

**TRANSFORMATIVE INSTRUCTIONAL METHODS EFFECTS ON  
PUPILS' ACADEMIC ACHIEVEMENT IN LOWER PRIMARY  
SCHOOLS IN KIRINYAGA COUNTY, KENYA**

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## **DECLARATION**

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

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## **DEDICATION**

I dedicate this work to God, who gave me the ability and good health as I conducted this research. Similarly my beloved husband, Mr. Joseph Mwangi, as well as my daughter Phoebe Mukami and son Mark Kariuki for their encouragement, interactive discussions, and moral support.

## **ACKNOWLEDGEMENT**

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## **ABBREVIATIONS AND ACRONYMS**

<b>COI :</b>	Centers of Interest
<b>CRC :</b>	Convention on the Rights of the Child
<b>CEO :</b>	County Educational Officer
<b>GW :</b>	Group Work
<b>KCPE:</b>	Kenya Certificate of Primary Education
<b>KICD:</b>	Kenya Institute of Curriculum Development
<b>LCA :</b>	Learner-Centered Approach
<b>LPST :</b>	Lower Primary School Teachers
<b>MOEST:</b>	Ministry of Education Science Technology
<b>PE :</b>	Physical Education
<b>QA :</b>	Question and Answer
<b>STEM :</b>	Science, Technology, Engineering, and Mathematics
<b>TCA :</b>	Teacher centered approach
<b>UNESCO :</b>	United Nations Educational, Scientific and Cultural Organization

## ABSTRACT

There has been tremendous development of classroom pedagogies especially for the young learners in lower primary schools during the last five decades. Despite the fact that transformative instructional methods is one such approaches used to help students transition from knowledge based to competency based approaches of learning, a knowledge gap still exists regarding its effectiveness. The purpose of this study was to investigate the effect transformative pedagogy on learners educational outcomes. The study had four objectives ,namely : i) To determine the effect of i)play on pupils learning outcome, ii)group work on pupils learning outcome, iii) centers of interest on pupils learning outcome, and iv) determine the factors hindering effective use of transformative learner-centered instructional methods in lower primary schools. Descriptive research design was utilized. From the targeted population of 845, Slovene's estimation formula used to compute a sample size yielded 271 participants. The study used validated semi-structured questionnaires and interviews to collect data. The instruments were piloted using a panel of three academic staff experts from the Department of Educational Management, Policy and Curriculum Development. The reliability was determined using a test-retest approach. The data collection involved administering questionnaires, interviews with teachers and head teachers, and lesson observation. Data were analyzed and presented using charts, tables and direct quotes. The first objective revealed that multiple elements have intertwined and led to prevention of majority of teachers from employing transformative learner-centered teaching. It was observed that play could have been more effective but was thwarted by inadequate play materials. The second objective revealed that despite teachers' awareness that group work was crucial in influencing positive learning outcomes, especially numeracy, and literacy, it needed to be used to the required standard. The third objective on using centers of interest could have been more utilized had basic resources been available. The factors that constrained effective use centered around inadequate training, overloaded teachers, lack of infrastructure, and low teacher morale. It was concluded that teachers in lower primary schools attempted to use transformative methods despite the combination of inhibiting factors. The study recommended that teachers should not only be equipped to use various pedagogies, but should also be provided with adequate equipment for curriculum implementation, Further research should also be conducted using a larger sample and covering more counties to determine how transformative instructional pedagogy is being implemented in schools, especially at the lower primary school level.

## **CHAPTER ONE**

### **INTRODUCTION AND CONCEPTUALIZATION OF THE STUDY**

#### **1.1 Introduction**

This chapter presents the background of the research, the problem statement, the purpose of the research, objectives, research questions, limitations of the research, delimitations, assumptions, theoretical framework, conceptual framework, and operational definition of key terms.

#### **1.2 Background of the Research**

Daniel (2020) opines that pedagogical strategies for lesson delivery have been consistently been developed in the past five decades. The researcher contends that the rapid advancement of knowledge has been anchored on the development of various learning philosophies and learnings deemed to be in tandem with the 21st-century. Linda (2020) adds her voice in this ranging debate and opines that the significant growth in information on human development and learning has equally contributed to more remarkable ability to design more effective pedagogies.

It is imperative that being cognizant of the diverse ways pupils learn is essential and directly related to learners academic outcome given the fact that everyone learns differently. Thus, it is arguable that a clear consideration of the diverse and differentiated learning is critical for both instructors and learners. There is little doubt that this knowledge of differentiated learning is a crucial ingredient in the process of designing learning content and delivery techniques ,especially for learners in lower classes.

Linda et al (2020) have suggested that transformative learning, although sometimes focuses mainly on adult education may equally be useful to young learners. Haynes-Brown and Shannon-Baker (2021) have attempted to conceptualize transformative pedagogy as one used to help students transition from the traditional receptacles of information to more modern meaningful interactive learning that mixes evaluating diverse views and questioning their beliefs, values, and assumptions. In this context, transformative learning centers are hinged on the notion that students may construct their thinking in response to new knowledge. Trott, Even and Frame, (2020) concur with previous researchers but further opines that at the classroom level, transformational instructors combine the art and science of any topic to inspire their pupils to study.

It is instructive to note that Castillo, (2020) express similar opinions on the use of transformative teaching but emphasize building dynamic interactions between instructors and learners. The bottom line is that teach with appropriately chosen objectives and tasks to be performed. Frerejean (2020) similarly contends that having a contextual background is critical in effectively facilitating learning that spurs students' holistic development. Further, the theoretical basis of transformational teaching is to set the goal beyond just imparting knowledge. Hence, there is need for a paradigm shift from traditional misconception that teachers are the reservoir of knowledge while the learner is a passive consumer of the knowledge. The entire process of developing skills sets should be a cooperative enterprise involving the learner and teacher as a facilitator.

Yeh et al., (2019) aptly argue that learners who go through primary education, especially in developing countries, tend to have little mastery of essential cognitive skills, as compared to those from more developed nations based on their low learning outcomes in national primary school examinations. Yet ,performance trajectory from the lower classes determines how well-equipped one is to face bigger challenges in upper primary and post-secondary school (Koehler & Schneider, 2019). Performance implies a positive or negative pupil's perception of oneself and society (Alhadabi & Karpinski,2020). Teaching formats that promote student engagement with the material and activity in the classroom increase pupils' exam performance (Felszeghy,2019).

Which focused The National Institute for Education Research NIER (2020), in Asian countries, found that education performance was similarly low. However, the Government has done a lot to provide physical facilities, teaching and learning resources, and free education. It necessitated looking deeper into teaching methods rather than apparent reasons. It was concluded that the learning methods and environment strongly correlate with pupils' achievement in their examinations (The National Institute for Education Research NIER, 2020).

In Africa, a research survey by Quansah (2022) in Uganda found that there were several other factors that influence pedagogy. Some of these variables include the language of instruction, time spent on teaching a subject, and the teacher to pupil ratio. The researcher concluded that there are multifarious variables affecting the teaching learning process and effectiveness. However, the transformative instructional method seem to be more critical variable.

In Kenya, the concerted efforts between the Government of the Republic of Kenya and key stakeholders have made commendable progress towards enhancing all drivers of quality education. (Onyango & Ondiek, 2021). It was found that there needed to be stronger organizational structures and institutional frameworks in the teaching process of many regional primary schools (Onyango & Ondiek, 2021). While the free primary education program in Kenya has attempted to put in place measures that enhance school outcomes, the performance of pupils in institutions of learning still remains a challenge (Onyango & Ondiek, 2021). Many factors affect pupils' achievement directly or indirectly. Addressing the root cause of this problem calls for investigations beyond apparent reasons that have been researched in the past.

In a nutshell, studies on factors contributing to the low school outcomes contend that there were multifarious factors, including school culture and climate, teacher behavior, parental support and involvement, pupils' socio-economic background and poor management of finances and school facilities (Mahlangu et al., 2021). It was concluded that the main challenge affecting the quality learning outcomes lower primary school was inadequate involvement of learners in the instructional process). Stehle (2019) concurs that it appropriately translates to effective teaching.

Instructional methods are the how-to" in the delivery of training (Shao et al., 2018). The learning objectives primarily dictate methods utilized in any learning situation. At the lower primary level, the goal is to effectively communicate the content to learners and help them acquire skills sets (Al-Khresheh, Khaerurrozikin & Zaid, 2020). Research



indicates that the learning method is a significant challenge in lower schools. A Harvard physicist, Eric Mazur, commented, "It is almost unethical to use lecture methods to pupils " (Bain, 2021).

Shah ( 2019) avers that teaching techniques exist in learning and are supposed to assist teachers when disseminating knowledge to the learner. Hence Meyer & Norman (2020) attributes the problem of poor learning outcomes to inappropriate teaching techniques employed by teachers.,

In Kirinyaga County, teaching methods in the most public primary are unbecoming. Much of the success of education in primary schools depends upon the instructional method of the lower to upper classes (Selvaraj et al.,2021). Factors affecting performance in KCPE revealed that efficient teaching methods and teacher involvement in emerging teaching training were the significant determinants of performance (Gopal, Singh & Aggarwal, 2021). Poor performance in end-year examinations was blamed on poor teaching methods (Gopal, Singh & Aggarwal, 2021).

Most studies seem to concur that transformative instructional methods refer to the approaches used to help students transition from being receptacles of information to more meaningful learning via evaluating diverse views and questioning their beliefs, values, and assumptions (Haynes-Brown & Shannon-Baker, 2021). Transformative learning centres are hinged on the perception that students are capable of operating proactively given appropriate learning facilities. In the classroom, transformational instructors combine the art and science of any topic to inspire their pupils to study (Trott, Even & Frame, 2020).

Studies show that most learners at all levels of basic education in developing countries have been found to have very little mastery of essential cognitive skills, as demonstrated through low learning outcomes national primary school examinations (Yeh et al., 2019). Performance from the lower classes determines how well equipped one is to face bigger challenges in upper primary and post-secondary school (Koehler & Schneider, 2019). Performance implies a positively or negatively pupil's perception of oneself and society (Alhadabi & Karpinski, 2020). Teaching formats that promote student engagement with the material and activity in the classroom increase pupils' exam performance (Felszeghy, 2019).

Which focused The National Institute for Education Research NIER (2020), in countries in Asia noted that learning outcomes basic educational institutions were similarly low despite the governments interventions in provision of learning resources. This observation necessitated looking deeper into teaching methods rather than apparent reasons. It was concluded that the learning methods and environment strongly correlate with pupils' achievement in their examinations (The National Institute for Education Research NIER, 2020).

