk to peers, posing open ended questions, and becoming involved in play thus extending and enhancing learning.					
Teachers help in selection and improvising play materials for children to facilitate the play sessions thus ensuring that everyone participates thus promoting learning					

18. What are some of the challenges related to play at your ECD center?

_____

_____

_____

_____

_____

19. What mitigation measures would you suggest for the challenges in (18.) above?

_____

_____

_____

_____

_____

20. How would you rate the level of learners' performance in the following observed tasks (activities) using the following likert scale of 1-3.

Play Materials	**Activities or Tasks to be observed**	**Able**	**Attempted**	**Not Able**
	The learner can sort and group play materials based on size, colour and shape.			
	The learner can manipulate play materials during play			
	The learner can share materials with other learners during play			
	The learner can name play materials			

21. Impact of play on pre-schoolers classroom participation

_____

_____

_____

22. The following are some statements on classroom participation among pre-school children. Kindly show the degree to which you concur to every sentiment in regard to your centre.

1: Strongly Disagree 2: Disagree 3: Neutral

4: Agree 5: Strongly agree

Statement	**1**	**2**	**3**	**4**	**5**
Different types of play employed by teacher among pre-school children have promoted classroom participation					
The use of different play materials has improved classroom participation among pre-school children					
Teachers are equipped with skills and knowledge on the use of play and incorporation of play materials thus promoting classroom participation among children					

Appendix V: Observation Guide for Pre-unit ECDE Learners (OGFPL)

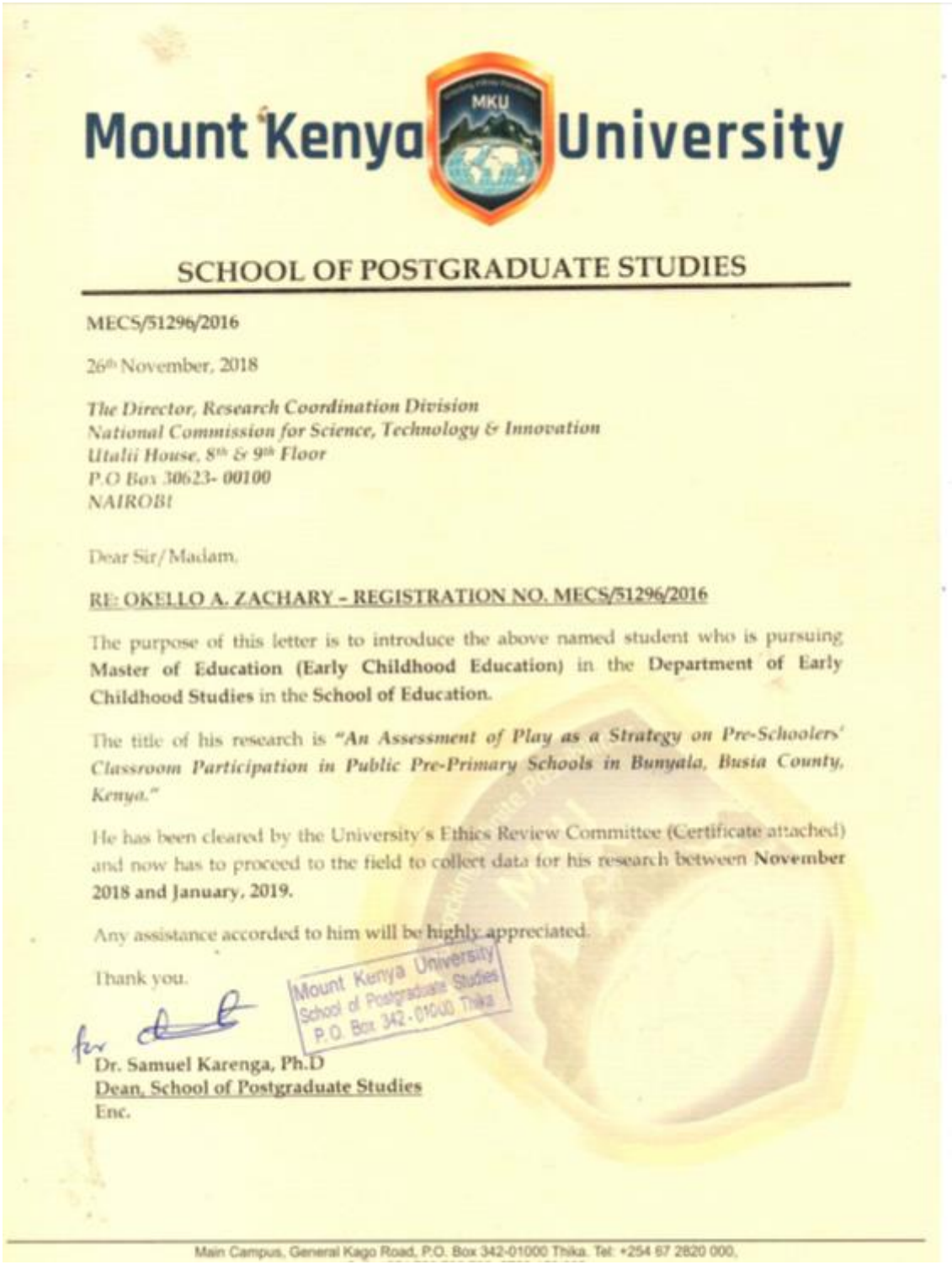
School _____ Class _____Gender_____Year_____

