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HAPTICSAND PROXEMICS USED IN STANDARD ONE PUPIL-TEACHER CLASSROOM INTERACTION, IN SELECTED SCHOOLS OF KARIARA-KIGORO DIVISION, MURANG'A COUNTY, KENYA

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF A MASTER OF ARTS DEGREE IN ENGLISH AND LINGUISTICS IN THE SCHOOL OF HUMANITIES AND SOCIAL SCIENCES KENYATTA UNIVERSITY

NOVEMBER, 2018

DECLARATION

I hereby declare that this dissertation is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this research project to my beloved wife Ann Wanjiru, my dear daughters, Debora and Joan, my Parents Geoffrey Kibe and Naomi Wambui, Pastor Eliazar Wachira and to all class one pupils of Giachuki Primary School.

ACKNOWLEDGEMENT

My strength comes from the Lord who has given me life and health. He encourages me through difficult times and without Him, I would not have come this far. Praise be to God. I would like to thank my supervisors Dr. Emily Ogutu and Dr. James Njiri for their continued support throughout the entire period of this research. Their patience, interest in the research and guidance has brought this research to its successful completion. I also thank all the staff department of English and Linguistics Kenyatta University for their support and encouragement. I am also grateful to Giachuki Primary School staff for their support.

I thank Dr. Kiguru for his unending support which comes in various ways. Without him, I would have come to a sudden termination of my studies. I am grateful to all my friends and late Aunt Winnie Mumbi for her immense support. My special tribute goes to my dear wife Anne and our two daughters Debora and Joan. They provided continued encouragement during my academic struggle. They were patient enough throughout my period of absence when they needed me most. My success is theirs.

Finally, would like to thank standard one pupils' Giachuki Primary and their teacher Ms. Karanja for according me good environment for data collection. I may not manage to thank all those who contributed either directly or indirectly to the success of this research. It is my prayer that God rewards each one of them in a special way.

To God be all the glory

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LIST OF ABBREVIATIONS

UNICEF	-	United Nations International Children's Emergency Fund
NEMA	-	National Environment Management Authority
CVI	-	Cognitive Valence Theory
CAT	-	Communication Accommodation Theory
SAT	-	Speech Accommodation Theory
PE	-	Physical Exercise
NACOSTI	-	National Commission for Science Technology and Innovation

OPERATIONAL DEFINITION OF TERMS

Classroom discourse: This is a communication activity that occurs mainly in the classroom.

Communication: This is the exchange and flow of information and idea from one person to another.

Dyads: This is something that contains two elements, parts or a group that is made up of two items.

Haptics: This refers to touch which is an important communicative tool. There are different types and styles of touch but they vary according to personal preference and one's culture.

Hybrid touches: These display greeting or departure that expresses affection.

Non-verbal communication: It involves communication by means other than words.

The traditional dimensions of non-verbal communication includes among others, physical appearance, personal space, facial expression, gestures, posture, touch, eye contact, vocal cues and time

Positive effect touches. These include touches of support, appreciation, inclusion, affection, physical attraction, and sexual interest.

Proxemics: This refers to personal space and distances that man is comfortable with and it depends on their culture and personal preferences.

Task related touches: These are the touches that may accompany a task and includes pointing at words using pointers, or using fingers to read a sentence.

Verbal Communication: This is passing of information from one person to another using words and sentences.

Visual cues: This is information attained via the use of the eyes.

ABSTRACT

The study sought to investigate haptics and proxemics used in standard one pupil-teacher classroom interaction, in selected schools of Karia-Kigoro division Murang'a County, Kenya. The objectives of the study were to: identify the haptics and proxemics that class one children use in class; describe how the class one children respond to the use of haptics and proxemics in class; compare haptics and proxemics used by teachers in class one; and finally investigate the roles of proxemics and haptics in learning among class one pupils. The cognitive variance theory and the communication accommodation theory were used to explain the use of haptics and proxemics in standard one pupil-teacher classroom interaction. The study took place at Kariara-Kigoro division in Murang'a County, Kenya. Questionnaires were used to get information from class one teachers about the haptics and proxemics used in class room interaction. Observation of the behavior of the pupils and teachers and communication pattern were made. Data was analyzed both quantitatively and qualitatively where observation notes were compiled and videos were interpreted and presented in narrative form. Photographs were interpreted in order to describe the haptics and proxemics used in class one pupil-teacher interaction. The study came up with the following findings: Use of haptics and proxemics among class one pupils is dependent on message being communicated and hence differed from one pupil to another and situation of pupil. The use of haptics and proxemics in classroom interaction make learning easier and teaching more effective. A key recommendation of the study is that teachers, parents and other care givers should be sensitized on the importance of the use of haptics and proxemics in communication.

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This section contains: the background of the study, statement of the problem, research objectives, research questions, research assumptions, rationale of the study and the scope and limitations of the study.

1.1 Background to the Study

This research work focused on communication. Communication maybe perceived by many people as solely verbal with words as the only means for communicating. However, many times people communicate non-verbally. For instance non-verbal communication is an important occurrence among children who use it to convey different messages (Bonito and Sander, 2009). The non-verbal processes deal with body behavior and messages of space, time and silence. Non-verbal communication plays several essential parts in social interactions like expression of attitude, emotions, and support in speech by enriching utterances and synchronizing management. Non-verbal communication is more convincing than verbal communication. For example, when somebody greets you with a super friendly tone but gives you “cold” eyes, you tend to believe the eyes communication and ignore the words uttered (Camperio and Malaman, 2002). First impressions are created by significant non-verbal communication. The non-verbal signs that other people display shape the first judgment we make about them.

Research in communication suggests that many feelings and intentions are sent and received non-verbally. Mehbrain & Wienre (1968) suggested that 7% of message is sent through words, with the remaining 93% being sent through non-verbal expression. Everything that surround us conveys a specific message, for example material objects like flowers give the mood, the sun at the horizon indicate sunrise time to wake up or sunset time to go home. Verbal communication can be turned off but it is hard to turn off non-verbal communication; even silence speaks (Cessario and Higgins, 2008). Words or silence all have a message value attached to them; they are influential and they communicate to others who also respond back.

A study by Camperio and Malaman (2002) is useful in not only documenting how teachers (both male and female) use classroom space but also how teachers use of space affects students perception of teachers. Closer physical distance between the teacher and the students creates a more conducive learning environment and causes higher academic performance. Pontefract and Hardman (2005) reported on the role of classroom discourse in supporting children learning in Kenyan primary school. The study further suggested that teachers should move closer to learners in class to enhance student centered learning. The researcher wanted to find out whether this is the case with class one pupils.

Studies on preschool early elementary school children suggest that awareness of appropriate personal space increases with age. Manusov and Patterson (2008) found that both male and female preschool children could associate distance with affect. Children aged between four and six-years-old showed an improvement over three-years-old and placed greater distance between angry dyads than happy dyads. Study by Sass and Weinstein (1971) indicated that by five years of age social interpersonal distance behaviors had been acquired. Thus, kindergarten teachers should expect that some knowledge of distance will be manifested in their pupils' behavior.

The modern era has been characterized by development in communication technology, most people use technological symbols to convey non-verbal message. Children mostly learn by observing adults and the way they react. Modern technology has isolated man in terms of socialization. Use of technological symbols to convey message has neglected the ancient non-verbal communication (Richards, 2014). Pupils in class one has access to modern technology devices and use them to communicate with each other.

The current move by the government to introduce technology to pupils by offering class one pupils with laptops to enhance innovation development implies that technology is taking over the traditional methods of communication.

The researcher explored to whether class one pupils have developed use of haptics and proxemics in classroom situation. The current study discusses the non-verbal communication of haptics and proxemics used among class one pupil.

1.2 Statement of the Problem

Although a lot of research has been done in this area in the developed world, there are no published materials or other forms of documentation in the area of haptics and proxemics used in classroom interaction here in Kenya hence there is very limited documentation in this area. It is this gap of knowledge that the current study sought to fill.

Haptics and proxemics are important to human beings in communication and when they are incorrectly interpreted, communication is adversely affected and interaction becomes difficult. Young children are growing up and are in the process of acquiring verbal communication competence. When both pupils and teachers understand the use of non-verbal communication cues it will enhance classroom interaction. Local scholars like Omoke (2010); Mwangi (2010); Neema (2010); have focused on other forms of non-verbal communication elements on kinesics, artifacts and vocalic. UNICEF Kenya (2013) asserts that young children as class one pupils are being abused via inappropriate touch, being shown pornographic materials or raped by child molesters.

This revelation further underscores the relevancy for this study in shedding light on the use of haptics and proxemics by children and their teachers. There is need to sensitize both teachers and pupils on the use of nonverbal communication. The fact that proxemics influences haptics makes this area an interesting area to study on how the class one pupils interpret touch and distance.

1.3 Research Objectives

The study sought to:

(i) Identify the haptics and proxemics that class one pupils use in class.

(ii) Establish the reaction of class one pupil to the use of haptics and proxemics by their teacher and fellow pupils in class.

(iii) Establish how class one teachers use haptics and proxemics in class.

(iv) Find out the roles of proxemics and haptics in learning among class one pupils.

1.4 Research Questions

This study attempted to answer the following questions;

(i) Which haptics, and proxemics are used by class one children in class?

(ii) How do class one children respond to haptics and poxemics in class?

(iii) Which haptics and proxemics are used by class one teachers?

(iv) What are the roles of proxemics and haptics in learning among class one pupils?

1.5 Research Assumptions

This study was based on the following assumptions:

(i) Class one children use haptics and proxemics in class.

(ii) Class one children respond to haptics and proxemics in class.

(iii) Class one teachers use proxemics and haptics differently in class.

(iv) Proxemics and haptics have significant roles on learning among class one pupils.

1.6 The Justification and significance of the study

This study focused on non-verbal communication in children. The study therefore, may be an important source of information in the field of communication and may add to scholarly knowledge. A study by Mwangi, (2010) on kinesics indicated that In the local context, there are limited studies that have been done in relation to proxemics and haptics. There is also limited documentation in the area of haptics and proxemics communication here in Kenya, and yet nonverbal communication is very common. The findings of the study may benefit the following: first, elementary teachers in understanding the roles played by haptics and proxemics in enhancing learning among learners. Second, the study findings may assist curriculum makers in the inclusion of the non-verbal elements of haptics and proxemics in the curriculum design. The teacher training colleges may find the study findings beneficial in training and teaching of teachers. Finally, the study gaps may assist future scholars in expounding the topic further.

1.7 Scope and Limitations to the study

The scope of the study covered non-verbal communication elements of haptics and proxemics. Non-verbal is a broad genre and areas that have not received focus locally are the two above. A representative sample of class one pupils and teachers from Kigoro-Kariara division Murang'a county Kenya was studied. The previous studies that were done in Kenya were in urban setting. This study was restricted to rural setting to find out whether the study will yield similar or different result.

The study was restricted to class one pupils, this is because most learners in that class find themselves in new schools after completing the early childhood course. The issue of haptics and proxemics seem to be more displayed in new environment (Davies, 2004).

The researcher attended two sessions per day for three weeks to collect sufficient data. This was in consideration to the usage of primary data collection instruments like video recorder. The researcher also used trained research assistant to collect data. Also, other important stakeholders like parents who have rich information regarding children behavior on use of haptics and proxemics were not used in the study, thus limiting the amount of data collected.

1.8 Summary

The foregoing section has dealt with background information, statement of the problem, research questions, research objectives and research assumptions. It also dealt with the rationale of the study and scope and limitation of this study. The coming chapter presents a review of literature related to the study and theoretical framework.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.0 Introduction

In the previous chapter, an introduction to the problem on which this study is based was given. In this section, two areas are given focus. The first part of this chapter handles the literature review while the second part of the study deals with theoretical review.