In Africa, particularly in Uganda, a research survey by Quansah, (2022) found that non-instructional variables such as medium of instruction, time spent on a subject and teacher-pupil ratios were among the critical variables influencing school outcomes. In Kenya, there has been concerted efforts between the Governments through the Ministry of Education to enhance learning in the country (Onyango & Ondiek, 2021). It was

found that there were weak organizational structures and institutional frameworks in the teaching process of many primary schools in the region (Onyango & Ondiek, 2021).

The findings from other studies indicate that the learning outcomes has not reached the targeted levels. While the free primary education program in Kenya has increased access and the cost of primary education has been cut, the performance of pupils in public primary schools remains a challenge(Onyango & Ondiek, 2021). It was concluded that the main challenge affecting the quality learning outcomes lower primary school was inadequate involvement of learners in the instructional process).

Instructional methods are the how-to” in the delivery of training (Shao et al., 2018). The learning objectives primarily dictate methods utilized in any learning situation. At the lower primary level, goal of learning is to nurture the learner and help them acquire skills and competencies (Al-Khresheh, Khaerurrozikin & Zaid, 2020). Research indicates that the learning method is a significant challenge in lower schools. Eric Mazur, a Harvard physicist, commented that “it is almost unethical to use lecture methods to pupils (Bain, 2021).

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### **1.3 Statement of the Problem**

The foregoing implies that there seems to be a knowledge gap regarding the mix and choice of innovative pedagogical approaches which have been developed to enable learners have a seamless transition from lower levels of academic to higher complex levels, especially in Kenya. The knowledge gap on variables that catalyze effective learning for optimal academic outcomes have not yet been well conceptualized. This has led to learners transiting from lower to primary school equipped with inadequate preparation to perform well in school-based as well as in national examinations. The evidence for this poor preparation is reflected in students' performance in Kenya Certificate of Primary Examinations (KCPE) in the study locale over the years. Further, most public primary school pupils transit from lower primary to upper primary without literacy skills and the ability to express themselves effectively.

Further, at policy level, the efforts of the Government of Kenya through the Ministry of Education has poetized directly providing schools with learning resources such as books. However, a good number of public schools have not been facilitated enough with requisite strategies that improve academic performance. It is thus arguable that one direction to solve the problem is to institute strategies that enhance content delivery

that is in line with the level of the learners. The unanswered question so far is “What is the effect of transformative instructional approaches on pupils educational outcomes”?

#### **1.4 Purpose of the Study**

To investigate the effect of transformative teaching on students’ academic performance in lower primary schools in Kirinyaga County, Kenya was the purpose of this study.

#### **1.5 Objectives of the Research**

The study adopted the following research objectives:

1. To determine the contribution of play on pupil’s learning outcome in lower classes.
2. To assess how group work contributes to pupil’s learning outcome in lower primary.
3. To determine the extent to which the centre of interest impacts pupil’s learning outcome in lower primary.
4. To find out the main instructional challenges hindering pupils’ learning outcome

#### **1.6 Research Questions**

The study adopted the following research questions.

1. To what extent does play contribute to pupils' learning outcomes in lower classes.
2. How does group work contributes to pupils' learning outcomes in lower primary.
3. How does the center of interest impacts Pupil's learning outcome in lower primary.
4. What are the main instructional challenges hindering pupils' learning outcome

### **1.7 Limitations of the Research**

It was not possible to conduct studies in all regions of Kirinyaga County. To find out the solutions to the poor performances of primary schools, studies should have been conducted in the whole county. That was barred by financial factors and the geographical size of Kirinyaga County.

### **1.8 Delimitation of the Research**

The research limited itself to public primary schools in the region because they form the majority compared to private schools. Investigating both public and private required considerable time and resources. The other delimitation was that the chosen locale and level is just one of the 47 counties. A larger scope would have yielded more generalizable results. This was mitigated by using variety of research instruments to facilitate triangulation.

### **1.9 Assumption of the Research**

The research assumptions were:

Respondents who filled out the questionnaires were open and honest

The teaching methods used in lower elementary schools are almost identical

### **1.10 Significance of the Research**

In a variety of educational settings, the results of this research might be valuable to policymakers, curriculum developers, and implementers. The research will shed light on the link between use of innovative pedagogies and pupils' academic outcomes. The findings may be helpful in the contribution to the knowledge gap and also catalyze the utilization of the results to school outcomes.

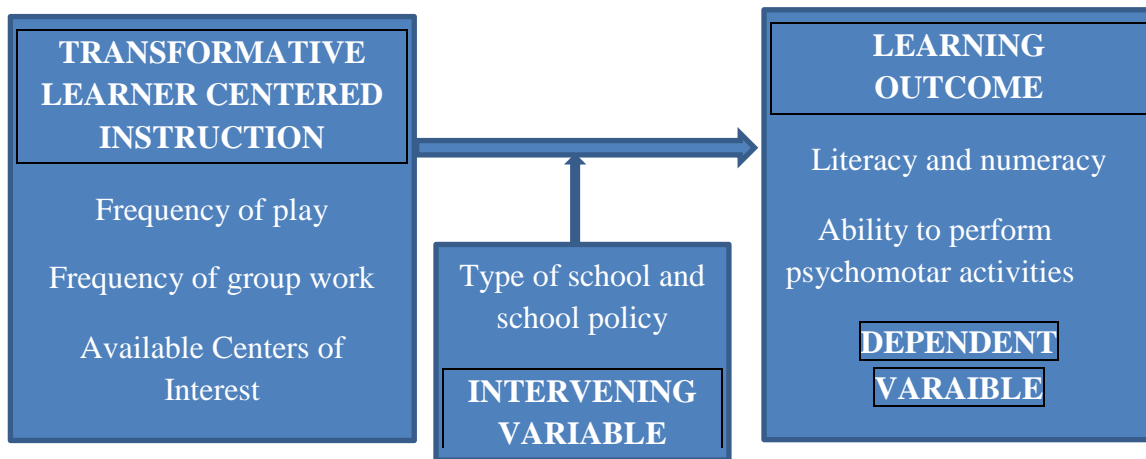
### **1.11 Theoretical Framework**

The research was underpinned on Lilli's theory propounded in (1998). The theory emphasizes the role of teachers as facilitators and pupils as the constructor and decider of learning based on own interests.. The overriding tenet of this theory is that the teacher should just be a facilitator who creates a conducive learning environment that spurs active learner participation. The proponent of this theory therefore lays a ground for understanding the connection between pedagogies used and expected learning outcomes.

It is thus imperative that teachers should be retooled with appropriate strategies that enable them to present dynamic learning exercises, such as reproductions, games, group work, and case studies, as opposed to encouraging class lessons, brings about more profound picking up and understanding alongside the transfer of knowledge

### **1.12 Conceptual Framework**

The conceptual framework depicted in Figure 1 which according to Orodho (2017) diagrammatically displays the envisaged relationship between the independent variable and the dependent variable, The intervening variable which competes with the transformational pedagogy in influencing the learning outcomes is also indicated (Orodho, Nzabalirw, Odundo and Ndayambaje, 2016a).



**Figure 1.1: Transformative pedagogy and learning outcomes**

**Source:** Adopted from Orodho (2017)

The conceptual framework was used to provide an interactive connection between the independent and dependent variables.

### 1.13 Operational Definition of key Terms

**Academic performance-** refers to the results signifying the sample of learners' attainment in academic knowledge and skills.

**Academic qualification** - refers to education standards or levels achieved by the teacher.

**Centers of interest** - refer to the set places and environment for learning within and outside the classroom.

**Cognitive development** - Development of intellectual ability.

**Group work-** Method of teaching where pupils work in groups.



**Head teacher** – This refers to any individual hired by the Teacher's Service Commission to take over the head of administration in the day-to-day administration of a primary school.

**Learning outcomes-** Quantifiable assertions that describe the end result of a course or program in terms of what students should know, be able to accomplish, or value.

**Play** – refers to the physical activities pupils primarily engage in for refreshments.

**Public school** - refers to an organization of studying where learners learn and are possessed and run by the county and national Government in collaboration with parents.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Introduction**

This chapter presents the definition of transformative instructional methods, quality of teaching, transformative instructional methods for academic achievement in the lower primary, play and learning, group work, the center of interest, good performance at the lower primary, and finally, the literature review is summarized.

#### **2.2 Concept of transformative (learner-centered) instructional methods**

Advanced English Learner's Dictionary (2018) defines instruction as teaching or furnishing information or knowledge and method as a process by which a task is completed. A suitable transformative instructional method is not necessarily enclosed in a classroom but aims to contextualize the issues with the surroundings and individuals as part of the learning environment (Hauge, 2019).

To encourage the information transmission cycle, instructors should apply appropriate instructing strategies that best suit explicit goals and levels and the targeted results (Petersen et al., 2020). Transformative instructional methods should be learner-centered to help students acquire higher thinking and problem-solving skills (Capone, 2022).

According to Keller (2018), transformative instructional methods play a pivotal role in the classroom because they determine the roles of both the pupils and the teacher. Rao (2019) suggested that the teaching technique must be appropriate for pupils to retain the material. Actively engaging students enhance information processing and retention (Vázquez-García, 2018).

Alkathiri (2019) asserts that students' test scores improved by almost half a standard deviation when teachers used instructional tactics that increased student engagement with the topic and movement in their classes. For students in the lower grades to learn effectively, elementary school instructors must use the most appropriate teaching methods in their settings (Piper et al., 2018).

Instructing is a cycle that encourages student change (Ogrinc et al., 2019). An educator is only deemed to have taught once a pupil has mastered the material. Instructing is a constant cycle that includes achieving attractive student changes through fitting strategies (Rovers, 2018). For students to learn efficiently, teachers and students must work together to prepare material, a basic premise of the teaching and learning process (Alobaid, 2020).

A school with an excellent reputation for academic achievement would encourage teachers to use more cooperative learning activities in which students compete in groups rather than individually (İlçin et al., 2018). Yangdon (2021) likewise calls attention to the fact that poor-quality of tutoring can bring about dissatisfaction and fatigue in the student who may, in the end, exit school.

According to Ndukwe & Daniel (2020), as a tutor, the fundamental part of an instructor is to give dynamic consideration to the advancement of the students. Teachers, as knowledge producers, should be able to organize the teaching and choose a suitable instructional method. During the learning process, teachers must be at the forefront of guiding the pupils in the learning activity (Dong, Cao & Li, 2020).

For the technique utilized for educating to be viable, Lombardi et al. (2021) point out that instructors should be acquainted with various instructing teaching methodologies that acknowledge the greatness of the multifaceted nature of the ideas to be secured.

Alobaid (2020) argued that diverse subjects lend themselves to diverse learning styles; various learning styles mean learners learn preferably with specific techniques over others. Instructing experience makes it more transparent which methodologies work superior to others depending on the learner's age and subject matter (Cevikbas & Kaiser, 2020).