Tick Appropriately.

Types of Play

Types of Play	**Forms of Play**	**Competence of the learner under observation**		
		Able	**Attempted**	**Not able**
Physical	1. 2. 3. 4. 5. 6.			
Social	1. 2. 3. 4. 5. 6.			
Cognitive	1. 2. 3. 4. 5. 6.			

Appendix VI: Authorization Letter from the Postgraduate School



Mount Kenya University

SCHOOL OF POSTGRADUATE STUDIES

MECS/51296/2016

26th November, 2018

The Director, Research Coordination Division
National Commission for Science, Technology & Innovation
Utalii House, 8th & 9th Floor
P.O Box 30623- 00100
NAIROBI

Dear Sir/Madam,

RE: OKELLO A. ZACHARY – REGISTRATION NO. MECS/51296/2016

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

The title of his research is ***"An Assessment of Play as a Strategy on Pre-Schoolers' Classroom Participation in Public Pre-Primary Schools in Bunyala, Busia County, Kenya."***

He has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data for his research between **November 2018 and January, 2019.**

Any assistance accorded to him will be highly appreciated.

Thank you.

Mount Kenya University
School of Postgraduate Studies
P.O. Box 342 - 01000 Thika

for

Dr. Samuel Karenga, Ph.D
Dean, School of Postgraduate Studies
Enc.

Main Campus, General Kago Road, P.O. Box 342-01000 Thika. Tel: +254 67 2820 000,

Appendix VII: Certificate of Ethical Clearance

Mount Kenya University

OCTOBER 18, 2018

Ref. No. MKU/ERC/1048

CERTIFICATE OF ETHICAL CLEARANCE

This is to certify that the proposal titled **"AN ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS IN BUNYALA, BUSIA COUNTY, KENYA"** Whose Principal Investigator is Mr Okello A. Zachary (MECS/51296/2016) has been reviewed by Mount Kenya University Ethics Review Committee (ERC), and found to adequately address all ethical concerns.

Dr. Francis W. Makokha
Secretary, Mount Kenya University ERC

Sign: _____ **Date:** 18·10·2018

Prof. Francis W. Muregi
Chairman, Mount Kenya University ERC

Sign: _____ **Date:** 22/10/2018

Mount Kenya University Ethics Review Committee P.O. Box 342 - 0100, Thika

Appendix VIII: NACOSTI Letter

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/26452/27169** Date: **12th December, 2018**

Zachary Achoka Okello
Mount Kenya University
P.O. Box 342-01000
THIKA

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"An assessment of play as a strategy on pre-schoolers' classroom participation in public Pre-Primary Schools in Bunyala Busia County, Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Busia County** for the period ending **12th December, 2019.**

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

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

GODFREY P. KALERWA MSc., MBA, MKIM
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Busia County.

The County Director of Education
Busia County.