2.1 Literature Review

2.1.1 Non-verbal cues used by six year old children

According to Knapp and Judy (2002), nonverbal communication is the use of interacting sets of visual, vocal and invisible communication systems and subsystems by communicating with the systematic encoding and decoding of nonverbal symbols and signs for the purpose of exchanging consensual meaning in the specific communicative context. Nonverbal communication comprises three interactive systems; the visual, the auditory, and the invisible communication system. The visual system is the most important nonverbal communication systems because it is the major source of nonverbal communication and it is in turn made up of extremely important subsystems: Kinesics, proxemics, and art factual (Juhad, 2004).

Non-verbal cues are mutually beneficial to teachers and pupils. They spare the voice thereby creating a calmer environment in the classroom. This in turn supports the children's processing with visual cues (Knapp & Judy, 2002). In a case where the teacher intends to silence noisy learners, shouting at them might not help but using the five fingers and stand in the middle of the room will silence them one by one and thereby prove to be effective than verbal communication.

Spaces announce the status of an individual; greater space is assumed by those with higher status, the children from higher status tend to exhibit the same in relation to fellow children. Women and minorities have less space than men in most places (Oregon State.edu, 2010). The prerogative to invade other people's personal space is linked to power, with those having greater power being most likely to trespass into others' territory (Hawkers, 1962). The same is clear in children whereby those given leadership roles and the older ones trespass the territory of their fellow children with ease. Boys tend to react aggressively than girls whenever their space is invaded (Caputo *et al*, 2002).

According to Evans and Wener, (2007), the space has both personal and interpersonal space; the personal space is centered on the body and can be thought of a person's portable territory, which each individual carries along wherever he or she may go.

The personal distance is an area with invisible boundaries surrounding a person's body into which the intruders may not come (Somer, 1969). The following quotation exemplifies Somer (1969)'s assertion;

> …personal space is carried around while territory is relatively stationary. The animal or man will usually mark the boundaries of his territory so that they are visible to others, but the boundaries of his personal space are invisible. Personal space has the body at its center, while territory does not (Somer, 1969).

The personal space focuses on the relationship between spatial arrangement like the children's sitting arrangement, and the interior design, and human feelings and interactions. In this case, the children in class identify a particular seat in the classroom as 'their chair'. Although they could not probably ask another student to give up what they considered their chair if they arrived late, they might feel annoyed to see someone seated on it and in some instances it may bring a conflict if the teacher is not around (Floyd, Guererro and Burgoon, 2009).

A study by Mwangi (2010) found out that the three year and four year old children use object adaptors more often while the five year old children used self-movement touch more often. An observable haptic non-verbal communication in the study by Mwangi was that the five year old children tended to touch objects and animals more often barely touching their siblings.

While playing Mwangi (2010) observed that new playmates maintained a bigger distance with each other as opposed to regular playmates. This indicated that new playmates had not opened the intimate distance for playing as compared to the regular playmates who sat more close to each other. While these non-verbal cues were identified with the children aged 3-5 years old, the study identified and described the non-verbal cues used by class one children.

2.1.2 The perception, illustration and evaluation of the use of haptics

Haptics is concerned with interpersonal touch, mostly, touching other people which can either be direct skin contact or indirect like a pat on the back. It can be used to express positive emotions or it can control one's behavior (Remland, 2000). Touch conveys many cultural meanings as it is culturally embodied and nurtured. Gesticulation focuses on the movement of the arms and their position (Grant and Gumble, 2002). It is possible for someone not to utter a word but at the same time communicate. Touch has five communicative functions, ritualistic interaction like shaking hands, expressing affect like kissing or kicking, playfulness like flirtatious stroking or poking, control function, for example, grabbing one's hand, task related function, for example, when a nurse is taking a patient's pulse (Knapp, Hall and Horgan, 2013).

Touch is also used to signify a professional relationship like being touched by a barber; a social relationship like in the case of a handshake; friendship for example touching the upper arm; intimacy for instance a hug; and sexual arousal for example certain types of kisses. In each instance, touch is a bonding gesture (Rosenberg, 2003). The study employed diverse touches to get various tactile communications.

A study by Hybel and Richards (2004) indicated that it was not appropriate to pinch pupils who misbehaved because of the negative haptic touch that emerged thereafter. The study further asserted that teachers especially in the elementary class should avoid negative haptics mechanisms like pushing, slapping and pinching as they created a negative learning experience.

Leach (2003), in his study of School Sexual harassment and abuse, reported that most schools in sub-Saharan Africa tolerate indecent touch perpetuated by older male pupils and male teachers. In Zimbabwe he found that girls in secondary school experience unsolicited physical contact with boys in school such as grabbing, pinching of their breasts or buttocks, pulling them, twisting their arms and in a few cases beating or hitting them. A survey conducted in Nairobi in 2002 by Johnston indicated that 60% of upper primary school pupils had been physically abused by sexual touch or corporal punishment of slapping and pinching.

Murigi and Muiruri (2009) asserted that a teacher had sexually molested a class two pupil through physical touching and breast stroking and had been interdicted. The pupil perceived the touch as inappropriate and reported to the parent who collaborated with the school and caught the teacher red handed. While this case was reported by the pupil, the research indicated that most pupils have been subjected to the same abuse but have remained silent. Judith (2007) observes that at times the perception of the touch by a child determines if they will talk about their touch experience with people. Omoke (2010) asserts that through the use of a touch a teacher can identify the behavior of a child. In the new school environment, class one children are prone to be touched by peers and teachers. The study therefore finds it relevant to describe how the class one children perceive and illustrate the use of haptics.

2.1.3 Use of haptics and proxemics among the teachers

Stack and Moore (2009) noted how the physical arrangement of furniture can affect both student and teacher use of space. Several other researchers have noted that most classroom environments with chairs arranged in straight rows affect not only the use of space, but verbal interaction, as well (Sommer, 2002). Koneya (1996) was also interested in seating arrangements.

But rather than just identifying students participation in various seating areas, Koneya was interested in whether certain types of students sit in particular areas of the classroom (e.g., Do more talkative students choose to sit in the center of the class? Or do certain areas of the classroom affect the students' willingness to participate?). His results suggest that low verbalizers avoid central seats more than do high verbalizers. But he also found that students who are low verbalizers generally talk very little, regardless of where they sit.

In a study on how room size affect student and teacher use of space, Little (1966) feels that in a larger room new pupils will probably choose to reduce the distance between them and teachers (Evans & Wener, 2007). In support of Little's hypothesis, Brody and Zimmerman (1975) concluded that students in open classrooms are more comfortable with reduced personal space than are students in more traditional classrooms. Bonito and Sanders (2009) also support this hypothesis. These two authors found that in four open-area classrooms much of the open space was not being used. Teachers apparently do not take advantage of all the space afforded to them. A study by Camperio and Malaman (2002) is useful in not only documenting how teachers (both male & female) use classroom space, but also how teachers' use of space affects students' perceptions of teachers. Male teachers move about the room more than do female teachers.

Mundui (2002) found that most of the teaching methods were teacher-centered than learner-centered. She also observed that the learning activities contribute little in enhancing learner participation during classroom interaction. Though her research was carried out in secondary schools, she points out the aspect of space between teachers and learners who tend to sit at the back of the class often disintegrate themselves from class learning activities.

Pontefract and Hardman (2005) reported on the role of classroom discourse in supporting children learning in Kenyan Primary schools. Their findings revealed the dominance of teacher-led recitation in which rote and replication dominated the classroom discourse with little attention paid to securing pupil understanding. The study suggested that teachers should move closer to learners in class to enhance student centered learning. Closer proximity increases the pupil's alertness and promotes their participation in class activities. The mentioned studies were done focusing on secondary and upper primary pupils with limited attention paid to lower primary especially those aged six in class one. The research thus aimed to establish use of haptics and proxemics among teachers in class one.

2.1.4 Roles of Proxemics and Haptics in Learning

If a learner's touch is "friendly" when (s) he is experiencing positive effect, it follows that his or her touch will be friendlier when (s) he is experiencing more rather than less comprehension.

Indeed, if we fail to understand a message during an interpersonal encounter, we are more likely to avoid or pull away from a speaker's touch than if we understand what(s) he is saying. This is especially true if we are experiencing a negative affective state at the time. Thus, we would predict that a learner is more likely to withdraw from touch if (s) he fails to understand an incoming message, especially if (s) he is experiencing a negative affective estate about either the trainer or the learning situation (Crane and Cane, 2010). In contrast, (s) he probably will be more open to touch (and being touched) if (s) he comprehends the message, and even more so if (s) he understands the message and is positive about the training environment.

Closer physical distance between the teacher and students creates a more conducive learning environment and causes higher academic performance (Camperio and Malaman, 2002). Lack of adequate physical space creates problems with concentration for students, decreases accuracy in performance of tasks and increases incidence of aggressive behavior. Experts in classroom proxemics stress the importance of the seating arrangements in the classroom for the relationship between teacher and students, as well as for the process of teaching, (Evans & Wener, 2007, Crane & Crane, 2010). The setting of benches in a system-series, a horseshoe or segments is frequently preferred. Researchers of classroom proxemics assure that innovative seating arrangements can create a more stimulating and pleasant learning environment for the student (Grant & Gramble, 2002).

A study by Kibiru, (2010) found that particular settings invite children to involve themselves in particular activities. Space communicates with children to involve them in a very realistic way by guiding them on how to act or how not to act. Sifuna, (2010) found out that conducive physical space enhances active participation of children in learning activities.

The study further revealed that most pre-schools had furniture which did not match the physical size and stature of children. This hindered children from making use of intimate space and caused them to be uncomfortable while learning. Sifuna also observed that some students kept pushing others in a desire to attain their intimate space. This made learning uninteresting because at times it led to conflicts among pupils. Omoke, (2010) found that the use of touch was effective while teaching children with Autism as it increased the attention of the pupils. Wambui, (2004) carried out a study on Nature and Extents of child abuse for students with exceptional needs and found out that abused children seemed uncomfortable with touch as it related to past negative experience of touch. The above studies offer limited information regarding the effects of haptics and proxemics on learning more so among class one pupils. This study sought to add more literature regarding the effects of haptics and proxemics in class one children.

2.1.5 Local studies on Haptics and proxemics

A study by Mwangi, (2010) found that the 3 year old children studied had more frequent nonverbal communication than the 4 and the 5 year olds. This shows that the older one gets, the less likely he is to use non-verbal communication to communicate. The younger ones use non-verbal communication more frequently since their vocabulary is limited. Neema, (2010) observed that children who are socially competent (children who socialize easily) displayed more non- verbal cues than the less competent ones and were able to decode the non-verbal cues from others. Another study by Sifuna, (2010) found that children who had expressive mothers, decoded and encoded non-verbal behavior easily unlike children whose mothers did not express themselves. He observed that the five year old children had problems encoding and decoding the non-verbal cues.

Mwangi, (2010) asserted that use of non-verbal communication reduced with age. In her study in 3-5 year old she found play involving use of touch like holding hands encouraged team work. Sifuna, (2010) observed that teacher-pupil distance had both a negative and a positive influence in classroom learning. While other scholars have done studies regarding use of haptics, proxemics and Kinesics among elementary learners in America, such studies are almost non-existent in the local context. Local scholars have focused on non-verbal communication involving older children (Omoke, 2012 and Neema, 2010).

This study thus finds it relevant to investigate non-verbal communication (haptics & proxemics) in class one children in Kariara-Kigoro division Murang'a County.

A study by Omoke, (2010) found out that three types of abuse to class three with exceptional needs were reported. Those included touching breasts, touching private parts and touching buttocks. Another study by Sifuna, (2010) indicated that the use of space in classroom activities by the pre-school teachers determined learning activities among children. Children who sat far from the teacher had low classroom participation as opposed to those who sat on the front row. Neema, (2009) on the study of the use of English observed that teachers who used touch in the learning activities encouraged students to use the language even though they were not competent with the language. The local studies by Sifuna, (2010) and Omoke, (2010) indicate that proxemics and haptics communication have an impact in the education and social learning of learners. While the scholars have done studies regarding haptics and proxemics, their population involved older children in upper primary classes.

2.2 Theoretical framework

This section dealt with the theoretical framework entailing the theories which guided the study. The study used two theories namely; Cognitive Valence Theory (CVT) and Communication Accommodation Theory (CAT).