The teacher should match pupils' learning needs with suitable instructional methods to enhance the quality and quantity of learners' performance (Liu et al., 2022). Tutors should adopt suitable techniques that enhance learning and improve the understanding of the new terminologies of the learners.

### **2.3 Instructional methods in relation to learner outcome in the lower primary**

In the past, many tutors broadly utilized tutor-centered approaches to convey knowledge to the students instead of learner-centered approaches (Thongwol, 2018). In today's world, effective teaching strategies have led to a reasonable interest in educational research (Yu, 2022). Abraham & Singaram (2019). regarding the effectiveness of tutoring approaches, points out that the quality of tutoring enhances students' performance. Thus it is arguable that for knowledge imparted to the learners to be utilized later in life, it must be positioned in the context of meaningful activities (DeMatthews, Serafini & Watson, 2021). The academic strength of the student is guaranteed if active learning is engaged. Learning must involve an activity where the

teacher and the learner interact smoothly (Creech, 2021). Geng et al. (2019) pointed out that adopting the best teaching strategies is necessary if the desired changes are to be realized among the learners.

The classroom atmosphere usually contains certain aspects of creativity, making the teaching more fascinating and participatory (Papadakis, 2018). The appropriate blend of creativity combined with academics allows pupils to be original and pushes them to learn new things. Students may become skilled communicators and increase their emotional and social abilities. Creative classrooms affect how students receive and use information in real life. Creative expression plays a significant part in a student's emotional growth.

### **2.3.1 Play and Learning Outcome**

Marchant et al., (2019) opine that play is such an essential component of learning since it allows them to fully participate in teaching learning process. Further, play is recognized as an important promoter of learning in various policy documents as being a critical ingredient of learning, This is also in tandem with Michelle(2020) who opines that play catalyzes a more cooperative and helpful communication skills.

### **2.3.2 Group Work and Learning Outcome**

The use of group work has been emphasized due to its potential to nurture interactions between peers and teachers. Group work facilitates learning, especially in academic knowledge (Huang et al., 2020). Hassan & Akbar's (2022) study in Nigerian public schools established that pupils improve their cooperation with peers and facilitate effective problem-solving skills. In the words of Mitchelle (2020), peer contact and

group work begin early in childhood, enabling the child to grasp the benefits of working effectively with others.

According to Cao (2021), all-around learning involves group work, and students engage freely to grasp the information better. Collaborative work promotes academic achievement. According to Shim & Lee (2020) and Johnson and Johnson (2018), group work enables learners to learn to inquire, share ideas, clarify differences, problem-solve, and construct new understandings when working interactively with others.

Group work is core to attaining academic knowledge and interpersonal skills (Panayiotou, Humphrey & Wigelsworth, 2019). Group work involves pupil-to-pupil relationships, formal relationships mainly centered among students (Bovill, 2020). Pacheco, Lafe & Newell (2019) suggest learners should learn to work with others and that specific abilities and skills can only be learned in a group.

McGovern (2019) asserts that oral responding in unison significantly bars learning as it assumes the level of understanding is parallel among students. Children are likely to feel a sense of belonging in a group and thus be able to concentrate on group work learning (Kricorian et al., 2020). These findings show that group work is essential to student learning and growth, eventually leading to good performance. In Kirinyaga County, Kenya, there is a need to close the gap between group work and student achievement.

Allowing pupils to work in small groups offers possibilities for cooperative education and the development of cooperative learning abilities. Group work may generate an

environment for active learning and provide circumstances for children to learn from and assist one another. By properly managing the nature of groups, the instructor may assign various pupils different sorts of work according to their educational requirements. Pupils might be assigned work more precisely suited to them: Through group activities, students may be assigned work more directly aligned with their interests. Organizing group work provides pupils with a broader choice: they can choose the activity they want to pursue.

### **2.3.3 Center of Interest and pupil's learning outcome**

Chumdari et al. (2018) define centers of interest as a theme, topic, or main subject about which the pupils learn at a specific time and which links or correlates with many issues. Children will learn very little if motivated (Kim, 2020). Teachers can engage and reengage the students in numerous ways during teaching and learning (Heilporn, Lakhal & Bélisle, 2021). Teachers need to demonstrate to the learner what they are teaching by relating what they taught the learner to a practical life situation. That will engage them and boost their understanding of what the teacher has taught. Teachers should focus on exposing the students to activities that connect to real-life situations, such as learning by practicing what they have learned in class (Brandt, 2021). Conversely, tutors should avoid drilling learners since this makes them not understand the concept taught in class (Sah & Shah, 2020). Center-of-interest-based tutoring strategies are more effective since they do not centralize the knowledge flow from the facilitator to the learner (Abdulrahman et al., 2020).

The teaching methods should be targeted toward this end to ensure the learner understands what is being taught. (Ehsan, Vida & Mehdi, 2019). Kim (2020) asserts that children always show a much greater interest in lessons associated with their own needs and experiences than in those not. According to Shad (Elumalai et al., 2021), the teacher's skill lies in knowing the suitable topics. E.g. a familiar experience for most pupils is visiting the local market. We then use the local market as a center of interest around which lessons are built. E.g., Math- buying, selling, counting, weighing.

Shin and Kin (2019) over that learning should be relevant to the students not only in-class work, but they should be able to utilize the knowledge and skills in their real life, meaning they should be able to solve the challenges they encounter in life. The literature review on the center of interest reveals it as a comprehensive and essential approach if we were to help learners acquire knowledge and skills in our schools. However, a thorough investigation must be carried out in Kirinyaga County to uncover how this strategy is seen, practiced, and implemented in public elementary schools.

#### **2.4 Summary of the Reviewed Studies**

The chapter has reviewed the literature on transformative (learner-centered) instructional method teaching strategies for pupils in lower primary schools of public schools in the study locale. The majority of the reviewed studies provided direction towards that gaps which were filled by this study.

Results indicated that a learning environment with various presentation methods promotes learners' participation, builds critical reasoning among the students, and effectively fosters a more profound understanding of the ideas. That means the students



can provide the solution during class activities. If quality is to be achieved, the learning environment must be improved (Pham et al., 2019). The literature reviewed indicates a gap in practice with play and group work being practiced more in developed than developing countries.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This section covers research design, location, target population, sample size and sampling technique, research instruments, pilot research, validity, data collection techniques, data analysis, and logistical and ethical considerations.

#### **3.2 Research Design**

The descriptive research design was employed in this study. The rationale for choice was premised on its ability to provide both quantitative and qualitative data sets that can be used for triangulation (Orodho, 2017). The design has other additional advantages of collecting both data sets as alluded by authors such as Orodho, Nzabairwa, Odundo, Waweru and Ndayambaje (2016a) acknowledge that descriptive research is a commonly used design due to its various advantages.

#### **3.3 Study Variables**

The two main independent variables (IVs), which focused on the Transformative learner-centered instructional method whose indicators were the frequent use of organized play, pupils' engagement in groups, and the center of interest.; and the dependent variables (DVs) measuring learning outcome whose indicators were pupils performance in practical activities as well as teacher rating of pupils ability in literacy and numeracy skills were used. The third variable considered in the research was the intervening variable, whose indicators were the type of schools, school policy, and overall school culture and climate in the schools visited.

### **3.4 Location of the Study**

The study was conducted in primary schools located in Kirinyaga East, sub-county in Kirinyaga County, Kenya. The choice of the study locale is justified based on the fact that Kirinyaga County has recorded extremely low performance at the KCPE level compared to its neighbouring counties. Records from the County Government of Kirinyaga indicates that there has been noticeable poor academically in lower classes, upper primary levels, and KCPE. (County Government of Kirinyaga, 2020). Arguably, this low learning outcome is often associated with inadequate intellectual rigor in lower grades in primary schools.

### **3.5 Target Population**

The study targeted 845 participants, comprising 35 headteachers, 210 lower primary teachers, and 600 pupils drawn from 35 public schools in Kirinyaga East Sub-County, Kirinyaga County (Kirinyaga County Development plan, 2020). The target population was found suitable due to its relevance to the study, given that the teachers and the pupils are the ones who can provide credible information regarding the effect of learner-centered instructional methods on pupil learning outcomes.

### **3.6 Sample Size Determination and Allocation to Strata**

The study employed Slovin's formula, (Orodho, 2017) to determine the sample size as follows:

$$n = \frac{N}{1 + Ne^2}$$

where

n = the desired sample size

N= the target population= 845

e = is the margin of error given as 5% (0.05)

By substituting relevant values in the formula, the sample size was obtained as;

$$n = \frac{N}{1 + \frac{N e^2}{3.115}} = \frac{845}{1 + \frac{845 \times 0.05^2}{3.115}} = \frac{845}{1 + 2.115} = \frac{845}{3.115} = 271. \text{ This yielded a sample size of 271.}$$

The allocation of samples in various strata was achieved through using a proportionate formula below:

Proportion formula =  $\frac{\text{sample}}{\text{Population}} = \frac{n}{N} = \frac{271}{845} = 0.321$ . Hence multiplying the head teacher population of 35 by 0.321 yielded the subsamples shown in Table 3.1.

**Table 3.1: Sample size and sampling procedures**

Category	Population	Sample	%
Head teacher	35	11	4.06
Teachers	210	67	24.72
Pupils	600	193	71.22
<b>Total</b>	<b>845</b>	<b>271</b>	<b>100</b>

**Source:** Developed by researcher 2018

### **3.7 Data collection Instruments and Procedure for data collection**

#### **3.7.1 Data Collection Instruments**

The study instruments used in this study are as described in the sections that follow:

##### **3.7.1.1 Questionnaires**

The semi-structured open and closed ended questionnaire for teachers was used to collect data. Data was collected using a questionnaire enables the researcher to explain the purpose of the research by giving meaning to the item that may not be clear. For the

closed ended questions, a five scale Likert scale was employed to quantify the data collected.

#### **3.7.1.2 Interviews**

Key Informant Interview schedule was used to collect data from teachers and Head teachers (Mitchelle, 2020).

#### **3.7.3 Lesson Observation Technique**

The lesson observation technique was used to confirm the extent to which transformative learner-centered approaches were utilized during lesson delivery. In each of the schools sampled, it was projected that at least three lessons were to be observed.

### **3.8 Piloting of Instruments**

Piloting was conducted to determine the validity and reliability of research instruments.

#### **3.8.1 Validity of the Instruments.**

The validity of research instruments was done using expert knowledge of supervisors and other members of the department.. The researcher handed the research tools over to an experts, including my supervisors, who ascertained their validity and commented. The corrected instruments helped the researcher to make final modifications accordingly.

#### **3.8.2 Reliability of Research Instruments**

The reliability index of the research instrument, particularly the questionnaires (Orodho,2017). The obtained coefficient was deemed appropriate for the study since it enables the instrument to produce consistent results or data after repeated trials.