Appendix IX: NACOSTI Permit

THIS IS TO CERTIFY THAT:
MR. ZACHARY ACHOKA OKELLO
of MOUNT KENYA UNIVERSITY, 70-40609
Usenge,has been permitted to conduct
research in *Busia County*

on the topic: *AN ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS IN BUNYALA-BUSIA COUNTY, KENYA*

for the period ending:
12th December,2019

Permit No : NACOSTI/P/18/26452/27169
Date Of Issue : 12th December,2018
Fee Recieved :Ksh 1000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013

The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS

1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

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Website: www.nacosti.go.ke

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH LICENSE

Serial No.A 22301

CONDITIONS: see back page

Appendix X: Authorization Letter from the County Commissioner

REPUBLIC OF KENYA

THE PRESIDENCY
MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

Email: ccbusia@gmail.com
Telephone: 055 - 22598
Fax No: 055 - 22231
When replying please quote
REF No. ADM 15/4/ VOL.IV/110

COUNTY COMMISSIONER'S OFFICE
BUSIA COUNTY
P.O. BOX 14-50400
BUSIA (K)

14th January, 2018

Deputy County Commissioner
Bunyala Sub- County
BUNYALA

RE: RESEARCH AUTHORIZATION

Following research authorization vide letter Ref.No.NACOSTI/P/18/26452/27169, dated 12th December, 2018, by the National Commission for Science, Technology and Innovation on **'An assessment of play as a strategy on pre-schoolers' classroom participation in public and Pre-Primary School in Bunyala Busia County, Kenya'.**

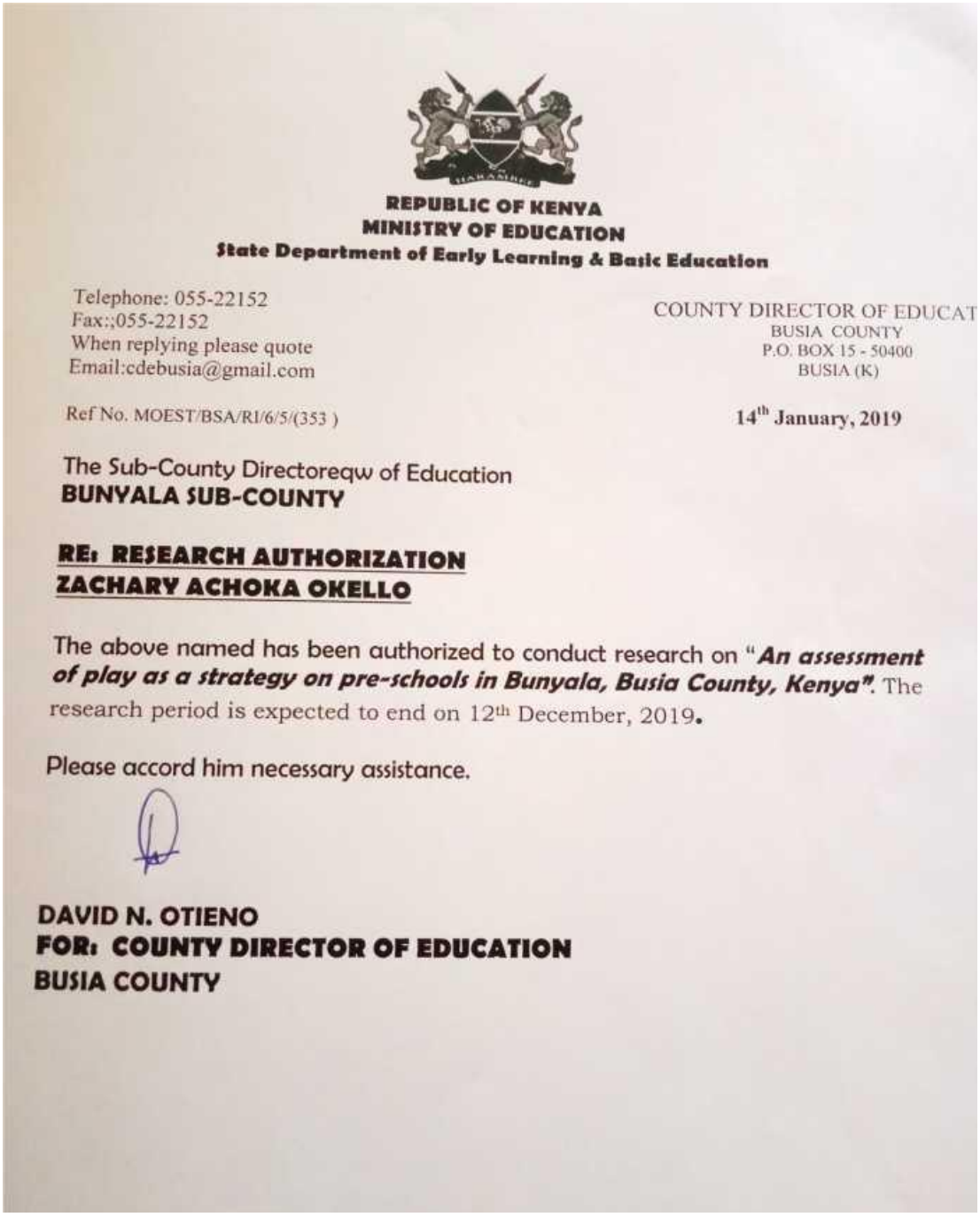
This is to inform you that **Mr. Zachary Achoka Okello** has been authorized to carry out research in Bunyala Sub-County in Busia County for the period ending **12th December, 2019.**