2.2.1 Cognitive Valence Theory

Cognitive Valence Theory (CVT) is a nonverbal communication theory which was developed by Andersen (1998). He created the cognitive valence theory to answer questions regarding intimacy relationships among colleagues, close friends and intimate friends, married couples and family members. Intimacy or immediacy behavior is that behavior that provides closeness or distance within a dyad relationship. CVT utilizes six types of schemata that regulate interpersonal interaction: culture, personality, interpersonal valence, situation, state, and the relationship. Each schema explores intimacy or immediacy behavior when interlaced with human emotion (Anderson, 1998). CVT focuses on these six schemata in relations to moderate levels of arousal in human emotions. Moderate levels of arousal are acceptable in a dyad relationship, but high levels of arousal may cause undue excitement, panic, fear, anger and disorientation.

This theory suggests three outcomes of the immediate and intimate behaviors (Andersen, 1998). The first outcome is the alteration of cognitive and affective appraisals between partners. The second outcome is the reciprocation or compensation as a response to the partner intimacy. The third outcome is the different degrees of mutual closeness as a result of increased intimacy. CVT suggests that when intimacy increases, the perceived arousal also increases and six cognitive schemata become active.

The six schemata include: a) culture determines what sort of intimacy is appropriate; b) intimacy preferences depend on individual differences; c) there is an interpersonal valence, meaning that people like intimacy from the ones they like; d) contextual-situational appropriateness that is, whether intimacy is perceived positively or negatively depends on the situation; e) psychological and physical states which refer to the mood that might change the perception of intimacy.

Cognitive Valence Theory concludes that when a person perceives an increase in intimacy from the other, arousal occurs (Andersen, 1998). It is suggested that high arousals are stressful and result in immediate compensating behaviors, while low arousal level does not have an effect. Research in classroom environments on teacher and pupil interaction shows that as teachers increased intimacy with pupils, more affect was observed (Andersen & Andersen, 1982). Thus teachers handling class one children should increase intimacy by increasing touch maybe through patting learners on their back, to realize positive learning in schools. This theory was used to account for the use of haptics and proxemics among class one children.

2.2.2 Communication Accommodation Theory

The Communication Accommodation Theory (CAT) is one of theories that is employed by this study. This theory was developed in the 1990s to find an explanation for the adjustments that people make to have, reduce or maintain social distance in their interactions with others (Giles and Ogay, 2006).

It evolved from the speech accommodation theory (SAT), but can be traced back to Giles' accent mobility model of 1973. The Speech Accommodation Theory (hereafter SAT) was developed to account for ways in which speakers modified their communication during interactions with addressees from other linguistic group.

First proposed by Giles (1973), the theory has continually been developed in Giles and Smith (1977), Giles and Clair (1979), Hamers and Blanc (2000), Gibbonsr (1987), Giles and Robinson (1990). The version that was used by present study is that of Giles and Robinson (1990).

The SAT is an integration of four principles namely, similarity-attraction, social exchange, causal attribution and social identity theory. The Communication Accommodation Theory has broadened this theory to include not only speech but also non-verbal and discursive dimensions of social interaction. Thus, it now encompasses other aspects of communication. In addition, CAT has moved in a more interdisciplinary direction. This study used both the similarity –attraction and social identity principles of the CAT. The similarity-attraction principle asserts that the more similar our attitudes and beliefs are to those of others, the more likely it is for them to be attracted to us.

Convergence through verbal and non-verbal communication is one of the mechanisms that can be used to become more similar to others, increasing their attraction towards people. For this reason, it can be said that one of the factors which leads class one pupils to use convergence is a desire to obtain social approval from their peers as well as teachers.

When pupils converge to the teacher's behaviors, they are more likely to be considered successful and are more rewarded by the teacher, even though they have problems with their social identity. The similarity-attraction theory, therefore views convergence by the speakers as an indication of the desire for social approval and integration from their addressees (Giles & Robinson 1990: 297) Similarity-attraction tenet was used by the present study to analyze convergence by speakers during pupil\pupil and pupil\teacher contact. This helped explain why speakers get along well with each other or get away from one another.

The study also used social identity principle. Speech divergence occurs when a speaker tries to create a distance between himself and the hearer by maximizing differences in language use. Speakers will therefore diverge when they wish to be different from others. Divergence occurs when this kind of identity problem results in isolation of the pupil from the group he or she is associated. Therefore divergence is the result of the motive to create a distance between the interlocutors, especially in a group.

However divergence can also give an idea about the interpretation of the messages that the person wants to give. Giles and Ogay (2006), suggested that in classroom settings, divergence of a professor toward a student who speaks very loudly might give the message to the student that s/he should adopt a more silent and less expressive style. Teachers can thus use haptics behaviors to rectify bad behaviors among class one pupils and applaud good behaviors at the same time.

It could hence be concluded that "the greater one's need for social approval, the greater will be one's tendency to converge." Natalé (1975), for instance, has found that speakers with high needs for approval converge more to another's vocal intensity and pause length than those with low needs for approval". An individual on the receiving end of high level of accommodation is likely to develop a greater sense of self-esteem and satisfaction than being a receiver of low accommodation. As class one pupil are in higher need of peer and teacher approval they can learn to use the haptics and proxemics element to communicate their messages effectively for example by patting a friend gently on the back when they hit them accidentally, and also by staying at close distance with their friends when they are sad or lonely.

The social identity theory was used in analyzing instances of divergence during class one interaction. The theory provided the study with tools to explain why speakers diverge from their addressees.

Consequently two tenets from CAT were used by this study to explain why speakers accommodate to their addressees in the way they do. CAT has the merit of proposing a valid theoretical framework, which explained how, and why pupils modify their communicative behavior in interaction with others.

2.3 Summary

This chapter presented literature review on non-verbal cues used by six year old children, perceptions, illustrations and evaluation of the use of haptics and proxemics, use of haptics and proxemics among teachers, role of proxemics and haptics in learning and finally, local studies on haptics and proxemics. Theoretical framework was also discussed in this chapter.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter deals with the methodology used for the study. It has five sections. First, the research design is described. Secondly, research area and study population are outlined. The third section deals with and sampling procedures. The fourth section is about research instruments and finally, an explanation of how the data was collected, analyzed and presented is done. The aim of this study was to identify the haptics and proxemics that class one use in class, how they respond to the use of haptics and proxemics and roles of proxemics and haptics on learning among class one pupils.

3.1 Research Design

A design is used to structure the research, to show how all major parts of research project work together to try to address the central research questions. It is the scheme, outline or plan that is used to generate answers to research problems. The study used descriptive research design. The design involves measurements, classification, analysis, comparison and interpretation of data (Kombo & Tomp, 2006).

A descriptive design enables a research to explain a given phenomenon more deeply and exhaustively (Mugenda and Mugenda, 1999). The written results of the research contain quotations from the data to illustrate and substantiate the presentation. The data include observation notes, photographs, video recordings and questionnaires.

A reconnaissance was done where the researcher visited twenty primary schools in Kariara-Kigoro division of Gatanga sub-county Murang'a County. This was to familiarize himself with environment and class one pupils and teachers in readiness for data collection. The study used observation, video recording, questionnaires and photographs to meet the objectives of the study**.**

3.2 Research Area and Study Population

The study was carried out in selected public and private primary schools in Kariara-Kigoro division in Gatanga sub-county in Murang'a County. Kariara-Kigoro division was chosen because other studies on non-verbal were mainly carried out in urban settings.

The study focused on a rural setting to find out whether it will yield similar findings or not. Teachers gave information acquired from teaching experience which might not have been easily manifested during the study if the research restricted itself to class one pupils only.

The classroom set up was considered appropriate for video recordings because it is the place where pupils spend most of time and considering the research instruments that were used. The study also sampled 20 standard one teachers from the region in both private and public schools.

3.3 Population Sample and Sampling Procedures

The target population refers to the study group from whom the researcher aimed to collect data from (Mugenda & Mugenda, 2003). In this study the target population included all class one pupils in Giachuki primary school and twenty class one teachers from Kariara-Kigoro division. There are 32 primary schools in Kariara-Kigoro division both public and private. The study used stratified random sampling in selecting twenty class one teachers for questionnaires. One class one was purposively selected for video recording and observation. Class one teacher population was 32 while the pupils population of class one as per April 2014 was 3,065 (Gatanga sub-County Education Office, 2015).

The study picked one standard one class because of research instruments like observation, video recordings and photography that were used. The classroom and P.E lessons set up were considered appropriate because it enabled the researcher collect data without interference from pupils from other classes.

The study also sampled twenty standard one teachers from the region both public and private schools. Teachers gave additional information acquired from teaching experience, which may not have easily manifested during the observation. The total sample population was 55 entailing 35 pupils and 20 class one teachers.

3.4 Data collection Procedures and Ethical Issues

Before the onset of this study, permission was sought from Teachers Service Commission Gatanga sub-county (SCDE) and all head teachers of all schools involved to conduct the study. After permission was granted, a reconnaissance was carried out

3.5 Research Instruments

The following research instruments were used to collect data.

3.5.1 Video Recording

This instrument captures both voice and non-verbal expression and the setting in which the recording is done. It is vital when the focus of the research is to analyze certain action or expression. It enabled the researcher to scan over a large scope and focus on multiple targets which would not be possible in the field with bare eyes. The recording was used to record both proxemics and haptics communication that the children exhibited. Haptics and proxemics recording formed the data for answering research question one and two.

3.5.2 Observation schedule

Observation was done for a period of three weeks in order to collect a wide range of non-verbal behavior more so, on spatial distance and tactile communication from the children. The researcher observed and checked against the lists of aspects in the observation schedule that the researcher prepared so as to meet the objectives. The observation methods included both participant and non-participant observation. In participant observation, the researcher became a participant in the classroom situation in Kigoro-Kariara division by asking children questions, which helped to build confidence with the researcher as an outsider (Patton, 2002). This enabled the researcher to overcome the observer's paradox.

In non-participant observation, the researcher was an outsider in communication context and passively observed and made notes and made video recordings on non-verbal, as the children made use of haptics and proxemics in their interaction. The researcher observed the behavior as it occurred naturally in class and in the playground during PE lesson. He did nothing to alter the environment. Non-participation observation can allow quantitative and qualitative data collection. Qualitative data attempted to describe behavior in their natural context. The emphasis was how a behavior occurred in a context namely at school; in class and while playing outside. This is attached as Appendix 1 (Children's haptics behavior observation schedule) and Appendix 2 (Children's behavior of proxemics observation schedule).

3.5.3 Teacher's Questionnaire

Teacher's questionnaires were hand delivered to twenty class one teachers in their respective schools. This instrument was used to collect information from class one teachers. It is attached as Appendix 3. It was used to measure objective 4 of the study on the roles of haptics and proxemics on class one pupils' learning.

3.5.4 Photographs

Pictures portray behaviors of individuals better. The researcher took photographs of class one pupils during PE lessons and in class. Photo viewing is a powerful tool for the researcher. The amount of personal space that people claim changes as they interact from interaction to interaction and relationship to relationship. Thus pictures of pupils holding hands and smiling indicate that they are close friends communicating through touch. Pupils holding shoulders, legs, arms or other parts of the body shows pupils are playful. This was opposed to play group. It was denoted appendix iv a and iv b photographs of class one class and during PE lessons.

3.6 Pilot Study

A pilot study is important because it enables the researcher to gather information that aids help improve reliability and validity of the instruments used (Orodho, 2009).

The researcher deemed it appropriate to pre-test the instruments in Kiangigi Primary School in Gatanga sub-county because the respondents were likely to bear similar characteristics with those used in the final study. However, these respondents were not included in the final study to avoid biasness and any preconceived opinions. Two questionnaires were administered to teachers, two observations were made and two photographs were taken during class interactions and finally two videos were shot during out of class activities. Responses and comments emanating from pilot study were used to improve data collection instruments.