### **3.9 Data Collection Methods**

The authorization to collect data was sought from NACOSTI who issued a research permit for the purpose of accessing targeted institutions and subjects. Reconnaissance visits were conducting at the Ministry and schools for authorization and familiarization and building rapport with institutions.

### **3.10 Data Analysis Methods**

The data analysis for quantitative data was assisted by SPSS while qualitative data was done manually using thematic approaches. Quantitative data from questionnaire was analyzed using statistical package for social sciences (SPSS) Computer Software to generate descriptive statistics (means and standard deviations). The analysed data were reported using quotes.

### **3.11 Ethical and Logistical Considerations**

The study was conducted after permission was granted by the Ethics Committee at Kenyatta University. Orodho et al. (2016) advise that studies that use vulnerable groups such as children and controlled methods such as strict adherence to instructional timetables require the researcher to adhere to good mien and decorum. This was ensured during lesson observation sessions in class or the field during teacher-pupil interaction without disrupting the entire process.

#### **3.11.1 Logistical Issues**

They will create awareness, allow the researcher to have subsequent preparation, and save the researcher a lot of resources. The researcher obtained a permit from the sub-county director of education in Kirinyaga East, which was meant to permit her to meet

the head teachers of the sampled schools and put forward her intentions. With the head teacher's permission, the researcher later met the teachers and parents of the sampled schools and explained the same.

### **3.11.2 Mien and Decorum**

The researcher adhered to good mien and etiquette, which refers to a person's appearance or expression of the face. The researcher, a professionally trained teacher currently teaching and managing a primary school, maintained a pleasant outlook and exhibited desirable mannerisms, especially during the lesson sessions. This was in observation to conforming with the teacher's goal of conduct policy.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION, AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the participants' demographic data and analysis and interpretation of data collected during the research. The analysis and interpretation of data were made within the framework of the objectives that this research sought to address. The results were presented according to the research objective.

- i. To determine the contribution of play on pupils' academic performance in lower classes.
- ii. To assess the role group work plays in enhancing the academic performance of lower primary pupils.
- iii. To determine the extent to which the center of interest impacts a pupil's academic performance in lower primary.
- iv. Determine the school based constraints that hinder effective implementation of transformative learner-centered pedagogy.

#### **4.2 Questionnaire Return Rate**

This section presents information on the questionnaire return rate. Table 4.1 tabulates the questionnaire return rate of teachers and pupils.



**Table 4.1: Accessible sample size and return rate**

<b>Category</b>	<b>Sample</b>	<b>Return Rate</b>	<b>%</b>
Head teacher	11	8	72.7
Teachers	67	55	82.1
Pupils	193	193	100.0
<b>Total</b>	<b>271</b>	<b>256</b>	<b>94.5</b>

**Source:** Field Data 2022

Data in Table 4.1 shows the return rate for the study in terms of the accessible sample. The return rate was for the entire study was 94.5. In terms of individual sub-samples, out of the 11 head teachers sampled, eight (8) took part in the study constituting 72.7%. The teachers who were sampled were 67 but 55 agreed to take part in the study yielding 82.1 percent. Out of the 193 pupils sampled, all took part because the researcher focused on intact classes which varied according to schools sampled and Grade level of the pupils who took part in the study. This return rate was deemed adequate for the study since according Orodho, Nzabairwa, Odundo and Ndayambaje (2016) posit that a response rate of 70% and above is adequate to validate research results. This response rate was good to work with as it concurred with Orodho et.al (2016) in all the sub-samples of the study.

### **4.3 Demographic Background of Teachers and Pupils**

The study was cognizant of the fact that certain teacher demographic variables affect the teaching and effectiveness of the teaching process (Orodho,2017). For this study, the researcher focused on gender of the teachers by designation, and years of teaching experience at the Lower Primary School Level.

#### 4.3.1 Gender and Designation

Gender variable was considered important because part of the objectives of this study was to determine the teachers perception regarding the effect of some selected pedagogical practices on pupils learning outcomes. Some of these could be interpreted along gender dimensions. The results are contained in Table 2.

**Table 4.2: Gender and designation of teachers**

Gender	Teacher Designation				Total	
	Head teacher		Class Teacher		F	%
	F	%	F	%		
Male	0	0	14	22.2	14	22.2
Female	8	12.7	41	65.1	49	77.8
<b>Total</b>	<b>8</b>	<b>12.7</b>	<b>55</b>	<b>87.3</b>	<b>63</b>	<b>100.0</b>

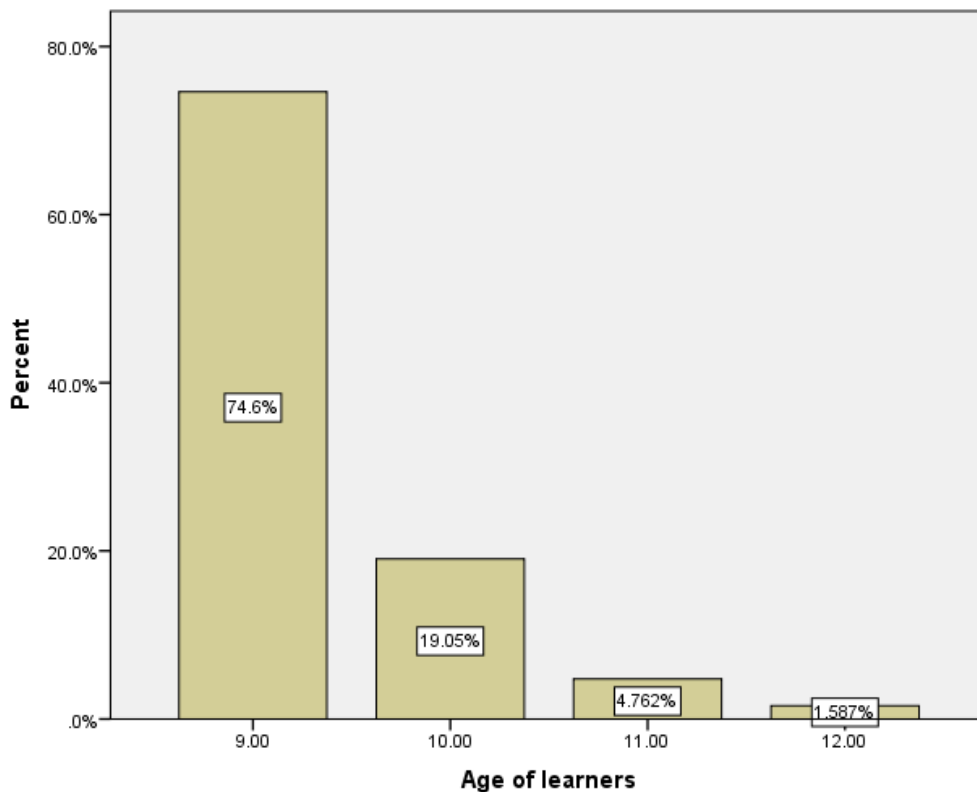
**Source: developed by researcher 2022**

Table 4.2 contains data on gender and designation of teachers of lower primary schools in the study locale. The data reveals that on the overall majority of teachers were head teachers. All the 8 school head teachers were females and over 70percent of the class teachers were also females. This finding indicates that teaching at the lower primary schools has not attracted male teachers.

The research observed the one-third gender rule, in teaching at the lower primary school level had not been achieved, hence agreeing with Pandey & Pandey's (2021) observations.

### 4.3.2 Age Characteristics of Pupils

The teachers and head teachers were requested to estimate the average age of their pupils in the respective lower primary schools which they teach. This information was critical in understanding the type of transformative pedagogy likely to be chosen by the teachers. Figure 4.1 contains information on the age characteristics of pupils.



**Figure 4.1: Age distribution of learners in the sampled classes**

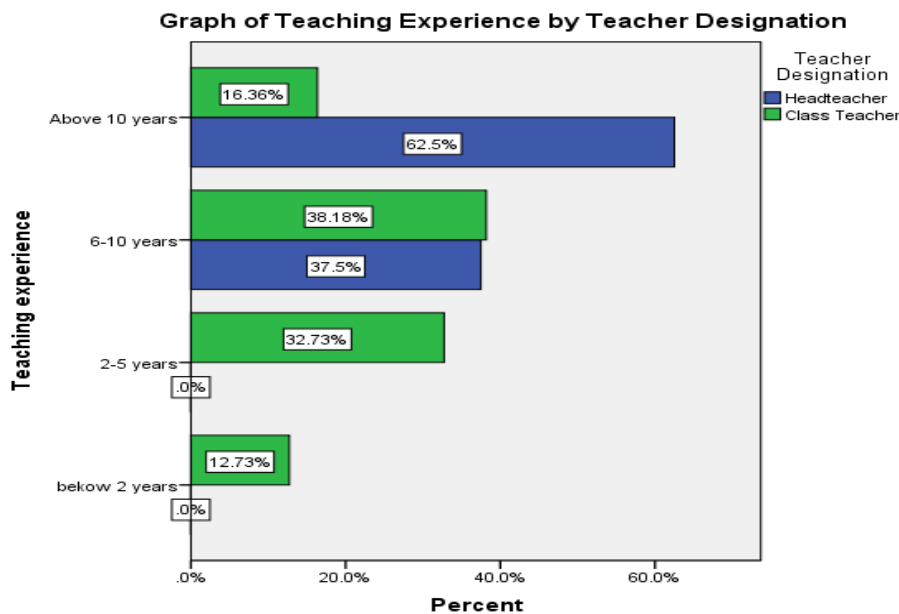
**Source:** Field data, 2022

Figure 4.1 contain data which shows that majority of learners in the lower primary school ,comprising nearly three quarters of the total were aged 9 years. While about 20 percent were 10 years old, a negligible proportion of less than 5 percent were overage at 4.7 percent and 1.58 percent aged 11 and 12 years ,respectively.

It implies that most of the pupils in lower primary school are youthful with a mean age of 9.5 years. Therefore, at this stage child should engage in activities such as play, group work, and centers of interest. This necessitates the use of suitable instructional methods.

### 4.3.3 Teaching Experience of Teachers by Designation

The results in Figure 4.2 reveals that the level of experience of various teachers was quite varied across all targeted year brackets. A larger percentage of Head teachers comprising 62.5 percent had over ten years of experience compared to their classroom counterparts comprising 16.36 percent. The classroom teachers were the only category of teachers with less than five years of teaching experience.