Kindly accord him the due co -operation.

S.Kimani
For: County Commissioner
BUSIA COUNTY

Copy to:
Zachary Achoka Okello
Mount Kenya University
P.O.BOX 342-01000
THIKA.

Appendix XI: Authorization Letter from the County Director of Education



REPUBLIC OF KENYA
MINISTRY OF EDUCATION
State Department of Early Learning & Basic Education

Telephone: 055-22152
Fax:;055-22152
When replying please quote
Email:cdebusia@gmail.com

COUNTY DIRECTOR OF EDUCAT
BUSIA COUNTY
P.O. BOX 15 - 50400
BUSIA (K)

Ref No. MOEST/BSA/RI/6/5/(353)

14th January, 2019

The Sub-County Directoreqw of Education
BUNYALA SUB-COUNTY

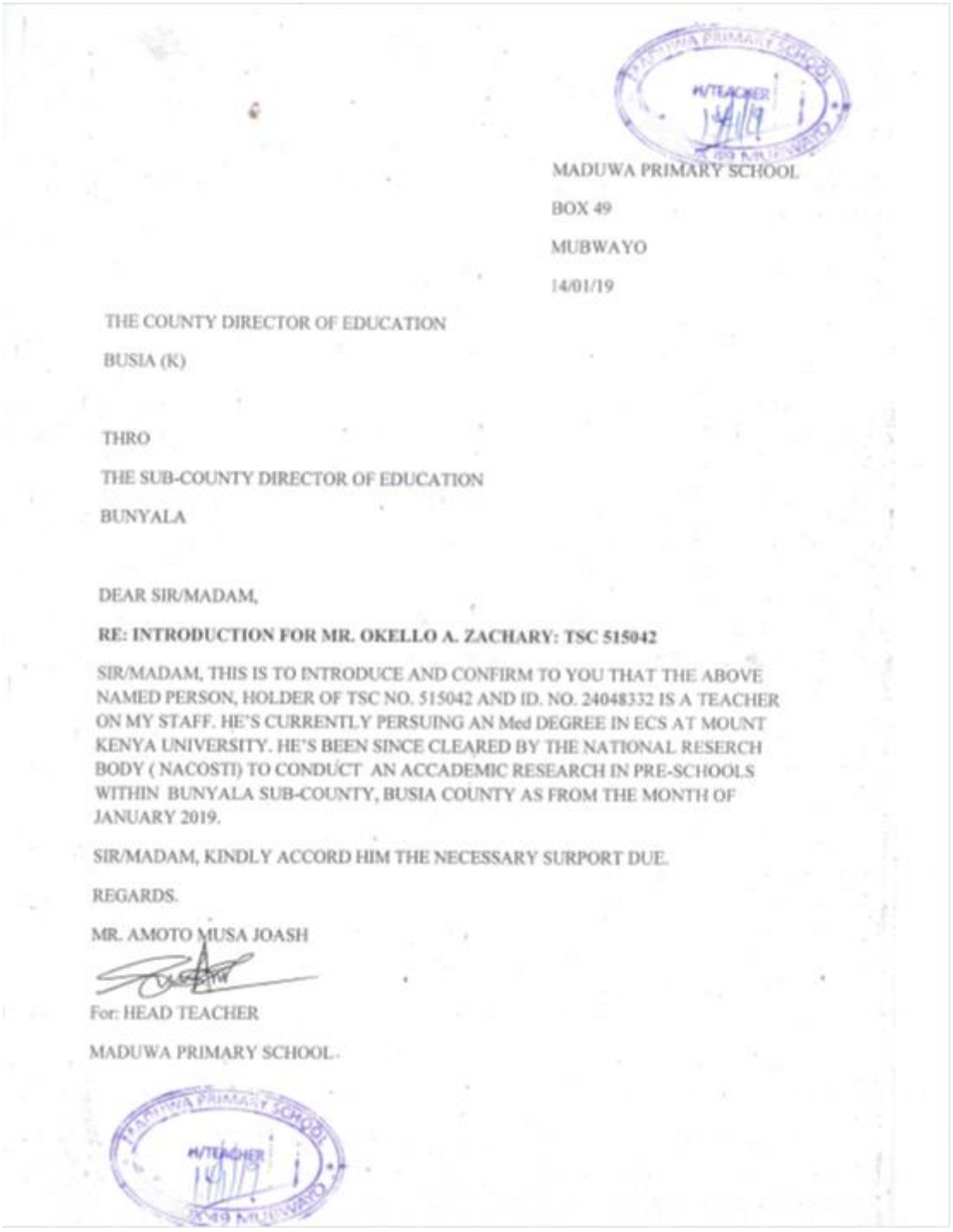
RE: RESEARCH AUTHORIZATION
ZACHARY ACHOKA OKELLO