3.7 Validity and Reliability of the Instruments

3.7.1 Validity of the instruments

Borg and Gall (1989) explain that validity is the degree to which a test measures what it is supposed to measure. Content and face validity of research tool was established through a pilot study. Content validity was used to determine relevance, comprehensiveness and completeness of research instrument while face validity was used to determine if research instrument appear effective in measuring constructs which they were to measure. Content and face validity was arrived at through judgment and opinions from experts in English and Linguistics department.

3.7.2 Reliability of the Study

After the pre-test study, a reliability analysis of teacher's questionnaires was established using Cronbach's Alpha which was calculated using Statistical Packages for Social Sciences. Cronbach's alpha was considered appropriate because it is recommended for determining reliability in multiple like questions in a survey questionnaire that form a scale. A correlation of 0.89 was obtained. The instrument was therefore considered reliable because it yielded a correlation coefficient above 0.7 (Orodho, 2009).

3.8 Data collection procedures

Data collection started with field observation whereby pupils were observed as they played during PE lessons and observation notes taken. The researcher video-recorded the children both in class and in PE lessons then noted down any proxemics and haptics used by class one pupils. Young children are sensitive, thus the first two days the researcher carried the video recorder to class to make pupils familiarize themselves with the recording equipment then collected data after the children were at ease with the data collection instruments. The researcher sat at the back of the class and observed the children in class recording their actions and movements as the teacher taught and when she was not teaching. He also recorded them while playing in the field during their Physical Education class. Data collected was stored safely before being analyzed.

3.9 Data Analysis procedures

Data analysis is the process of inspecting, cleaning, transforming, and modeling collected information with the aim of presenting useful information, suggestions, conclusions, and supporting decision making. The aim of data analysis is to consolidate an orderly structure and meaning of the enormous information collected (Patton, 2002). The video recordings were transcribed and analyzed as soon as possible. Since observation schedule were structured thematically, the qualitative data analysis procedure was employed. The data collected was then organized through identification and sorting and was organized according to the topics based on the objectives of the study. The photographs taken were also used to capture non-verbal communication in class and during PE lessons according to the objectives of the study. (See appendix iv a and iv b).

3.10 Data management and Ethical Considerations

Ethical guidelines in research include, but are not limited to informed consent, deception, confidentiality, anonymity, harm to subjects and privacy (Patton, 2002). Participation in research must be voluntary, and people have the right to refuse to divulge certain information about themselves (Kothari, 2009).

The researcher sought permission to collect data from the National Commission for Science, Technology and Innovation. Then he proceeded to get an introductory letter from the Linguistics Department of Kenyatta University.

Permission from county director of education-TSC-Gatanga sub-county was sought. Finally, all headteachers of twenty primary schools involved were requested for data collection.

The researcher sought permission from the parents via the school administration to allow the researcher to video record the children at school. For ethical reasons the information gathered via video was only used for the purpose of this study and thereafter discarded. The researcher had a very high rate of respect for the respondents. Issues of disrespect due to gender, age, religion, tribe, position in the school did not arise as they are against the research ethics.

The researcher made sure he was safe while carrying the research, at the same time made sure safety of the respondent was adhered to. Safety of the respondent were: if agreed the information should not be published in print media, the researcher should make sure that that does not happen because it can cost the respondents their valued job. This condition was adhered to. Further, consent form was also presented to the respondents. In this study, all individuals who participated gave consent for the study.

3.11 Summary

The section has presented research methodology, explaining the procedures that were used to collect data and how it was analyzed. What follows in the next chapter is the presentation and analysis of this data.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

The preceding chapter has demonstrated how data was collected from the respondents. In this chapter four areas are given focus. These are namely: haptics and proxemics used by class one pupils, class one children response to use of haptics and proxemics in class, comparison of haptics and proxemics among teachers of different gender, age and years of experience, and roles of haptics and proxemics in learning among class one pupils and has two subsections: 4.4.1 discusses roles of haptics in learning and 4.4.2 discusses roles of proxemics in class one teaching and learning.

Data was collected using 20 questionnaires, 17 videos, 5 observation schedules and 3 photographs. The area from where data was collected has 32 schools out of which 20 were picked in order to provide adequate data for this research. The analysis of data was done through several activities. This included: going through the questionnaires, watching the videos, observing keenly pictures taken, and referring to observation schedule notes**.** Cognitive valence theory and communication accommodation theory helped in identifying and interpreting the data.

4.1 Haptics and proxemics used by class one pupils

The first objective of this study was to identify the haptics and proxemics that class one children use in class. Data for the objective was generated using closed open ended questions in a questionnaire where twenty teachers were expected to select by ticking haptics and proxemics used by pupils in class one. Teachers also, identified haptics and proxemics used by class one pupils not in the list provided in the closed ended questions.

In addition to the questionnaire, video recording was used to gather data analyzed in this chapter. A total of Seventeen videos were taken. Seven were shot while their teacher was teaching, 4 when the teacher was not in class, three while pupils were in the field accompanied by the teacher. Also, five observation schedules notes were completed and 3 pictures were taken. The making of notes in the observation schedule and taking of photos was done in between video recording sessions.

Below is a table showing the data collection tools and number used.

Table 4.1: Data collection tools

Tool	Number
Questionnaires	20
Videos	17
Observation schedule notes	5
Pictures	3

Two theories: Cognitive Valence Theory (CVT) and Communication Accommodation Theory (CAT) employed by the study anchors the findings of the study. The two theories used to pursue objectives suggest that when intimacy increases, the perceived arousal also increases. Pupils will get closer to each other depending on whether they are strangers or friends. CVT also postulates that culture, individual differences, interpersonal valence, contextual-situational appropriateness, psychological states determines the use of both haptics and proxemics. CAT in similarity-attraction tenet which assumes that the more similar our attitudes and beliefs are to those of others, the more likely it is to be attracted to us. In analyzing this study, haptics and proxemics were studied separately .This is expounded in the proceeding sub-sections

4.1.1 Haptics used by class one pupils

Data on haptics used by class one pupils was gathered from the respondents using questionnaires, videos, pictures and observation schedules. First, from twenty questionnaires, 11 teachers agreed that haptics was common among class one. The questionnaire had 10 different types of haptics where teachers were supposed to tick touches exhibited by pupils.

The researcher also shot 17 videos, which gave more information on the area. The researcher went through the notes in the observation schedule. He observed pupils behavior on 5 occasions and took 3 photographs.

Two video recording sessions were done every day in five days for three weeks. They were scheduled in the third and fifth lesson consecutively. Observation sessions took a lesson every day for five days.

From the questionnaires, as illustrated in figure 4.1, the most commonly used haptics according to respondents is pupils patting one another on shoulders with 38.64%. Close following it was hand shaking which was identified by 5 teachers which was 15.64%. Other haptics used are holding one another 9.38% and greeting one another with 9.38%. The least used haptics among class one pupils were holding of hands 3.13%, tapping each other 3.13%, hugging 3.13%, Kissing was not observed among class one pupils 0%.

Table 4.1 summarizes haptics used by class one pupils as obtained from the questionnaires administered to teachers.

Table 4.2: Haptics used by class one pupils

Haptics	**Frequency**	**Percentage**
Patting one another	11	34.36
Shaking hands	5	15.63
Holding each other	3	9.38
Greeting one another	3	9.38
Pushing each other	2	6.25
Wrestling	2	6.25
Hugging	1	3.13
Kissing	0	0
Tapping	1	3.13
Holding hands	1	3.13
None	3	9.38
Total	**32**	**100**

The information on table 4.1 above can be seen on figure 4.1 below.

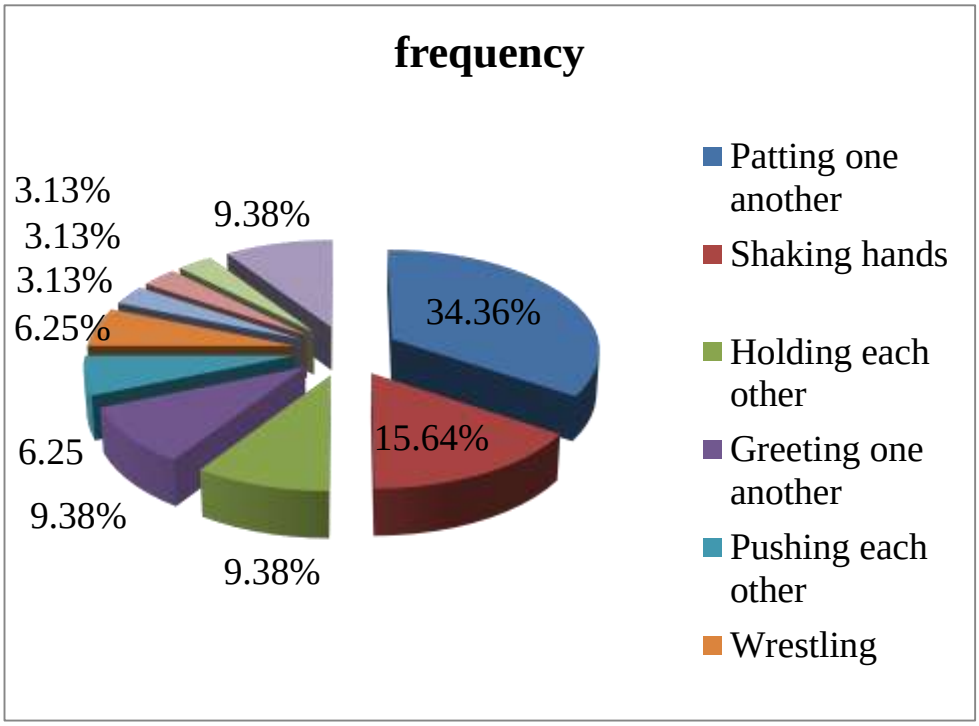

Figure 4.1: Haptics used by class one pupils

The data analyzed from videos revealed the type of haptics and frequencies. The most common haptics was that of pupils touching each other shoulders while in class. This appeared in four videos. They also used their fingers to touch their books along words as they read through. Pupils would lean on each other especially when in queues.

Moreover, pupils held one another's hands or legs. Pupils also, occasionally used sticks to playfully run and hit each other. On other occasions pupils used pointers to point words on wall charts.

Pupils in some videos were seen pulling and pushing each other or wrestling. This was common especially among the boys. This agrees with Mwangi, (2010) who found out that regular playmates kept intimate distance and touches one another more regularly. This is contrary to new playmates. This is captured in appendix (iv a and iv b).

Data from pictures illustrated pupils holding each other heads in a playful manner. Some boys were chasing one another or holding each other. They appeared to be engaged in child play as observed from the videos.

Notes from observation schedule revealed that pupils often hold each other shoulders or waist. They also pulled, tagged, grabbed and carried one another occasionally. Class one pupils also regularly used pointers to point on words or items on the blackboard and also on rare occasions greeted each other by hand shake.

The data in video recordings, on use haptics in classroom interaction agreed with CAT-similarity-attraction principle which asserts that the more similar our attitudes and beliefs are to those of others, the more likely it is for them to be attracted to us. From video clips, girls in class one play, lean and pair together. The same is observed for class one boys. Both genders moved away from one another in their interaction.

4.1.2 Proxemics used by class one pupils

Data on proxemics used by class one pupils was collected from respondents through questionnaires, videos, pictures and observation schedules. The questionnaire had 5 different types of proxemics where teachers were supposed to tick proxemics exhibited by pupils. The researcher also shot 17 videos. Using an observation schedule, the researcher observed pupils' behavior on 5 occasions and took 3 photographs.

Looking at the data collected through questionnaires, it was observed that common proxemics among class one pupils is moving closer to each other or away from each other depending on the purpose of interaction . This proxemics was ticked by 6 teachers. The second common proxemics is playing in groups. Closely following it was maintaining distance with teachers or with strangers. The least used proxemics is rejecting intruders through pushing them away. Five teachers reported that they have not observed proxemics from their pupils.

Table 4.3 below summarizes proxemics used by class one pupils as obtained from the questionnaires administered to teachers.