**Figure 4.2: Respondents by Designation**

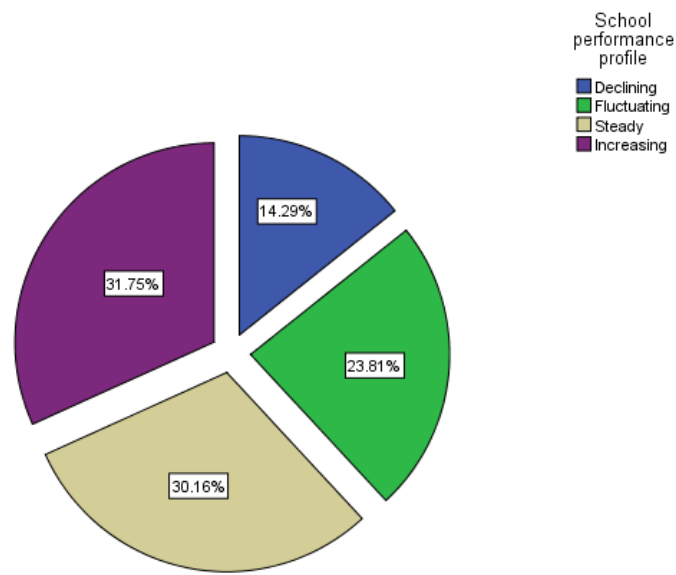
Source researcher 2022

#### **4.4. School Performance Background Information**

The current school background was found critical in understanding the types of pedagogy and interventions taking place in the sampled schools. To this end, an attempt was made to profile the performance of schools in the study locale before delving into establishing the effect of various transformative teaching pedagogy on learning outcomes among lower primary school pupils.

##### **4.4.1 The Performance Profile in School**

Respondents indicated the extent to which they considered the performance of their school in terms of pupils mastery of main competences ,especially in terms of numeracy and literacy and the pupils involvement in activities that promote active learning. The results are displayed in Figure 4.3. The results reveals that slightly less than one third of teachers in the sample, constituting 31.6 percent considered the performance of their schools as increasing.



**Figure 4.3: Chart showing the teachers perception regarding the School Performance**

**Source: Researcher 2022**

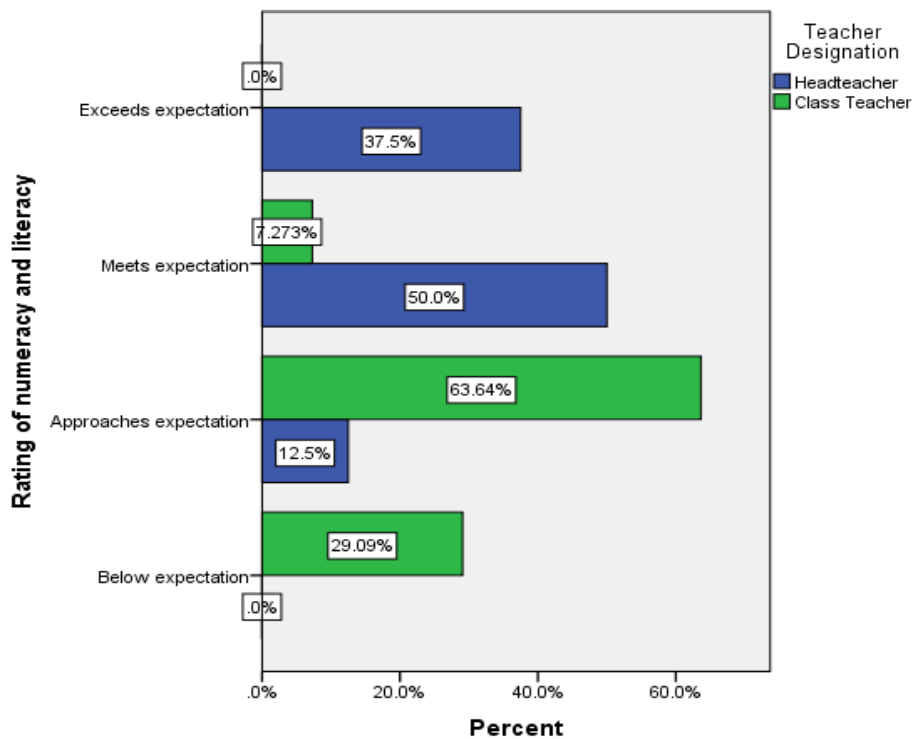
Further, about one third also considered the performance of their schools as steady. This indicates that about 61 percent of the respondents considered the performance of their schools as either increasing or steady.

On a negative tone, the results contained in Figure 4.3 contend that over one third of teachers and head teachers, comprising approximately 38 percent considered the performance of their schools as either fluctuating (23.8 percent ) or declining (14.3 % ). This is disturbing because the figures speak to the fact that schools in the Sub-County need a closer examination to determine the kind of learning pattern taking place in lower primary schools which, arguably is the foundation stage.

The results from the Figure 4.4 confirm the overall results of the Sub-County in National Examinations. The overall results indicated that the average performance was between 250 marks to 300 marks. That is typically termed fair, which means that if that is the tendency in the upper school, there is a probability of poor performance in KCPE. Chand et al. (2021) assert that the higher the effects a student acquires in primary school, the higher their chance of joining a higher standard secondary school in Kenya. The research finding had the majority of student achieving marks below 300, and it was evident that the student was not doing so well if they were to join a higher standard secondary school.

#### 4.4.2 Numeracy and literacy skills of pupils

The rating of learners regarding their literacy levels as captured in figure 4.4.



**Figure 4.4: Rating of Literacy by Participants**

Both teachers and Head teachers indicated that the learners had a fair level of attainment of numeracy and literacy. Nearly half of the teachers as compared to over half of the Head teachers rated the numeracy and literacy as meeting expectation.

The results of the study found support from studies by Bhushan (2021) and Shohel (2022). The findings agree with the current study that competency in numeracy and literacy at the lower level directs higher learners academic attainment

## 4.5 Effect of Play on Pupils Performance

### 4.5.1 Perceptions of teachers regarding effect of play on pupils learning outcome

Results of objective one on rating of teachers regarding their perception on the role of play on academic attainment of learners is depicted in Figure 4.5.

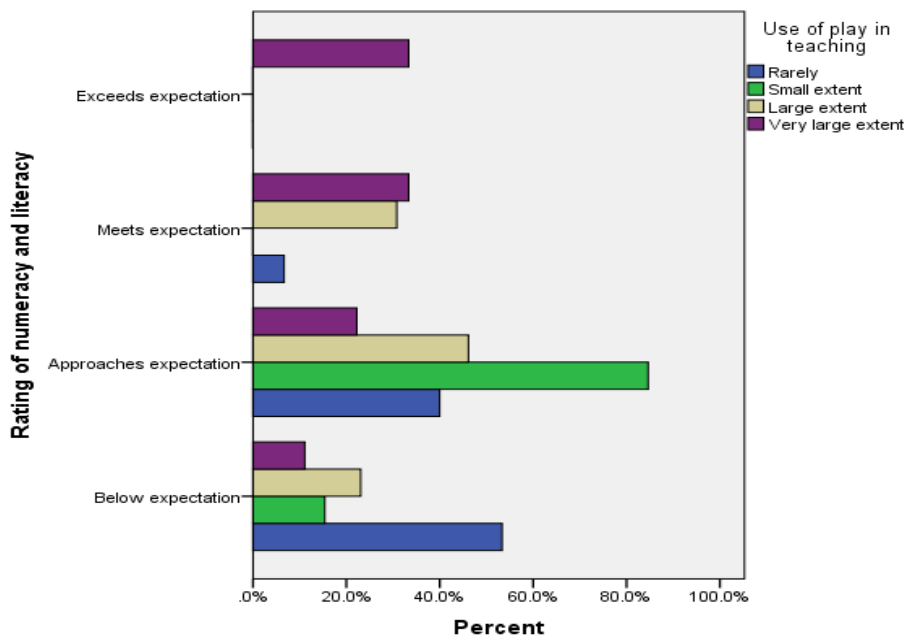


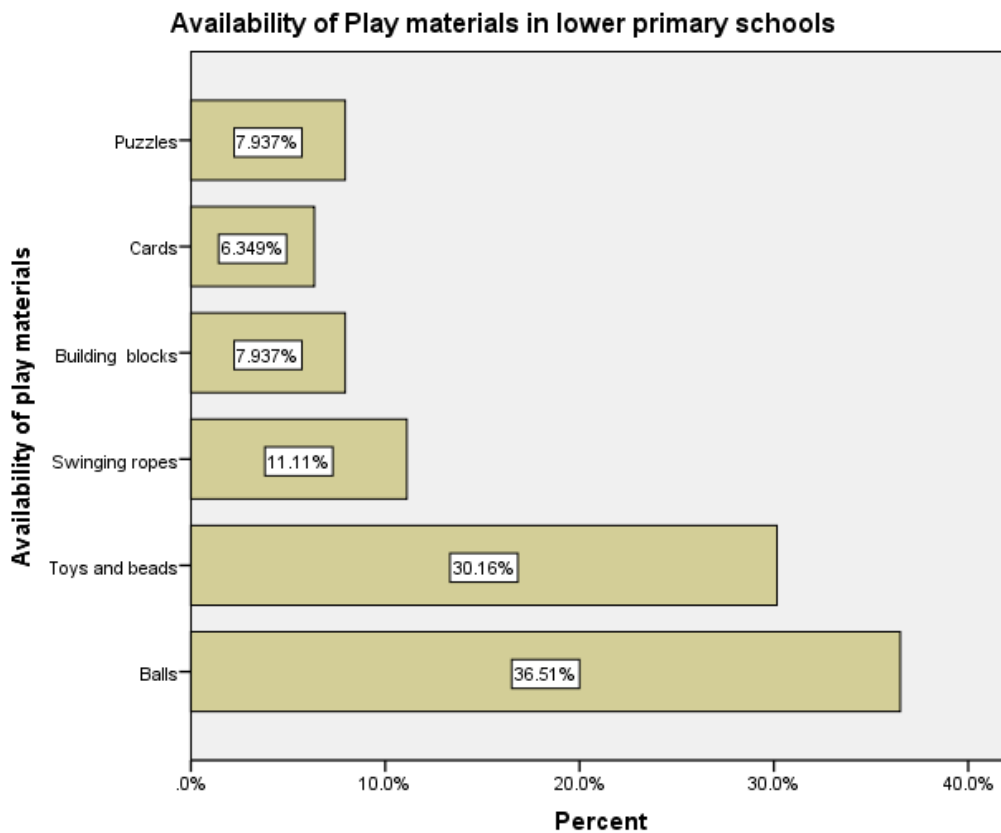
Figure 4.5: Effect of play on pupils academic outcome



The results indicate that very considerable number of participants consider play to enable learners exceed expectations. It was also noted that mixed results were obtained regarding the effect of play on learners approaching expectations. Majority however, considered use of play to a large extent to translate to learners approaching expectations.