The above named has been authorized to conduct research on "***An assessment of play as a strategy on pre-schools in Bunyala, Busia County, Kenya***". The research period is expected to end on 12th December, 2019.

Please accord him necessary assistance.

DAVID N. OTIENO
FOR: COUNTY DIRECTOR OF EDUCATION
BUSIA COUNTY

Appendix XIII: Introductory Letter from the Researcher's Head teacher



MADUWA PRIMARY SCHOOL
BOX 49
MUBWAYO
14/01/19

THE COUNTY DIRECTOR OF EDUCATION
BUSIA (K)

THRO
THE SUB-COUNTY DIRECTOR OF EDUCATION
BUNYALA

DEAR SIR/MADAM,

RE: INTRODUCTION FOR MR. OKELLO A. ZACHARY: TSC 515042

SIR/MADAM, THIS IS TO INTRODUCE AND CONFIRM TO YOU THAT THE ABOVE NAMED PERSON, HOLDER OF TSC NO. 515042 AND ID. NO. 24048332 IS A TEACHER ON MY STAFF. HE'S CURRENTLY PERSUING AN Med DEGREE IN ECS AT MOUNT KENYA UNIVERSITY. HE'S BEEN SINCE CLEARED BY THE NATIONAL RESERCH BODY (NACOSTI) TO CONDUCT AN ACCADEMIC RESEARCH IN PRE-SCHOOLS WITHIN BUNYALA SUB-COUNTY, BUSIA COUNTY AS FROM THE MONTH OF JANUARY 2019.

SIR/MADAM, KINDLY ACCORD HIM THE NECESSARY SURPORT DUE.

REGARDS.