Table 4.3 Proxemics used by class one pupils

Proxemics	Frequency	Percentage
Moving closer or away from each other	4	20
Playing in groups	5	25
Rejecting intruders by pushing them	3	15
Maintaining distance with teachers	3	15
Maintaining distance with strangers	3	15
None	2	10
Total	20	100

The information on table 4.3 above can be clearly seen in figure 4.2 below

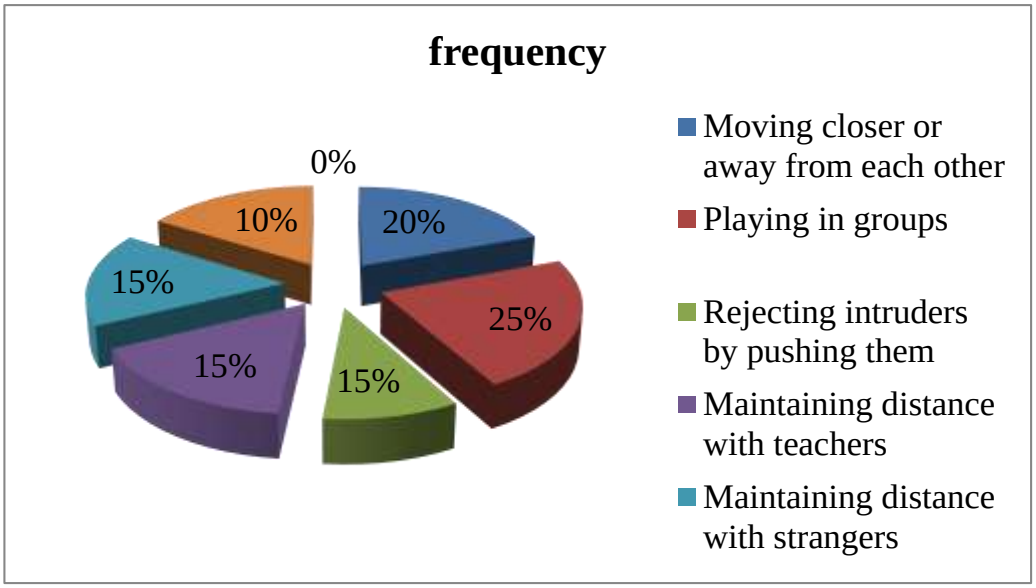

Figure 4.2: Proxemics used by class one pupils

From the videos, the common proxemics are sitting closer to each other while in class, standing closer to each other while in queues, playing in groups of either boys or girls. When handing books to their teacher they left some distant between them and the teacher. Few pupils were seated alone doing their own things especially during PE time. In the videos, girls partnered with girls while boys partnered with boys when their teacher requested them to pair, they did so in their respective genders.

The pictures in video recordings revealed play groups are dictated by gender orientation. From the observation notes, sitting arrangement is so distinct when the teacher is out of class whereby girls sit together and boys the same. When the teacher was marking their books, pupils maintained a certain distant between them and their teachers. This is shown in appendices (iv a and iv b).

Observation schedule notes, show that children use haptics more than proxemics while in class. This concurs with findings by Mwangi (2010) who observed that five years old children used all ranges of haptics. The common proxemics is maintaining distance between children who are friends and those who are not which is in line with Mwangi (2010) who observed that regular playmates maintain a close distance among themselves while new playmates maintain a bigger distance.

Maintaining closeness is an indicator of friendship or intimacy Floyd, Guarrero and Burgoon (2009) also noted that children own and protect personal space from intruders. This is manifested by tendencies by pupils clinging to their sitting position. Intruders are frowned upon or pushed off. The findings of this study also concur with findings by Leather (1997) in Mwangi (2010) that people do not keep still when they interact. In addition to changing their positions, they use their hands or shuttle their feet. From the data analyzed, hugging is seldom haptics among class one pupils as it was ticked by one teacher while kissing is not indentified among class one pupils as it was not ticked by any teacher. This can be attributed to the fact that hugging and kissing are not common haptics in African communities as postulated by Ochieng (2013)

4.2 Class one children's response to the use of haptics and proxemics in class

The second objective of this study was to describe how the class one children respond to the use of haptics and proxemics amongst the pupils and between the teacher and pupils in class. Data on response to haptics and proxemics by class one pupils was collected by questionnaires, videos, pictures and observation schedules. The questionnaire was open ended and gathered data on response of class one pupils to haptics and proxemics from teachers, parents and fellow classmates. The researcher also shot 17 videos, using an observation schedule, the researcher observed pupils behavior on 5 occasions and took 3 photographs.

To understand and interpret class one pupils' nonverbal behavior on haptics and proxemics, the researcher anchored the study on two theories: Cognitive Valence Theory (CVT) and Communication Accommodation Theory (CAT). The CVT posits that intimacy relationships among colleagues, close friends, intimate friends, married couples and family members is dictated by individual differences. People will like intimancy from the one they like (Anderson, (1988). The CAT- states that there is convergence of speakers depending on whether they want to come together or move away of one another (Giles & Ogay, 2006).

4.2.1 Behavior of class one pupils when touched by teachers

Data elicited from the questionnaires revealed that shyness is the common response from pupils when touched. Three teachers also reported that many times pupils also respond by feeling important and wearing a smiling face and being relaxed. Two teachers noted that some pupils come closer to teachers when touched, some looked happy whereas others appreciated at being recognized. In rare occasions pupils when touched by teachers responded by smiling back to the teacher. When touched by non-class teachers they showed shyness, fear, insecurity, others cried and moved away. Other pupils become proud, confidence and friendly to teachers.

From the observation notes revealed that, some pupils felt loved by the teacher when touched. For instance in one of the videos, a pupil fell down while playing and started crying. When the teacher patted the pupil on her shoulders and told the pupil ‘sorry,’ the girl kept quiet. This is captured in appendix 1.When the teacher got closer to the pupils to encourage them on, they responded through putting more efforts on what they were doing. For example, answering questions, reading passages or drawing as shown in appendix 2.

4.2.2 Behavior of class one pupils when touched by friends

Data from the questionnaires showed that majority of pupils got along well with their friends when they touched them and would start playing together. They showed jovialness when touched by their friends. Other pupils responded to their friends touch by compensating it. Thus, the interaction get into children play.

From the videos, pupils could be seen getting along well with other pupils when touched. For instance, during PE time, students were seen holding one another hands as they proceeded to the field. While in the field, pupils seemed to respond to touch of their classmates by touching them back in a playful manner. For example, when a pupil touched another and run away, the latter would chase after the former until she or he touches the partners. Notes from observation schedule revealed that boys would wrestle each other to the ground.

From the first picture, one girl was holding another girl's head as she leaned on her. On picture two, another girl is seen holding the head of another girl as she wears her shoes. On picture three, a boy is seen pressing hard on a girl's head to force her sit down. This is demonstrated appendix (iv) a and (b)

Out 0f the above discussion it can be deduced that class one pupils are able to define their space, regulate who interferes with their space and defend intrusion to their space. Female pupils used touch more as compared to male pupils. The above findings are in tandem with Hans & Hans (2014). He identified four types of distance namely intimate, personal, social and public distance. Pupils who are intimate interacted at intimate distance through body touches that are warm and friendly. Play groups related at social distance. Pupils who are intimate interacted at personal distance, in class and during PE lessons. The teacher/pupils interaction manifested itself at social distance. He further postulated that distance depicts interaction and that there are reactions to distance. For example, when people's space is interfered with, people react defensively. Garcia, (2012) noted that people territoriality is an innate drive to take up and defend spaces.

Moreover, Sommer (1979) also noted that when personal space is violated, people react with defensive manners such as shifting in posture, moving away or attacking violators. Findings of this study are in line with findings of a study done by Briton (1995) which found that females tend to use nonverbal cues more than males.

4.3 Haptics and proxemics used by class one teachers

The third objective of this study was to establish haptics and proxemics used by class one teachers in regard to gender, age and teaching experience. This is captured as appendix iii. A teacher may use haptics and proxemics for a number of reasons. Teachers who keep close distance to children are considered friendly, talkative and intimate (Fall, 1973). To collect the data on haptics used by teachers, a questionnaire denoted as appendix iii which had 7 different types of haptics was administered to teachers whereas data on proxemics was gathered using a questionnaire which had 4 different types of proxemics. Teachers were supposed to agree or disagree on haptics and proxemics they use in class.

4.3.1 Haptics used by class one teachers by gender

The study involved 15 females and 5 male teachers. Data is presented in percentages. Data analyzed revealed that female teachers made use of touches more than male teachers. In all categories of haptics listed down in the table 4.4 below the percentages of females were higher to those of male counter parts. The teachers responses are summarized in table 4.4 below.

Table 4.4: Haptics used by class one teachers by gender

Haptics	GENDER	
	Females (%)	**Males (%)**
I pat students when am happy with their responses	**80**	**60**
I tap pupils heavily to discourage bad behavior	**86**	**40**
I greet pupils to welcome them in class	**93**	**20**
I greet pupils to show friendliness	**93**	**40**
Hold pupils hands to show affection	**100**	**60**
I touch pupils heads to show concern	**86**	**80**
I rub pupils on hurt body parts to show tender care	**73**	**20**

4.3.2 Haptics used by class teachers per age

Data from questionnaires was categorized into 4 teacher's age cohorts. The information is contained in figure 4.5 below.

Table 4.5: Haptics used by class teachers per age

Haptics	AGE			
	21-30 (%)	**31-40 (%)**	**41-50 (%)**	**51-60 (%)**
I pat students when am happy with their responses	100	75	66	75
I tap pupils heavily to discourage bad behavior	100	75	66	75
I greet pupils to welcome them in class	50	75	83	75
I greet pupils to show friendliness	100	75	66	75
Hold pupils hands to show affection	100	75	100	86
I touch pupils heads to show concern	50	100	83	86
I rub pupils on hurt body parts to show tender care	50	50	50	75

Category one was of teachers aged 21-30 years and were 2 in number, Category two was of teachers aged 31-40 years and were 4 in number, Category three was of teachers aged 41-50 years and were 6 in number, Category four was of teachers aged b 51-60 years and were 8 in number. All teachers aged 21-30 years agreed that they pat students when am happy with their responses, they tap pupils heavily to discourage bad behavior, they greet pupils to show friendliness, they hold pupils hands to show affection, while 50% of the same cohort agreed that they greet pupils to welcome them in class, touch pupils heads to show concern and rub pupils on hurt body parts to show tender care.

Hundred percent of teachers aged 31-40 agreed that they touch pupils heads to show concern. Seventy five percent of same group agreed that they: pat students when happy with their responses, tap pupils heavily to discourage bad behavior, greet pupils to welcome them in class, greet pupils to show friendliness and hold pupils hands to show affection while 50% of them agreed that they rub pupils on hurt body parts to show tender care.

Thirdly, a hundred percent of teachers aged 41-50 agreed that they hold pupils hands to show affection. Eighty three percent of them agreed that they greet pupils to welcome them in class and touch pupils' heads to show concern.

Sixty six percent of cohort agreed that they pat pupils when they are happy with their responses, tap pupils heavily to put off bad behavior and greet pupils to show friendliness whereas fifty percent rub pupils on hurt body parts to show tender care.

Finally, eighty six of teachers aged 51-60 years said that they hold pupils hands to show affection and touch their heads to show concern. Seventy five percent of the same group agreed that they pat students when they are happy with their responses, tap pupils heavily to discourage bad behavior, greet pupils to welcome them in class, greet pupils to show friendliness and lastly, rub pupils on hurt body parts to show tender care.

Data contained in this section pointed out that there is inconsistence in the haptics used by teachers of different age as shown above in table 4.5. Age category (51-60) make most use of haptics. The category was made of eight out of twenty teachers.

4.3.3 Haptics used by class teachers per years of experience

Teachers' experience was put into 4 categories. Namely: 0-10 years, 11-20 years, 21-30 and 31-40 years of experience. The data is shown in table 4.6 below.