#### 4.5.2 Availability of Play Equipment and Materials

Results of availability of play equipment is shown in Figure 4.6 .

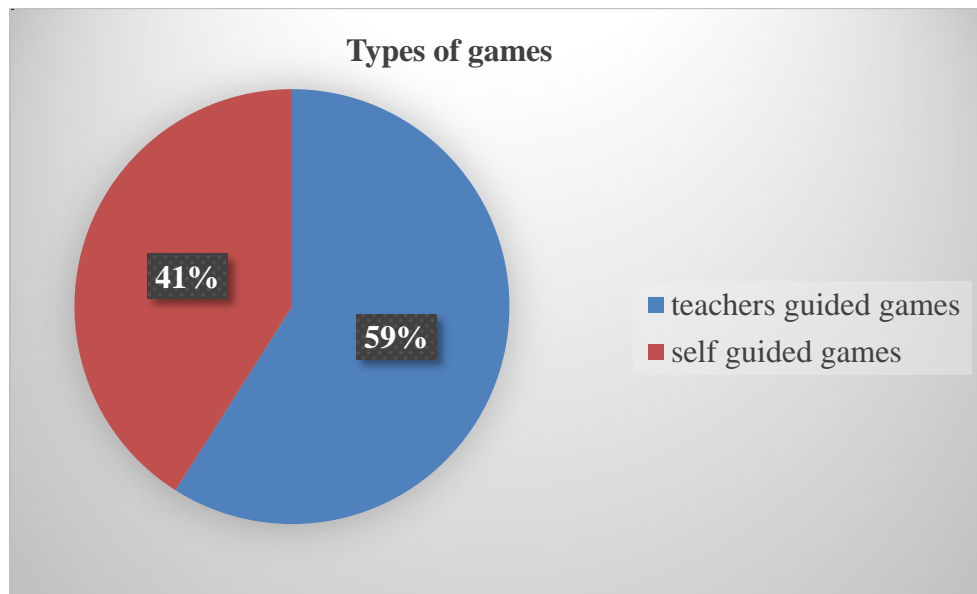


**Figure 4.6: Availability of play materials**

Results revealed that majority of play materials used in most schools included balls, tots and beads, swinging ropes, building blocks and cards. The commonly used were balls (36,5%) followed closely by toys and beads (30.1%).

#### 4.5.3 Types of Games by Organizer

Figure 4.6 compares the two types of games embraced in the region.



**Figure 4.7: Pie chart showing percentage comparison between teachers guided games and pupil self-guided games.**

**Source: Developed by researcher 2022**

Mind games and those involving creativity and innovation, such as puzzles, patterning cards, building blocks, or block boards, recorded the lowest numbers from teachers and pupils. That implies that the schools in the region did not employ games involving teachers' guides. In a percentage comparison between games that require a teacher's guidance against those that do not, the latter had 59%, followed by 41 percent.

#### 4.5.4 Effect of play on Numeracy and Literacy

**Table 4.3: Effect of Play on Numeracy and Literacy**

Use of play and numeracy and literacy	Mean	N	Std. Deviation
Rarely	1.533	15	.640
Small extent	1.846	26	.368
Large extent	2.079	13	.759
Very large extent	2.889	9	1.054
<b>Total</b>	<b>1.968</b>	<b>63</b>	<b>.763</b>

The results carried in Table 4.3 indicate that a majority of lower primary school teachers constituting 26 (41.3 %) considered play to enhance numeracy and literacy to a small extent. In fact, 41(65.1 % ) considered play to enhance numeracy and literacy to either rarely or to a small extent. The results in the table further show that 22 (34.9) either considered play to enhance numeracy and literacy to a large or very large extent. This finding indicates that majority of lower primary schoolteachers do not perceive play as a contributor to pupils enhanced performance in numeracy and literacy.

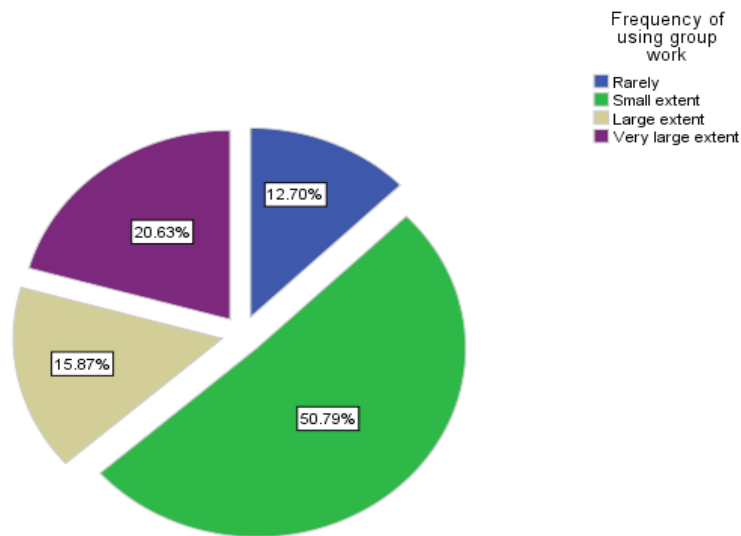
The findings seem to be consistent with those obtained by Marchant et.al.(2019) which established play was essential to psychomotor development of the pupil. By detention play also provides teachers and children with a chance to fully engage in learning and teaching during class. Further results are also in tandem with Michelle (2020) observation that families that play together with their children are more cooperative and helpful and have better communication skills.

## 4.6 Group work and Learning Outcome

The second objective investigated the effect group work on pupils learning outcomes. To be able to assess the effect of group work on learning outcome of pupils, the participants ,comprising of Head teachers and class teachers were requested to indicate the frequency with which they used group work and also their perception regarding the overall effect of group work on numeracy and literacy. They used a four scale Likert scale with 1= Rarely, 2= Small extent, 3= Large extent and 4= Very large extent.

### 4.6.1 The Frequency of Group work

Participants reported the extent to which they utilized group work in their teaching, and results displayed in Figure 4.8.



**Figure 4.8: Frequency of use of Group work**

The Figure 4.8 shows that over half, comprising 50.7 percent of the teachers of lower primary schools reported to use group work to a small extent. Surprisingly, a considerable percentage, comprising 12.7 percent reported to rarely use group work even in the current competency based curriculum (CBC) which requires teachers to transit from teacher centered to learner centered pedagogy's fact, slightly over one third, comprising 36.5 percent reported to use group work to either a large or very large extent. The overall indication was that the group work teaching method was not embraced in more than half sampled schools. In the interview schedule, teachers claimed it was tiresome and ineffective due to wasting time when rearranging into such groups. Some teachers also said group work would be practical in upper classes because they require a little guidance and follow-up.

#### 4.6.2 Group work and Numeracy

Results of group work and literacy is exhibited in Table 4.4

**Table 4.4: Effect of group work on pupils numeracy and literacy outcome**

Group	Below expectation		Approaches expectation		Meets expectation		Exceeds expectation		Total	
	F	%	f	%	f	%	f	%	f	%
Small extent	1	1.6	12	18.0	0	0.00	0	0.00	13	20.6
Large extent	6	9.5	17	27.0	5	7.90	0	0.00	28	44.4
Very large extent	9	14.3	7	11.4	3	4.80	3	4.8	22	34.9
Total	16	25.4	36	57.1	8	12.7	3	4.8	63	100.

**Source: developed by researcher 2022**

The results in Table 4.4 reveals that nearly one quarter of the sampled teachers considered group work to influence pupils performance in numeracy and literacy to a small extent. Majority of the teachers, constituting 79.3 percent acknowledged the fact that group work influences pupils performance to a large extent (44.4 percent) and very large extent (34,9 percent) of all teacher responses. The results are in tandem with Huarage et al ,(2020) who aver that group work can effectively motivate students and enable them enhance their learning outcomes (Oliveira, 2021).

Lesson observation revealed that use of group work was predominantly used while handling mathematics and science-the two subjects dominated with a percentage of 78%. English, Kiswahili, and Social studies subjects had a frequency of 22% in terms of using group works. Teachers who participated in the interview indicated that group work was best for more complex issues, meaning Science and Mathematics. They added that group work in subjects like English was only applicable during debate sessions. Some said group work for Kiswahili could best fit while teaching poetry. While others said that the topics they would apply to group work in social studies were physical features. These findings agreed with Oliveira (2021) that, at times, group work as an instructional method is sometimes viewed as a waste of time, especially when it is not well planned.

According to Lombardi et al, (2021) group work is usually accelerates students' active working modes. According to the researchers, all-around learning involves group work, and students engage freely to grasp the information better. Collaborative work promotes academic achievement. According to Shim & Lee (2020), group work makes it easier

for learners to focus on the topic and enjoy the learning process. Franco & DeLuca (2019) asserts that students learn to be more inquisitive and yearn to learn more by themselves later.

Group work serves a core role in attaining academic knowledge and interpersonal skills (Panayiotou, Humphrey & Wigelsworth, 2019). Group work involves pupil-to-pupil relationships, formal relationships mainly centered among students (Bovill, 2020). Pacheco, Lafe & Newell (2019) suggest learners should learn to work with others and that specific abilities and skills can only be learned in a group.

On the overall, group work serves a core role in attaining academic knowledge and interpersonal skills (Panayiotou, Humphrey & Wigelsworth, 2019). Group work involves pupil-to-pupil relationships, formal relationships mainly centered among students (Bovill, 2020). Pacheco, Lafe & Newell (2019) suggest learners should learn to work with others and that specific abilities and skills can only be learned in a group.

#### **4.7 Center of interest and pupils learning outcome**

The third objective investigated the effect of center of interest on pupils learning outcome. Participants were requested to indicate the extent they consider center of interest influences pupils learning outcome, in terms of numeracy and literacy This information is captured in table 4.5.