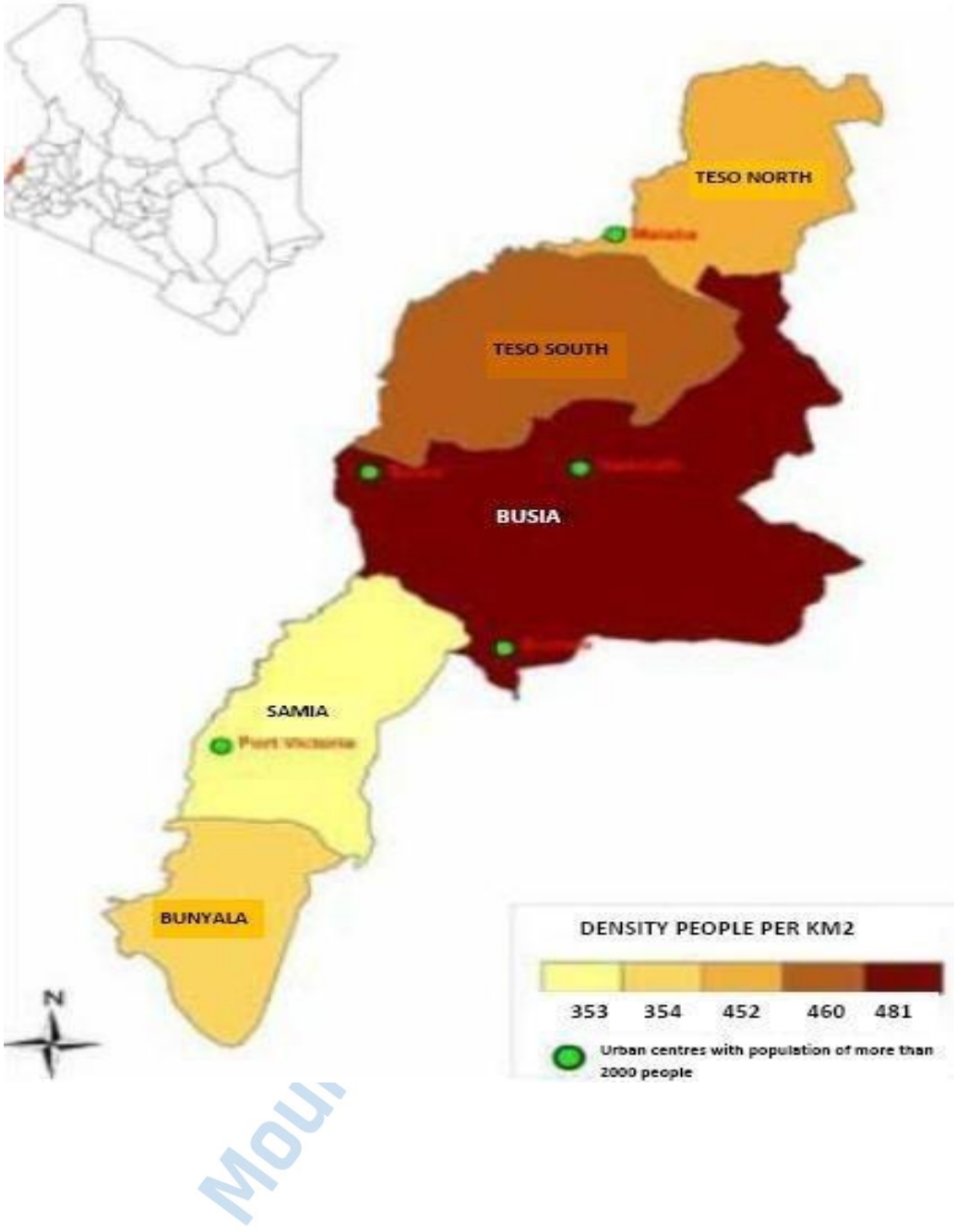
MR. AMOTO MUSA JOASH

For: HEAD TEACHER
MADUWA PRIMARY SCHOOL

Appendix XIV: Map of Kenya showing Busia County

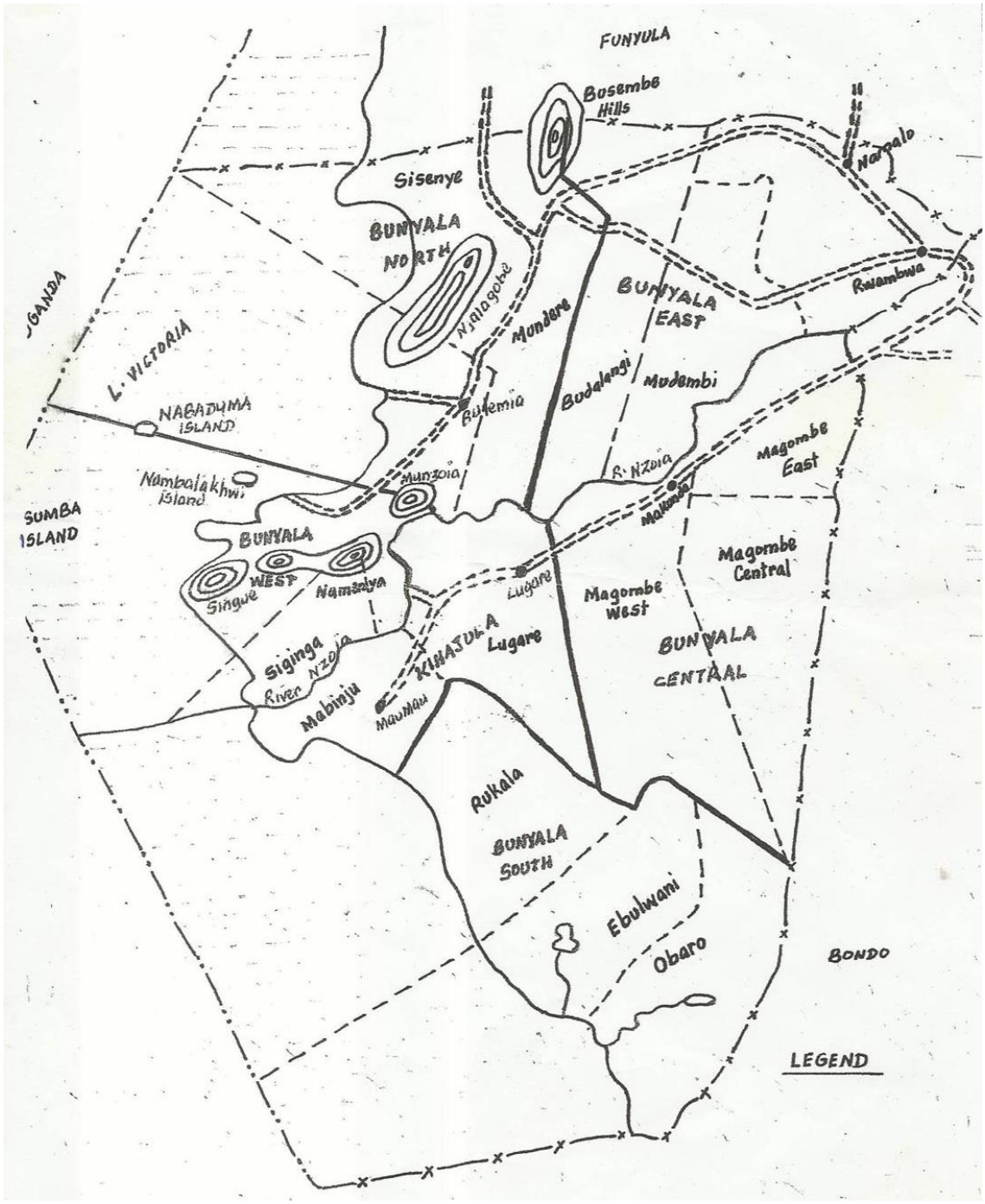
Source: Google Maps

Appendix XV: Map of Busia County showing Bunyala Sub-county



Source: Google Maps

Appendix XVI: Map of Bunyala Sub-County



Source: Bunyala Sub-County Administration Archives.

Appendix XVII: Originality Report

AN ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS IN BUNYALA- BUSIA COUNTY, KENYA

by Okello Achoka Zachary

Submission date: 23-Feb-2023 04:59PM (UTC+0300)
Submission ID: 2021225912
File name: ZACK_JUMA_FEB_23.docx (4.38M)
Word count: 27645
Character count: 159402

AN ASSESSMENT OF PLAY AS A STRATEGY ON PRE-SCHOOLERS' CLASSROOM PARTICIPATION IN PUBLIC PRE-PRIMARY SCHOOLS IN BUNYALA- BUSIA COUNTY, KENYA

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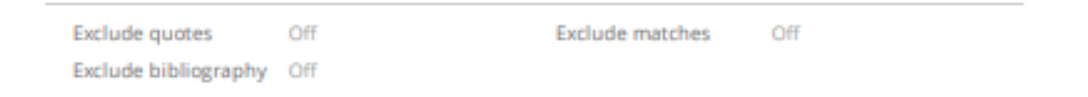
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