Table 4.6: Haptics used by class teachers per years of experience

Haptics	Years of experience			
	0-10 (%)	**11-20 (%)**	**21-30 (%)**	**31-40 (%)**
I pat students when am happy with their responses	100	75	66	75
I tap pupils heavily to discourage bad behavior	100	75	66	75
I greet pupils to welcome them in class	50	75	83	75
I greet pupils to show friendliness	100	75	66	75
Hold pupils hands to show affection	100	75	100	86
I touch pupils heads to show concern	50	100	83	86
I rub pupils on hurt body parts to show tender care	50	50	50	75

All teachers with 0-10 experience years all ticked yes that they pat students when they are happy with their responses, they tap pupils heavily to discourage bad behavior, they great pupils to show friendliness, they hold pupils hands to show affection, while 50% of the same cohort agreed that they greet pupils to welcome them in class. They touch pupils heads to show concern and rub pupils on hurt body parts to show tender care.

Hundred percent of teachers with 11-20 years' experience agreed that they touch pupils heads to show concern. Seventy five percent of same group agreed that they: pat students when happy with their responses, tap pupils heavily to discourage bad behavior, greet pupils to welcome them in class, greet pupils to show friendliness and hold pupils hands to show affection while 50% of them agreed that they rub pupils on hurt body parts to show tender care.

Thirdly, 100% of teachers aged 21-30 years' experience agreed that they hold pupils hands to show affection. Eighty three percent of them agreed that they greet pupils to welcome them in class and touch pupils' heads to show concern. Sixty six percent of cohort agreed that they pat pupils when they are happy with their responses, tap pupils heavily to put off bad behavior and greet pupils to show friendliness whereas 50% rub pupils on hurt body parts to show tender care.

Finally, 86% of teachers with 31-40 years' experience said that they hold pupils hands to show affection and touch their heads to show concern. Seventy five percent of the same group agreed that they pat students when they are happy with their responses, tap pupils heavily to discourage bad behavior, greet pupils to welcome them in class, greet pupils to show friendliness and lastly rub pupils on hurt body parts to show tender care.

Data analyzed pointed out that there is inconsistence in the haptics used by teachers of different years of experience. Some haptics like, patting pupils when happy, tapping heavily to discourage bad behavior, greeting to show friendliness and holding pupils to show affection were consistently used across the four experience groups. This is because they common to interaction during communication. The least used haptics across the majority of teacher experience cohort was rubbing pupil's hurt body parts. Getting hurt is not common and hence it explains the least occurrence.

4.3.4 Proxemics used by class one teachers by gender

To collect data on proxemics used by teachers, the study involved 15 females and 5 male teachers. Data was presented in percentages. All teachers regardless of their gender agreed that they used various proxemics while teaching. This is shown in table 4.7 below.

Table 4.7: Proxemics used by class one teachers by gender

Proxemics	Males (%)	Females (%)
Getting close to pupils to encourage them	100	100
Moving away from pupils to show unhappiness	100	100
Pupils occupying front seats are more attentive	100	100
Pupils occupying back seats are socially cold	100	100

From the table above teachers of all genders make use of proxemics in classroom pupil=teacher interaction. This is done to accommodate all the pupils in classroom set up. Class one teachers would like the pupils to have a similar attitudes and behavior for the learning/teaching activity to be labeled successful as it is in SAT-similarity attraction principle.

4.3.5 Proxemics used by class one teachers by age

Teacher age was put into 4 categories. Category one was of teachers aged 21-30 years and were 2 in number, Category two was of teachers aged 31-40 years and were 4 in number, Category three was of teachers aged 41-50 years and were 6 in number, Category four was of teachers aged b 51-60 years and were 8 in number. All teachers regardless of their age, agreed that they used various proxemics while teaching as can be seen on Table 4.8 below.

Table 4.8: Proxemics used by class one teachers by age

Proxemics	21-30	31-40	41-50	51-60
Getting close to pupils to encourage them	100	100	100	100
Moving away from pupils to show unhappiness	100	100	100	100
Pupils occupying front seats are more attentive	100	100	100	100
Pupils occupying back seats are socially cold	100	100	100	100

The data in table 4.8 above shows that teachers of all age use proxemics. They are conscious of the importance of proxemics in pupil-teacher interaction. The data indicate that class one teachers extensively use proxemics in class.

4.3.6 Proxemics used by class teachers per years of experience

Teacher age was put into 4 categories. Category one was of teachers with 0-10 years' experience, Category two was of teachers with 11-20 years' experience, Category three was of teachers with 21-30 years' experience Category four was of teachers with 31-40 years' experience. All teachers regardless of their years of service agreed that they used the various proxemics while teaching, as can be seen on table below 4.9.

Table 4.9: Proxemics used by class one teachers by years of service

Proxemics	**0-10**	**11-20**	**21-30**	**31-50**
Getting close to pupils to encourage them	100	100	100	100
Moving away from pupils to show unhappiness	100	100	100	100
Pupils occupying front seats are more attentive	100	100	100	100
Pupils occupying back seats are socially cold	100	100	100	100

From the above data analysis, female teachers seem to make use of touches more than male teachers. This habit concurs with Britom (1995) arguments that women use touches more than males. However, there is inconsistency on how teachers of different age and years of experience make use of proxemics and haptics. Interestingly all teachers regardless of their gender, age and years agreed that they all use various proxemics while teaching.

4.4 Roles of proxemics and haptics in learning among class one pupils

The fourth objective of this study was to find out the roles of proxemics and haptics in learning among class one pupils. Data on role of haptics and proxemics in learning was gathered using questionnaires, videos, pictures and observation schedules. The questionnaire was open ended. This objective was split into two. The first part handles the role haptics and the second part the role of proxemics in learning among class one pupils.

4.4.1 Roles haptics in learning among class one pupils

Responses gathered through questionnaire, showed that haptics played numerous roles including: motivation, encouragement and giving children confidence to speak up or take up some tasks which seemed difficult. They were also used to positively reinforce good behavior among children. For example, when a child does something good, a pat on the back motivates them.

The researcher also observed that haptics were equally used to create pupil attention in class hence increase understanding. In other occasions, when teacher was using pupils as learning aids she touch them. Moreover, haptics were used to comfort, welcome, threaten and persuade. Touch was used to depict closeness, liking, care, attention and concern. Among the pupils, haptics were also used to set a playful atmosphere among pupils, control behavior, perform a task and express affection. In rare occasions, haptics were used for ritualistic interaction such as greetings and reading turn. This is illustrated in appendix iv a and iv b.

From one of the videos, the teacher was seen patting on the back of pupils which was accompanied by words such as, `Go on! Try harder, you will make it, keep up!' among other encouraging words. These actions seemed to motivate pupils in accomplishing their tasks which included drawing in their books, doing calculations, reading passages or spelling words. At times some pupils disrupted learning and the teacher would hit their back a bit hard or tap on the shoulders to control the behavior and seek pupil attention. Teacher also touched pupils when using them as learning aids. For instance, while in a social studies lesson the teacher had to use a pupil to illustrate parts of the body. Pupils were asked to touch various parts of their bodies to demonstrate body parts. Pupils used their fingers to touch their books along words as they read through so as to increase accuracy. The video showed both the teacher and pupils pointing to words on a wall chart.

Haptics was also seen to be used to comfort pupils. For instance, while in the field one child fell down and started crying. Pupils who were close to her helped her walk to where the teacher was by holding her shoulder all saying ‘sorry’. The teacher further gently touched the pupil on the head then looked at the hurt place as she assured the child that it would be well .Interestingly, the child stopped crying and joined others in the play. This is shown in figure 4.3 below.

Figure 4.3: A pupil showing concern to her fellow pupil who was hurt during children play

For pupils who had difficulties in understanding some concepts, touch proved to help them understand. This was common during mathematics lesson where the teacher illustrated using pupils on how to go about some questions. For example, in addition concept she directed the pupils to use beans to work out the solution.

Haptics moreover, provided feedback that information conveyed has been received. For instance, in the videos, two students were talking, when the teacher pointed at them, the one who saw her pointing at them touched the other and they ceased talking. In the same sense the teacher was able to use haptics to communicate to a few students without drawing attention to other students.

Information from the observation schedule notes showed that pupils used haptics for ritualistic activities such as greeting each other in the morning. The teacher tapped a pupil with a stick to signal reading turn. Learners also used haptics to express affection for their fellow learners by holding their shoulders when in a queue, carrying one another on their back and walking together. In these activities boys and girls were interacting separately.

Moreover, children used haptics playfully through pulling, tagging, grabbing, carrying one another and wrestling each other to the ground. Further, children used haptics to control other pupils by pulling items such as books towards oneself or holding hands strongly such that pupils could not move. Other haptics used by pupils were task related. These included pupils using pointer to point on items on either blackboard or on the wall charts as they read aloud.

4.4.2 Role of proxemics among class one pupils

From the questionnaires, it is evident that proxemics are used by the teacher to motivate learners, making corrections on pupil work, encourage learners to respond, discourage bad behavior, give instructions, seek attention when teacher wants learners to respond to instructions**.**

The data gotten from videos show that both teachers and pupils used proxemics. Teachers used proxemics to motivate learners. In case a pupil is unable to understand something the teacher gotten closer to the pupil and illustrated it to the learner. When making corrections on pupil's work, the teacher moved closer to pupils accompanied with verbal reinforcement.

Moreover, getting closer to learner improved the learning environment. When a child does not respond to instructions, the teacher moved closer to him and he obeyed. For instance, while in field some pupils were not doing the directed exercise but when the teacher went near them, they started doing that. Once again, while in the field, the teacher assembled all pupils in order to give them instructions. While in the field one child fell down and started crying. Pupils who were close to her helped her up and to walk to where the teacher was while holding her shoulders all saying 'sorry'. The pupil later kept quiet. The videos also showed the teacher getting closer while teaching to seek the pupil's attention especially when giving explanations and illustrations.

Notes from observation schedules revealed that children demonstrated territoriality. For instance, some pupils who do not want to be involved in play during PE lessons kept away from the rest. Friends sit together especially during PE lesson those who are close also play together. When teacher requested pupils to pair during PE a lot of movement was observed as friends trace their friends. All these demonstrated that pupils kept intimate zone. Pupils also maintained personal zone during their interactions. For instance, some pupils are comfortable in the company of others and would sit together or play together. When pupils were handing books to their teachers, they maintained some healthy distant between them and the teacher. This helped maintain social distance which is necessary in a classroom set up.

From the above discussion, it was observed that good use of both proxemics and haptics made children feel comfortable accepted, loved and cared for and in turn they showed openness in communicating their concerns to the teacher. They also encourage hard work among pupils and build a conducive learning environment where pupil feel comfortable to participate Pupils show attachment to the teacher and created a friendly environment between the teacher and pupils, enhanced confidence, created a good rapport between pupils and their teacher and created a friendly classroom environment. This, enabled the teacher, spare the voice by controlling behavior among disruptive pupils without drawing attention to the whole class through the use proxemics and haptics. Also, haptics and proxemics enabled teachers in giving instructions.

The above finding are in line with Garcia (2012) argument that non-verbal communication complements verbal communication, substitute verbal communication and repeat verbal communication for emphasis, and that touch can communicate closeness, liking, care and concern among individuals. In addition, Ochieng (2012) noted that non-verbal communication helped in creating relationship between communicators and that basic message of touch is affect, control, protect and support. Hans and Hans (2014) on the other hand claimed that touch can be used to comfort, welcome, threaten and to persuade. Haptics and proxemics also spare the voice of the teacher, thereby creating a calmer environment in the classroom. This in turn supports children's processing of visual cues (Knapp & Judy, 2002). Spaces announce the status of an individual; (Oregon State.edu, 2010) and hence pupils were able to keep a longer distance between them and teachers as compared to pupils amongst themselves.

Touch generally has five communicative functions, ritualistic interaction like shaking hands, expressing affect like kissing or kicking, playfulness like flirtatious stroking or poking, control function, for example, grabbing one's hand, task related function (Knapp, Hall and Horgan, 2013). Apart from kissing flirtatious and poking all of above functions of touch were demonstrated in learning among class one pupils where closer physical distance between the teacher and students created a more conducive learning environment and reinforced internalization of education concepts (Camperio and Malaman, 2002).