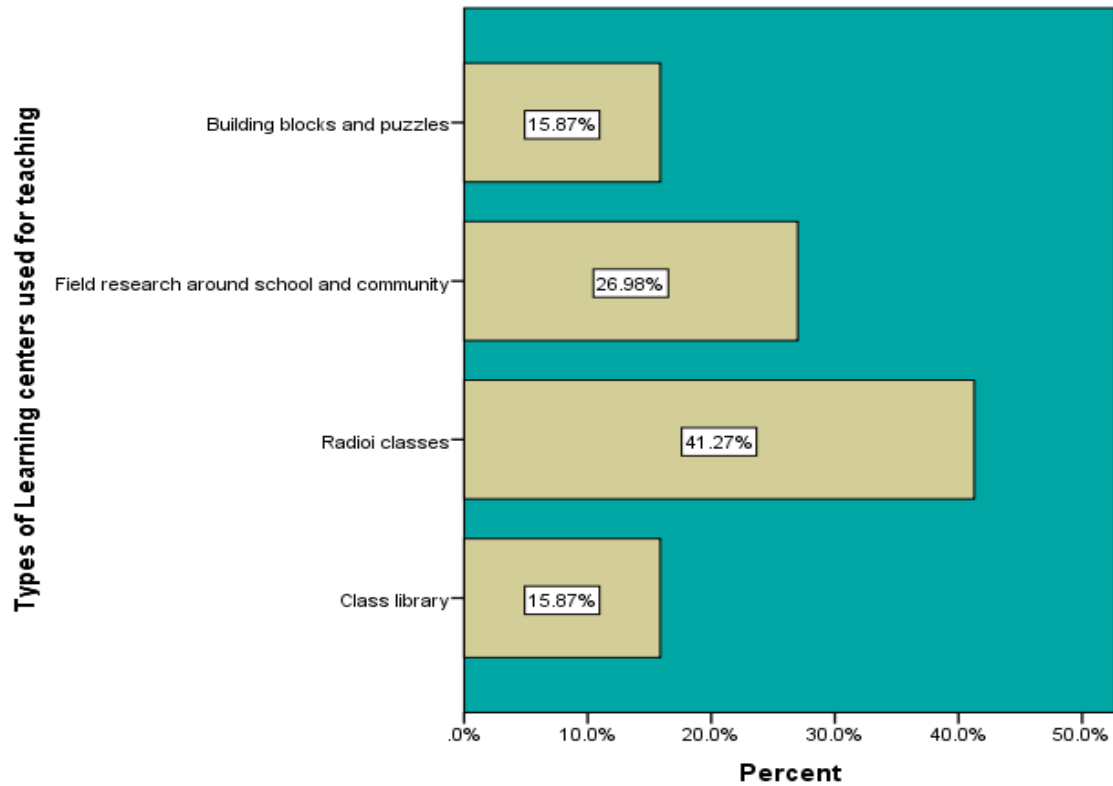
**Table 4.5: Effect of Centers of interest on Numeracy and Literacy**

<b>Center of Interest and numeracy and literacy</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
Rarely	1.69	25	
Small extent	2.24	25	
Large extent	2.25	8	
Very large extent	1.60	5	
<b>Total</b>	<b>1.968</b>	<b>63</b>	

The results in Table 4.5 review a very disturbing trend since over three quarters, constituting 79.4 percent of the participants considered centers of interest to influence pupils numeracy and literacy either rarely or to a small extent. This implies that less than one quarter, constituting 20.6 percent considered centers of interest to influence pupils learning outcome in terms of arithmetic and writing to a large or very large extent. The message from the table is that teachers do not perceive the use of centers of interest to spur pupils learning outcome in terms of numeracy and literacy.



### Types of Learning Centers commonly used for teaching



**Figure 4.9: Types of Learning Centers of Interest used for teaching**

**Source developed by researcher 2022**

The results in Figure 4.9 reveals that the most commonly used center of interest was the radio comprising 41.27 percent followed by field research in the school and community. The least used center of interest was reported to be class library as well as building blocks which were reported by 15.87 percent, and building blocks equally at 15.87, respectively.

During interviews as lesson observations were implemented, the research explored the use of specific centers of interest strategies for delivering information to children through familiar aspects such as; classroom libraries, listening centers, and many other centers of interest.

When teachers were asked to mention whether their primary schools used centers of interest in delivering education to children, the following emerged :

All the teachers' participants indicated using one or two centers of interest. Amongst the tabled center of interest to choose from, most schools had radio classes, research fields with plants, and cleaning and watering plants as their primary center of interest areas. A distribution of 10 teachers utilized classroom libraries while only 20 teachers and Head teachers had radio classes.

It is instructive to note that majority of schools do not apply these interest centers in learning, differing from Martin et.al.(2018) works on the importance of these instructional methods. According to Martin et al. (2018), interest centers allow children to manipulate the materials available to them, explore them at their own pace, and become familiar with them, all of which leads to them being able to take their exploration to the next level.

The finding is in tandem with Chumdari et al. (2018) who contends that centers of interest as a theme, topic, or main subject about which the pupils are learning at a specific time and which links or correlates with many issues. Kim (2020) adds his voice to this discourse by averring that children will learn very little unless motivated

using the numerous ways teachers can engage and reengage the students during teaching and learning.

Heilporn, Lakhal & Bélisle (2021) notes that teachers need to demonstrate to the learner what they are teaching by relating what they taught the learner to a practical life situation. Thus, it is arguable that this approach will not only actively engage them but also boost their understanding of what the teacher has taught. Teachers should focus on exposing the students to activities that connect to real-life situations, that is, learning by practicing what they have learnt in class (Brandt, 2021).

In contrast, Sah & Shah, ( 2020) counsels that tutors should avoid drilling learners since this makes them not understand the concept being taught in class In the modern world, tutors should utilize student-centered strategies to promote analytical research, enjoyment, and critical thinking and interest (Nahar, 2021). Center of interest-based tutoring strategies is more effective since it does not centralize the flow of knowledge from the facilitator to the learner (Abdulrahaman et al., 2020). The teaching methods should be targeted toward this end to ensure that the learner understands what is being taught. (Ehsan, Vida & Mehdi, 2019). Kim (2020) asserts that children always show a much greater interest in lessons that are associated with their own needs and experiences than in those which are not. We then use the local market as a centre of interest around which lessons are built.

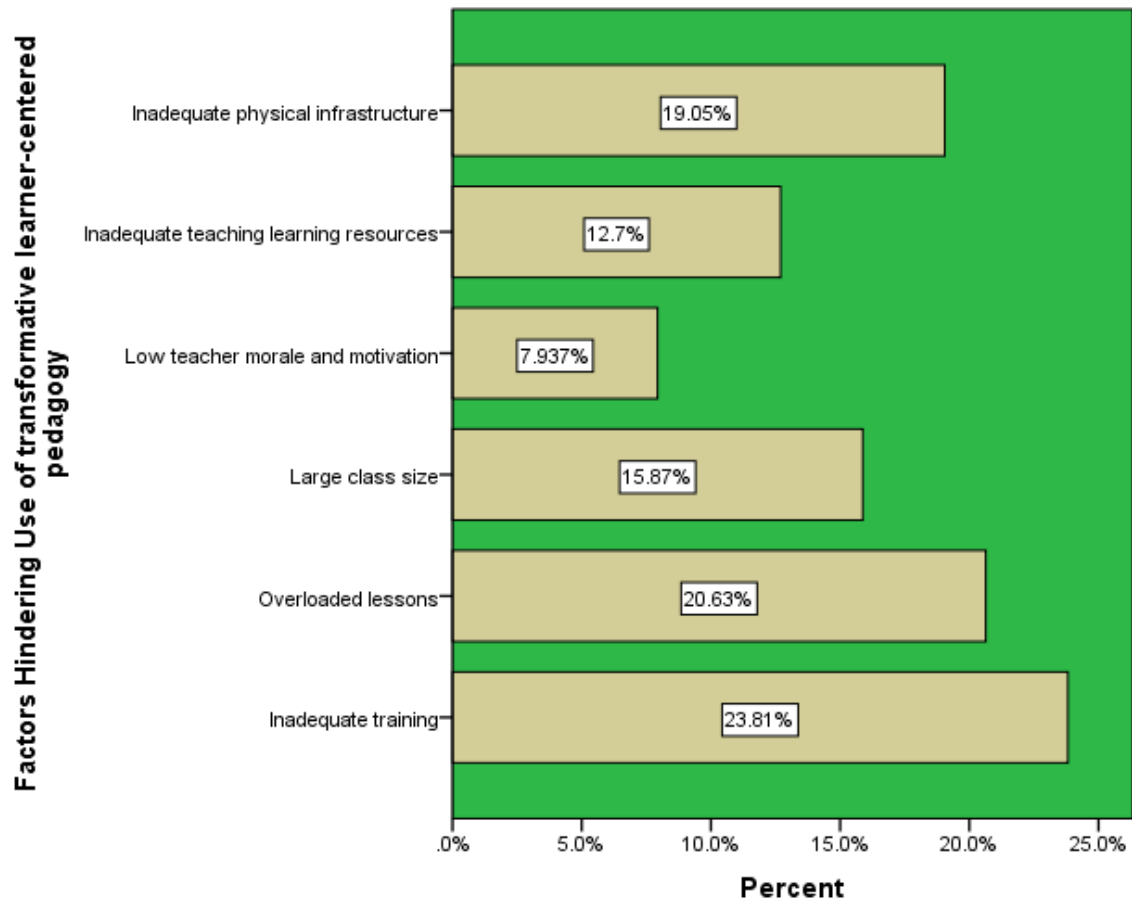
Shin & Kin (2019) suggests that center of interest-based learning benefits students and tutors. According to him, in this kind of learning, students engage in learning by drawing upon their prior knowledge and experiences. Shin & Kin (2019) asserts that

this approach uses the student 's prior knowledge as a building block to integrate new understandings with prior learning.

Shin & Kin (2019) learning should be relevant to the students not only in-class work, but they should be able to utilize the knowledge and skills in their real life, meaning they should be able to solve the challenges they encounter in life. The literature review on the center of interest reveals it as a comprehensive and essential approach if we were to help learners acquire knowledge and skills in our schools. However, a thorough investigation during lesson observation sessions this was not being implemented.

#### **4.8 Factors Hindering Use of Transformative Learner-centered Pedagogy**

The fourth and final objective sought to establish some of the constraints to use of transformational learner-centered pedagogy. The participants were asked to mention some of the factors they consider to thwart their efforts to use modern transformational learner-centered pedagogy. Results are carried in figure 4.10.



**Figure 4.10: Factors Hindering Use of Transformative Learner-centered Pedagogy**

The results in figure 4.10 indicate that there are several factors hindering the application of transformational learner centered pedagogy in classroom setting on the ground. Most of these factors were confirmed during the lesson observation sessions in various schools sampled for the study. It was evident that nearly one quarter (23.81% ) consider inadequate training as a main constraint. This was closely followed by 20.63 percent and 19.05 percent, who mentioned overloaded lessons and inadequate physics and infrastructural resources, respectively. These two factors can be attributed to the

Government of Kenya policy of 100 percent transition from one grade or level to the other.

The other constraints cited were large class size, inadequate teaching and learning resources and low teacher morale and motivation cited by 15.87 percent, 12.7 percent, and 7.94 percent, respectively.

The results are in tandem with Pham et al., (2019) who indicated that a learning environment with various presentation methods promotes learners' participation, builds critical reasoning among the students, and fosters a more profound understanding of the ideas effectively. That means the students can provide the solution during class activities. There is little doubt that if quality is to be achieved, the teaching-learning scenario must be improved, and the cited constraining variables minimized. This is supported by Brookfield, (2018) who stresses on availability of learning resources and varied learning activities.