Lack of adequate physical space creates problems with concentration for pupils, decreases accuracy in performance of tasks and increases incidence of aggressive behavior. This was observed in class where pupils repulsed those who interfered with their space when teacher was not in class.

4.5 Summary

This chapter has dealt with four areas namely: haptics and proxemics ued by class one pupils, class one children response to use of haptics and proxemics, comparison of the use of proxemics and haptics among class one teachers and roles of haptics and proxemics in learning among class one pupils.

It has emerged that the use of haptics and proxemics in learning is common among class one pupils. The most commonly used haptics is pupil patting one another on shoulders, hand shaking holding of one another hands. The least used haptics among class one pupils include tapping each other, hugging, wrestling and pushing each other.

On proxemics, the data showed that moving closer to each other or away is the most common among class one pupils. Other proxemics used by class one pupils include: playing in a group, maintaining distance with teachers, or strangers and rejecting intruders through pushing them away.

From data analysis, it revealed that female teachers seem to make use of touches more than male teachers. On the contrary, there is inconsistency on how teachers of different age and years of experience make use of haptics and proxemics. An interesting observation is that all teachers use both proxemics and haptics as manifested in appendices.

The next chapter deals with the summary of findings, conclusions and recommendations of this study.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This section contains summary of the study, the findings and conclusions with particular reference to research objectives and questions and methodology. Recommendations and suggestions for further research are also given. The purpose of this study was to discuss haptics and proxemics used in standard one pupil-teacher classroom interaction. Data collection was guided by four objectives of the study namely: identify the haptics and proxemics that class one children use in class; establish the reaction of class one pupil to the use of proxemics and haptics in class; establish how class one teacher use haptics and proxemics in class one; and to find out the roles of proxemics and haptics in learning among class one pupils.

5.1 Summary of the findings

Several finding emerged from the analysis of the data collected. It was generally necessary to find out the haptics and proxemic that pupil-teacher use in class one. Touches come with their unique meanings. This is also the same with proxemics. The use of distances will range from public, social, intimate and personal which also carry respective meaning.

The first objective of this study was to identify the haptics and proxemics that class one children use in class. Analysis of data from questionnaires, videos, pictures and notes from observation schedule revealed that common haptics among class one pupils include: patting one another, shaking hands, holding each other, greeting one another, using pointers to point on words or items on the blackboard, pushing each other, wrestling, and tapping one another. Patting and holding one another was the most common used haptics. The least common haptics were holding each other's hands, tapping and hugging each other. Kissing was never used among class one pupils. Other haptics which were rarely used included: pulling, tagging, grabbling, greeting and carrying one another. On the other hand, common proxemics were moving closer or away from each other and playing in group. Intruders were rejected by pushing them, away. They also maintained healthy distance against teachers, maintained safe distance against strangers.

The second objective of this study was to establish the reaction of class one pupils to the use of proxemics and haptics in class. Analysis of data from questionnaires, videos, pictures and notes from observation schedule revealed that, majority of pupils were put off when touched by teachers. Others felt important and were seen smiling. Some Pupils were getting closer to their teacher when touched, and looked happy.

The pupils faces were lighten up to show this convergence. When touched by non class teachers they kept aloof to mean that there was no intimacy between these pupils and the teachers. Some pupils felt cared by their teacher when they were touched by her. Some Pupils when touched by the teacher in class gotten motivated and showed this by putting more efforts in their task. Some pupils became friendly when touched by their follow friends and responded by reciprocating the touch. When touched by their friends, majority of puils got along well with them

The third objective of this study was to establish how class one teacher use haptics and proxemics in class. Data analyzed revealed that female teachers seem to make use of touches more than male teachers. In every type of haptics considered in the study, the percentages on haptics usage among female teachers as compared to males counterparts were higher However, there is inconsistency on how teachers of different age and years of experience make use of proxemics and haptics. Interestingly, all teachers regardless of their gender, age and experiences agree that they use various proxemics and haptics while teaching.

The fourth objective of this study was to find out the roles of proxemics and haptics in learning among class one pupils. Analysis of data from questionnaires, videos, pictures and notes from observation schedule revealed that both proxemics and haptics made pupils feel comfortable, accepted, loved and cared for. In turn' they were free to communicate their concerns freely to their teacher.

The use of haptics and proxemics also encourage hard work among pupils by creating a coducive learning environment. Pupils are free while participating in class activities. They are attached to their teacher and this created a friendly classs for teacher and pupils. Enhanced confidence helps create a good rapport between pupils and teacher hence an enhance learning. Both haptics and proxemics help the teacher spare the voice by controlling behavior among disruptive pupils without drawing attention to the whole class. The teacher only need to get close to such a pupil then pinch or tap the shoulder Also, haptics and proxemics enabled teachers to give instructions.

5.2 Conclusions

This study concluded that class one pupils were able to identify distance and use it in their day to day interactions. They showed this by either getting closer or away to individual or group depending on the feeling provoked during interactions. Class one pupils use diverse haptics depending on the message being passed on or across. On the second objective, the study concluded that pupils were able to interpret meaning of various haptics and proxemics used by teachers and pupils and hence responded to them accordingly. On the third objective, the study found that there was a notable difference in how females and male teachers use haptics. There was no much difference in how teachers of different gender, age and years of service used proxemics.

On the fourth objective, the study concluded that both haptics and proxemics help in creating a conducive and friendly environment for learning. Appropriate touches and distances greatly enhance learning among class one pupils.

5.3 Recommendations

Based on the study findings and the aforementioned conclusions, the researcher gives the following recommendations:

1. Haptics and proxemics are essential in learning and also in ensuring a child's well-being. Teachers, parents and other caregivers should be sensitized on the importance of haptics and proxemics especially in any interaction with children.
2. Teacher in-service training on the use of haptics and proxemics should be conducted at least once in a year, during the school holidays. Seminars on use and interpretation of haptics and proxemics could also be conducted for teachers.
3. Teachers should be encouraged to make use of haptics and proxemics so as to make learning interesting and ensure attention from pupils.
4. Class organization should be considered and appropriate reshuffling from time to time to ensure that all children benefit from proxemics.

5.4 Suggestions for further research

This research focused on the use of haptics and proxemics in class one pupil teacher interaction. A study can be carried out on older students. Further research can be done on other non-verbal communication. In addition, research can be conducted on use of haptics and proxemics among teachers of different gender, age and years of experience using a larger population.

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APPENDICES

Appendix I: Children's Haptics behaviour observation schedule

Use of haptics	Illustration	Remarks	Conclusion
Ritualistic interaction	Tapping/pointing a pupil with a stick to indicate a reading turn Greeting one another by using their right hand and being close to one another	Every time this happens the pupil get to reading assignment This is not common, only few instances that was exhibited	Pupils were able to do required task as expected Class one pupil don't lay much importance on greeting each other
Affection expression	Holding each other hands or shoulders and working together Holding the shoulder and are on the same line as they prepare to run as directed by the teacher	It was voluntarily and indicated friendship The pupils appear relaxed and wore bright faces	The touches indicated friends care for one another Indicates friendliness and warmth
Playfulness	Holding each other all over, wresting each other Pulling Tagging Crabbing Holding one another	No offence is taken The frequency is myriad	Pupil enjoyed playing together and along their respective gender Pupils in class one are playful

Control function	Applying a lot of force to holdback using hands Pulling another pupil towards oneself	A pupil is barred from doing what she intended This happen only when one pupil is controlling another	Strong pupils are able to control weak ones To assert oneself the pupil make use of appropriate touch
Task related	The teacher and a pupil demonstrate to other pupils kind of exercises they need to do The teacher got close to pupils holding their head or shoulder by touching gently the two areas.	Other pupils imitate the way the teacher demonstrated to the class The pupil appeared attentive and obliged to instructions that were given by the teacher	Success of the exercise is expressing conformity with the teacher Touch on the head or shoulder is used as a tool of directing pupils and make them follow desired instruction
Other observations	Other forms of non-verbal cue besides haptics and proxemics were observed during PE as pupils played	Use of eye behavior Use of vocalics and affect display	Communication is also holistic and is dependent on a number of non-verbal cues

Appendix II: Children's behavior of proxemics observation schedule

Proxemics	**Observation**	**Conclusions**
Intimate zone (use of personal locker)	Pupils who do not want to get involved in the play during PE lesson kept away from the rest Pupils who are friends sit together. They also play together during PE lesson	This show there are pupils who like keeping to themselves A sign of friendship is pupils staying together
Personal zone (paired with a friend)	When the teacher was away, girls sat together closely and appeared comfortable. The same happened to boys Play mates and friends are very comfortable with each other	How pupils are pulled together is dictated by gender Pupils who are free with each other are the one who get involved
Social zone (teacher proximity)	When marking pupils books, the pupils maintain a healthy distance of about three feet away from teachers Distinctively we have two types of grouping; boys and girls	Pupils indicate their respect to their teacher by maintain a reasonable distance between them her The group move away from each other to create playing space
Public zone (playing in the field)	Pupils form separate groups which move away from each other When the teacher was supervising pupils play during PE, she kept her distance away from pupils to give them freedom to do their tasks Pupils who do not rhyme run after one another	Formation of these groups are voluntarily and also dictated by friendship It was only notable between the teacher and pupils Though children go for each other the running after one another is playful

Other observable features	When the teacher gotten close to a pupil when they were doing an activity, e.g. reading, drawing pictures, the pupils would respond by putting more efforts on the activities the teacher was monitoring	Close distance to the pupils encouraged them to perform the assigned task

Appendix III: Teacher's Questionnaire

1) Age……30 years……
2) Gender…female……..
3) How many years have you taught in class one?..four.....
4) Have you specified the distance the pupil should come close to you?
   Yes [√] No [ ]
5) Are there pupils who specify their sitting partners?
   Yes [√] No [ ]
6) Which criteria do you use to create sitting arrangement in class? Mixed ability
7) Are you able to identify the best friend of a pupil?
   Yes [√] No [ ]
8) If yes which criteria do you use to do that?
   a. By seating together.
   b. Playing together during P.E lessons
   c. Coming in to defend a friend
9) How does class a one pupil behave when touched by the following?

   A teacher: Feel proud, friendly, sometimes scared.
   Some are shy and show it by pushing their shoulders up or by getting closer to the teacher.
   A friends : Welcome it, reciprocate it.
   A parents : Reciprocate by also touching them and getting closer to them.

10) In the table below, identify by ticking the most prevalent haptics among the class one children.

Haptics	**Tick**
Patting one another	√
Shaking hands	
Holding each other	
Greeting one another	
Pushing each other	
Wrestling	
Hugging	
Kissing	
Tapping	
Holding hands	
None	

11. Indicate any other haptics not mentioned on the table above

Holding one another

Hitting one another.

12. In the table below, identify by ticking the most prevalent proxemics among the class one children.

Proxemics	**Tick**
Moving closer or away from each other	√
Playing in groups	√
Rejecting intruders by pushing them away	√
Keeping a healthy distance against a teachers	√
Keeping away from strangers	√
None	

13) Indicate any other proxemics not mentioned on the table above

Running away

Dancing together

14) Do you use haptics (touch) and proxemics (distances) in classroom delivery? Yes / No. Yes.

1) If yes above, explain which haptic and proxemic you use and how?
   (i) Haptics : patting the head to encourage on.
   (ii) Patting shoulders of pupils gently. To alert a pupil.
   (iii) Pinching to discourage.……
   (iv) Proxemics: getting close when marking pupil assignment, changing class one sitting arrangement, using public distance when handling the whole class.

15) In your own opinion does the use of haptics and proxemics help you in lesson delivery? Yes/NO. YES .

16) If yes above describe how?
   Improve teacher / pupil interaction.
   Create conducive environment by making pupils free amongst themselves.
   Pupil/ teacher communication is strengthened.

17) Tick appropriately from the list of haptics that in you view enhance teacher/pupil non-verbal communication in class?