## **CHAPTER FIVE**

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

#### **5.1 Introduction**

This chapter summarizes the research, conclusions, recommendations, and suggested areas for further studies. The summary will highlight the main objectives and research design including the overall reporting format used during quantitative and qualitative data collection, analyses and reporting.

#### **5.2 Summary of the Research**

The research investigated the role of transformative instructional methods on pupils' academic achievement in the lower primary in Kirinyaga East sub-county, Kirinyaga County, Kenya. The research adopted a descriptive survey design and targeted lower primary teachers and pupils in Kirinyaga East region, Kirinyaga County public primary schools.

More than half (51%) of the teachers utilized the question and answer method to investigate the role of transformative instructional methods. The researcher found that play, group work, and centers of interest were not effectively utilized. That is because the teachers were handling large numbers of students. The research indicated that sixty percent (60%) of the head teachers were not committed to monitoring play activities, a situation that has led teachers to lack commitment. In the role of parents in support of the instructional methods, the researcher found that only 4% of the parents visited the school regularly.

The research found that most teachers utilized question and answer and drilling methods. They claimed to choose the two methods over other methods because they were handling overcrowded classes. Instructional methods such as play, group work, and center of interest were unpopular.

The study discovered that most playing grounds were neglected and that students had to make their playing supplies. Only when the P.E. class was not being used to educate to cover the curriculum did teachers accompany students to play. According to the findings, teachers could not engage in play with their students because of their age. Teachers thought that the time allotted for recess between classes was sufficient for pupils to refresh themselves, and they did not feel that students needed more time to play. Pupils were found to play during their breaks solely. There was no student participation in class since the instructor exclusively used class time for instruction. After-class time was devoted to cleaning the classroom and attending to school business. Moreover, the two kinds of play could be conducted by pupils and hence did not require teacher guidance. Mind games and those involving creativity and innovation, such as puzzles, patterning cards, building blocks, or block boards, were unpopular in many schools.

### **5.2.1 Role of Play in Enhancing Pupil's Academic Performance**

It is concluded that play is a vital determinant of pupils' academic achievement. The researcher noted that majority of the playing fields were poorly maintained and pupils themselves locally made balls which they used for play activities.



### **5.2.2 Group Work**

The research on the group work method of teaching found that it was not embraced in more than half sampled schools in the region. Results indicated that teachers viewed group work as tiresome and ineffective because it took time to rearrange the groups. Other perceptions of group work were that it is effective in upper classes because pupils at that level require little guidance.

Results revealed that group work was majorly on mathematics and science. The two were termed more complex subjects, and most schools allocated more time and resources to the two. The research found that many teachers viewed group work in subjects like English, Kiswahili, and social studies as ineffective.

### **5.2.3 Centre of Interest**

The research found that teachers employed at least one or two centres of interest in all schools. Most teachers had radio classes, research fields with plants, and cleaning and watering plants as their primary center of interest areas. It was found that activities such as classroom library, collection of diverse types of rocks and soil, watching birds, music classes and role play, cooking projects, washing, and finally, building blocks were not embraced in the majority of schools.

## **5.3 Conclusion**

Most teachers relied on teacher-centered methods and not student-centered ones. They used question and answer methods and drilling methods compared to play-centered, group work, and center of interest methods. Pupil's performance in the end-term examinations was average which was attributed to traditional teaching methods. The

ability to read, write and solve mathematic problems for lower primary pupils was a problem. That implied they graduated to upper primary with problems and poor performance term after term and later in KCSE.

#### **5.4 Recommendations for Policy**

1. There is need for teachers to use a mixture of pedagogical approaches that stimulate and spur the holistic development of all learning domains.
2. The Devolved County Governments should consider allocating all schools with playing materials and equipment required for effective teaching and learning.
3. Motivation and re-tooling teachers is mandatory for teachers especially as they transits from the 8:4:4 education system to the 2:6:6:3 which is competency based.
4. The child needs to be mentally and physically stimulated to develop self-esteem, confidence, ability to express oneself, and problem-solving skills. It is therefore recommended to involve the learners in an all-around environment which will involve outdoor activities, play or discussions and debates as well as drama and swimming lessons.

#### **5.5 Suggested Areas for Further Research**

1. Research should be conducted to establish the challenges facing primary school teachers in implementing a new curriculum.
2. Research should be conducted on factors that contribute to most primary school teachers using traditional teaching methods.

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## **APPENDICE**

### **APPENDIX 1: QUESTIONNAIRE FOR THE TEACHERS**

The information given on this questionnaire will be treated with absolute confidentiality and will only be utilized for research purpose only. Please complete the questionnaire truthfully and honestly by ticking where suitable.

1. Please indicate your Gender

Male        ☐                                  Female                                  ☐

2. How many years have you served as a lower primary teacher?

Below 2                                  ☐

2 - 5 years                                  ☐

6 - 10 years                                  ☐

Above 10                                  ☐

3. How do you rate pupils' performance for the past 3 years?

Progressive                                  ☐

Static                                  ☐

Declining                                  ☐

4. What is the numeracy and literacy skills rating of pupils?

Below expectation                                  ☐

Approaches Expectation                                  ☐

Meets Expectation                                  ☐

Exceeds expectation                                  ☐

5. Tick the kind of play you engage your pupils in when teaching

<b>Play activity</b>	<b>Rarely 1</b>	<b>Small extent 2</b>	<b>Large extent 3</b>	<b>Very large extent 4</b>
Games during P.E lessons				
Outdoor play in the evening				
Toys and beads				
Patterning cards				
Swinging ropes				
Building blocks				
Filling puzzles				
Table and plastic boards				

6. Assess the extent to which the following learning method enhances

Outcome/performance

<b>Play activity</b>	<b>Below Expectation 1</b>	<b>Approaches Expectation 2</b>	<b>Meets expectation 3</b>	<b>Exceeds expectations 4</b>
Games during P.E lessons				
Outdoor play in the evening				
Toys and beads				
Patterning cards				
Swinging ropes				
Building blocks				
Filling puzzles				
Pegboards				
Balls and sports				

7. To what extent do you use Group Work teaching in your class?

1. Rarely
2. Small extent
3. Large extent
4. Very large extent.

8. To what extent do you use Group Work teaching in your class?

5. Rarely
6. Small extent
7. Large extent
8. Very large extent.

8. To what extent do you use Group Work teaching in your class?

1. Rarely
2. Small extent
3. Large extent
4. Very large extent.

9. To what extent do you use the following learning centers of interest as a teaching method?

<b>Areas of interest</b>	<b>Rarely 1</b>	<b>Small extent 2</b>	<b>Large extent 3</b>	<b>Very large extent 4</b>
Listening centers				
Role play and dramatic plays				
Field research for plants and animals				
Music lessons				
Team building activities				
Charts and graphs				

10. Assess the effect of the following centers of interest enhances pupils learning outcomes

<b>Areas of interest</b>	<b>Below Expectation 1</b>	<b>Approaches Expectation 2</b>	<b>Meets expectation 3</b>	<b>Exceeds expectations 4</b>
Listening centers				
Role play and dramatic plays				
Field research for plants and animals				
Music lessons				
Team building activities				
Charts and graphs				

11. What are the average marks of pupils in end-term exams?

1. Below 200     [   ]                      200 – 500     [   ]
2. 250 - 300     [   ]                      Above 300     [   ]

**THANK YOU FOR YOUR COOPERRATION**

## APPENDIX 2: OBSERVATION GUIDELINE DURING LESSON DELIVERY IN CLASS TAUGHT

1. What is your gender?

Male ☐ Female ☐

2. Teaching experience of the teacher

Less than one year ☐ 1-3 years ☐

4-5 years ☐ 5-7 years ☐

8-9 years ☐ 10 years and above ☐

3. Assess the extent to which the following learning method enhances

Outcome/performance

<b>Play activity</b>	<b>Below Expectation 1</b>	<b>Approaches Expectation 2</b>	<b>Meets expectation 3</b>	<b>Exceeds expectations 4</b>
Games during P.E lessons				
Outdoor play in the evening				
Toys and beads				
Patterning cards				
Swinging ropes				
Building blocks				
Filling puzzles				
Pegboards				
Balls and sports				

4. Assess the effect of the following centers of interest enhances pupils learning outcomes

<b>Areas of interest</b>	<b>Below Expectation 1</b>	<b>Approaches Expectation 2</b>	<b>Meets expectation 3</b>	<b>Exceeds expectations 4</b>
Listening centers				
Role play and dramatic plays				
Field research for plants and animals				
Music lessons				
Team building activities				
Charts and graphs				

Any other observation regarding use of learner-centered Pedagogy? Explain.....

.....

.....

### **APPENDIX 3: INTERVIEW SCHEDULE FOR TEACHERS**

1. Are you a trained teacher?
2. For how long have you been a teacher?
3. How long have you taught in this school?
4. What is the common method of teaching which you use to teach?
5. What are the main instructional challenges related to learner centered methods of teaching?
6. How do you overcome these challenges?
7. What is your general comment regarding teaching at this level?

**THANK YOU FOR YOUR COOPERATION**

## APPENDIX 4: RESEARCH AUTHORIZATION



### 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

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

Ref: No. NACOSTI/P/16/67753/13801

Date:  
23<sup>rd</sup> September, 2016


Janet Wanjira Njogu  
Kenyatta University  
P.O. Box 43844-00100  
NAIROBI.

#### RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on  
*“Transformative instructional methods that enhance pupils’ academic  
achievement in lower primary schools in Kirinyaga East Sub-County Kenya,”*  
I am pleased to inform you that you have been authorized to undertake  
research in **Kirinyaga County** for the period ending **23<sup>rd</sup> September, 2017.**

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

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

  
BONIFACE WANYAMA  
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner  
Kirinyaga County.

The County Director of Education  
Kirinyaga County.



## APPENDIX 5: RESEARCH PERMIT

**THIS IS TO CERTIFY THAT:**

**MS. JANET WANJIRA NJOGU**

**of KENYATTA UNIVERSITY, 68-10309**

**KIAMUTUGU, has been permitted to**

**conduct research in Kirinyaga County**

**on the topic: TRANSFORMATIVE**

**INSTRUCTIONAL METHODS THAT**

**ENHANCE PUPILS' ACADEMIC**

**ACHIEVEMENT IN LOWER PRIMARY**

**SCHOOLS IN KIRINYAGA EAST**

**SUB-COUNTY KENYA**

**for the period ending:**

**23rd September, 2017**

**Permit No : NACOSTI/P/16/67753/13801**

**Date Of Issue : 23rd September, 2016**

**Fee Recieved :Ksh 1000**

**Applicant's Signature**

**Director General**

**National Commission for Science, Technology & innovation**