Haptic	**females**	**males**
I pat students when am happy with their responses	√	√
I tap pupils heavily to discourage bad behavior	√	√
I greet pupils to welcome them in class	√	√
I greet pupils to show friendliness	√	√
Hold pupils hands to show affection	√	√
I touch pupils heads to show concern	√	√
I rub pupils on hurt body parts to show tender care	√	√

Appendix IVa: Photographs of class one pupils in class as they interact

Class one pupils using touch to read a text

Class one teacher and pupils maintain intimate distance

Class one teacher and pupil maintain social distance

Pupil maintain intimate distance

Greeting one another

Pushing away the intruder

Pupil in an intimate distance

Repulsing the intruder

Pupils maintaining intimate distance

Appendix IVb: Photographs of pupils during P.E as they use haptics and proxemics

Using a playful touch

Pupils maintain social distance as they play

Playful touch

Pupils crowd together playfully

Holding one another warmly

Maintenance of gender grouping during play

Playful touches

Maintaining gender grouping

Control touch

Concern touch

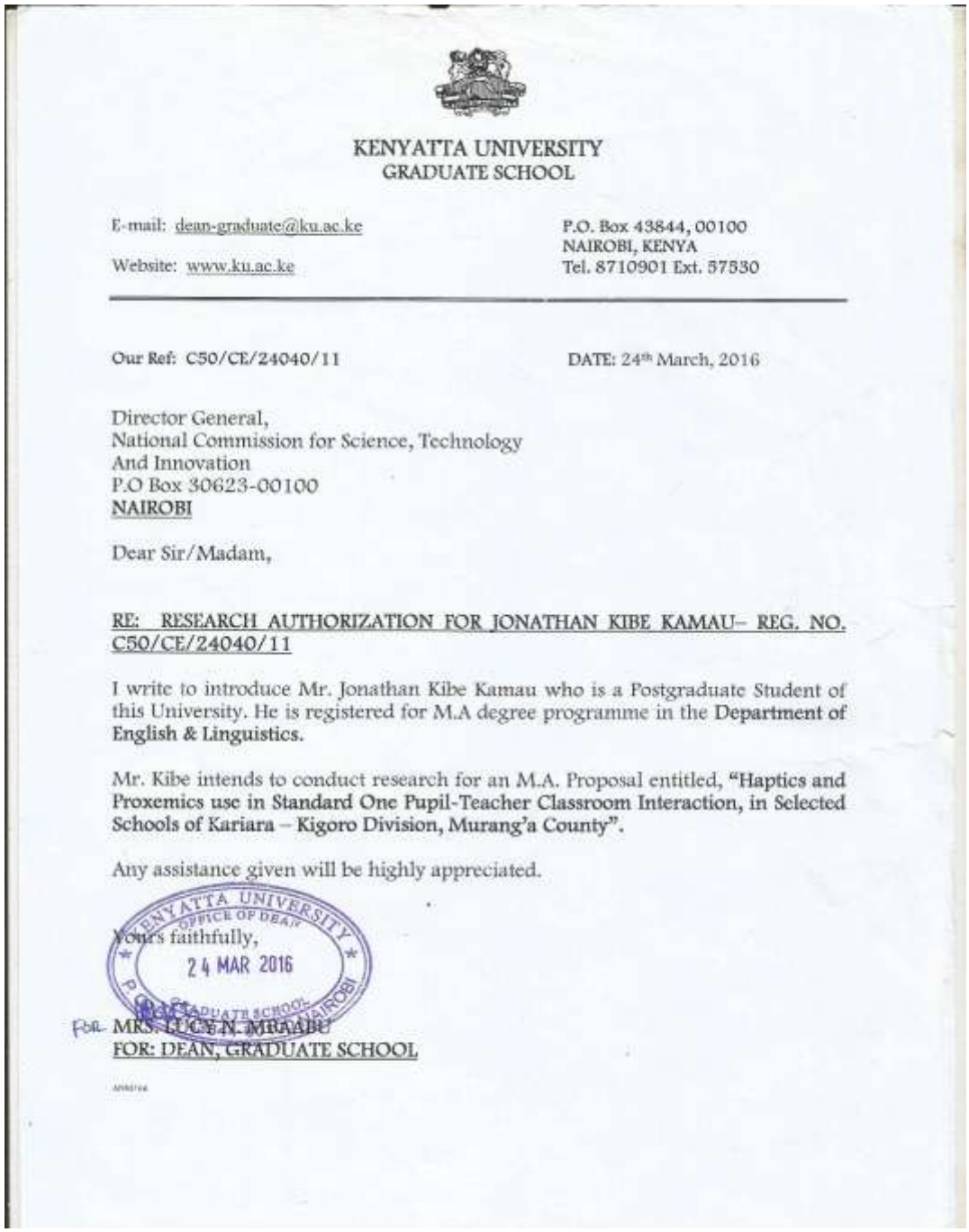
An intruder being closed out

An intruder being chased away from the group of girls


Maintaining close distance and also playful touches


Maintaining distinctive gender group during queuing

Appendix V: Research authorization



KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 8710901 Ext. 57530

Our Ref: C50/CE/24040/11

DATE: 24th March, 2016

Director General,
National Commission for Science, Technology
And Innovation
P.O Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: RESEARCH AUTHORIZATION FOR JONATHAN KIBE KAMAU– REG. NO. C50/CE/24040/11

I write to introduce Mr. Jonathan Kibe Kamau who is a Postgraduate Student of this University. He is registered for M.A degree programme in the **Department of English & Linguistics.**

Mr. Kibe intends to conduct research for an M.A. Proposal entitled, **"Haptics and Proxemics use in Standard One Pupil-Teacher Classroom Interaction, in Selected Schools of Kariara – Kigoro Division, Murang'a County".**

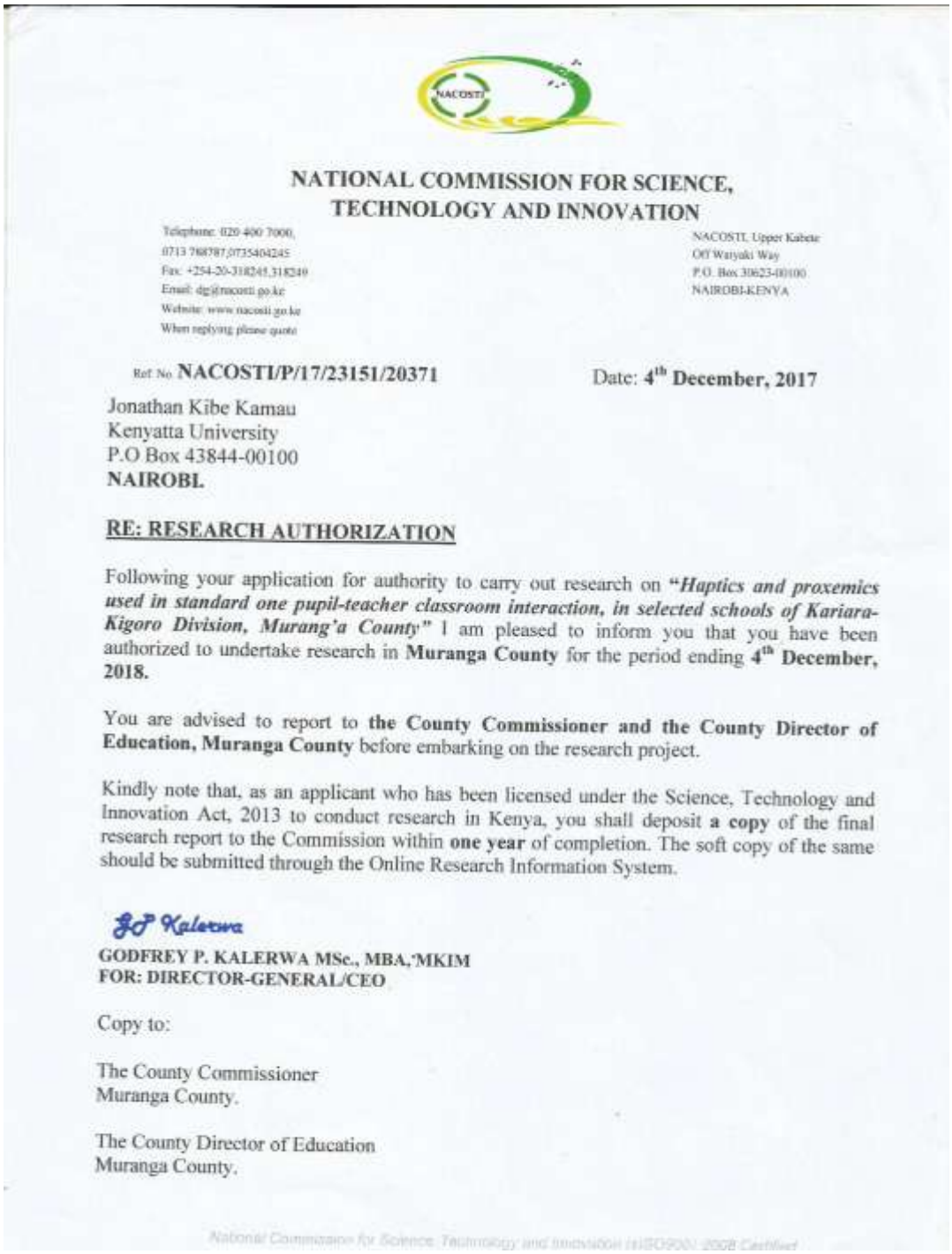
Any assistance given will be highly appreciated.

KENYATTA UNIVERSITY
OFFICE OF DEAN
24 MAR 2016
GRADUATE SCHOOL
P.O. Box 43844 - 00100 NAIROBI

Yours faithfully,

FOR MRS. LUCY N. MBAABU
FOR: DEAN, GRADUATE SCHOOL

Appendix VI: NACOSTI research Authorization



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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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/17/23151/20371** Date: **4th December, 2017**

Jonathan Kibe Kamau
Kenyatta University
P.O Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Haptics and proxemics used in standard one pupil-teacher classroom interaction, in selected schools of Kariara-Kigoro Division, Murang'a County"*** I am pleased to inform you that you have been authorized to undertake research in **Muranga County** for the period ending **4th December, 2018.**

You are advised to report to **the County Commissioner and the County Director of Education, Muranga 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.

GP Kalerwa

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

Copy to:

The County Commissioner
Muranga County.

The County Director of Education
Muranga County.

Appendix VII: CDE permission letter

REPUBLIC OF KENYA

MINISTRY OF EDUCATION

Email: gatangadeo@gmail.com
WHEN REPLYING PLEASE QUOTE

REF: GAT/EDC/AD/0068

DISTRICT EDUCATION OFFICE
GATANGA DISTRICT
P.O. BOX 6253
THIKA.

24/03/2016

TO WHOM IT MAY CONCERN

RE: AUTHORITY TO COLLECT A RESEARCH DATA
JONATHAN KIBE KAMAU; Reg. No. C50/CE/24040/11

Reference is by made to a letter on the above subject dated ***24th July 2016.***

You are hereby granted the permission to collect research data on Haptics and Proxemics use in standard one pupil-teacher classroom Interaction in schools in Kariara Zone, Kigoro Division, Gatanga sub-county, Murang'a County.

This Office wish you the best as you conduct the research.

FOR DISTRICT EDUCATION OFFICER
GATANGA DISTRICT
THIKA

JOSEPH M. WAIRURI

FOR: SUB-COUNTY DIRECTOR OF EDUCATION,
GATANGA SUB-COUNTY.

Appendix VIII : Research permit

THIS IS TO CERTIFY THAT:
MR. JONATHAN KIBE KAMAU
of KENYATTA UNIVERSITY, 0-1000
THIKA,has been permitted to conduct
research in *Muranga County*

on the topic: *HAPTICS AND PROXEMICS USED IN STANDARD ONE PUPIL-TEACHER CLASSROOM INTERACTION, IN SELECTED SCHOOLS OF KARIARA-KIGORO DIVISION, MURANG'A COUNTY*

for the period ending:
4th December,2018

.....
Applicant's Signature

Permit No : NACOSTI/P/17/23151/20371
Date Of Issue : 4th December,2017
Fee Recieved :Ksh 1000

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

CONDITIONS

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No.A 16787

CONDITIONS: see back page