PEER INFLUENCE ON ACADEMIC ACHIEVEMENT OF MENTALLY CHALLENGED LEARNERS IN KILIFI COUNTY PRIMARY SCHOOLS, KENYA

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DECLARATION

I THOYA WINFRIDA KADZO, hereby declare to the best of my knowledge that this work embodied here in, is purely my own effort and has never been submitted in any university around the globe for any award

Sign.....

THOYA WINFRIDA KADZO

Date...14TH NOV. 2017

APPROVAL

This research Thesis has been done under my guidance and all work here in has been authenticated by the supervisor

Sign.................................. Date...04/11/17..................................

Assoc Prof Ijeoma Anumaka

Dr. Wunti

DEDICATION

I dedicate this thesis report to my daughters, Sandra Uside and Melinda Pill and my sisters Philomena Furaha, Esther Kauchi and my beloved mum Joyce Thoya, for their financial support and prayers.

Last but not least I dedicate this research proposal to my lovely husband Mr Aswan Bernard.

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ABSTRACT

The main purpose of the study was to compare the effect on peer teaching and conventional teaching on academic achievement among mentally challenged learners in selected primary schools in Kilifi County Kenya. It was guided by two objectives which were to investigate whether there is a significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County. The research design followed quantitative approach. The study was a quasi-experimental investigation that employed the descriptive, comparative survey design.

The design was suitable for the study in that the researcher was able to determine the level of academic achievement among mentally challenged learners and carry out a comparative analysis between teaching methods (peer and conventional teaching) and academic achievements among mentally challenged learners. Data collected through this design enabled the researcher to prevent the level of academic achievement and investigate differences between teaching methods (conventional or peer teaching) and academic achievement among mentally challenged learners in Kilif county, Kenya.

Findings showed that the overall mean of academic achievement of mentally challenged learners among selected schools in Kilif county was very slightly above 40 percent (40.04%) with standard deviation of (Std Dev=5.778). The maximum work was 55% and the lowest was 30% giving a range of 25%.

The study concluded therefore that peer teaching should be applied since it showed that there is slightly high performance rate than conventional methods. This is evident with regard to the discussion of this study and that there is need to orient, develop and train teachers of mentally challenged learners and thus improve them with respect to teaching methods.

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CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter contains the background of the study which is also composed of the historical, theoretical, conceptual and contextual perspectives. The chapter also presents the statement of the problem, the purpose of the study, the objectives of the study, research question, and research hypothesis, scope of the study and significance of the study.

1.1 Background to the Study

1.1.1 Historical Perspective

Globally there is common concern and practical interest about improving memory skills of mentally challenged learners in education institutions starting in preparatory schools Campione et al (2007). Research on this notion can be traced back to the pioneering studies of Galton's (1987) and Binet's (1904) on intellectual performance. From the beginning of the intelligence testing movement, memory items such as digit span have been included in the standardized intelligence tests. Attention has been directed towards investigating why the memory skills of mentally retarded persons appear to be inefficient and how the deficits might be remediated through training using different teaching methods.

In a special report carried out by Campiones et al (2007) on improving memory skills of mentally retarded children, it was established that they face challenges in their education outcomes compared to their peers. As a better way of helping them attain higher outcomes, they indicated that positive intervention would help the learners especially by using special class interactive teaching approaches. According to Heward (2006, pg.152), intensive systematic intervention could produce significant gains in a learner thought to be incapable of learning. With

Itard's application of intensive systematic approach to "Victor who was believed to be mentally retarded, signaled that individuals with mental retardation (MR) are capable of learning, however limited it may be (Herward, 2006).

In 1975, the United Nations declared the UN declaration on the Rights of Persons with disabilities. This declaration called for nations across the globe to recognize persons with disabilities as human beings. In addition, this declaration expanded the services and opportunities for PWDS globally in education, employment, and rehabilitation. In efforts to follow this UN declaration, the Ministry of Education set up a special education division dedicated to coordinate a special curriculum for children with disabilities (Jonathan, 2014).

In a different report, Friend (2008) while quoting the United States Department of Education (2004), during 2002-2003 school years, 0.88% of all children aged 6-21 (580,375 students) in America received special education because they were identified as having mental retardation (Ruteere, 2013). To increase more access to such a group of learners, the PL 94-142 of 1975, which later was later in 1990, changed to Individuals with Disabilities Education Act (IDEA), supported the education of children with disabilities. The court rulings in North Carolina in 1969 played a major role in the education of children with mental retardation. It is stated that:

> *"It is unconstitutional and invalid ...to operate the public school system in a discriminatory manner as against the mentally retarded children and to allocate funds to the disadvantage of the mentally retarded child. Often a mentally retarded child develops fair skills and abilities and becomes a useful citizen of the state but in order to do this, the mentally retarded child must have his/her chance" (Kaur, 2005, pg 33)*

This formed the basis for search of methods to teach the daily living skills. Other global declarations which impacted much on education of learners with MR were

the declaration on human rights of 1948 and also that on child rights of 1989. In Africa most countries have also been concerned about the education of the mentally challenged child in education institutions. In response to such declarations on human rights and child rights, most of the African countries have consequently become member signatories to the Jomtien Declaration on Education for All (EFA) of 1990 (Government of Kenya, 2005). Among the African countries which started Special Needs Education (SNE) institutions in response to the declaration include Uganda in 1982, Zambia in 1991 and college of SNE in 2002 (Khalifan, 2002) cited in Jonathan (2014).

In Kenya, The next progressive action to address disabilities concerns by the Kenyan government came in 1993. One of the recommendations that the Disability Task Force suggested in 1997 was a need for legislation to provide support to this marginalized community (Grut, 2007). This suggestion by the Disability Task Force ultimately led to the formation of The Persons with Disabilities Act of 2003. The most important features of the Act were to provide for the rights and rehabilitation of persons with disabilities, to achieve equalization of opportunities for persons with disabilities and to establish the National Council for Persons with Disabilities (Parliament of Kenya, 2003). The establishment of the National Council for Persons with Disabilities (NCPWD) in the Disability Act is very vital because its primary job is to ensure the rights, privileges, and protections in the Act are actually implemented (National Council for Persons with Disabilities, 2009).

In education research, learners with mental disability are categorized as mild, moderate, severe and profound. They manifest cognitive deficits in areas of memory, generalization, metacognation, motivation and language (Ndurumo, 1993). In adaptive behavior, they manifest deficits in social skills, self-care, home living, leisure, self-direction, functional academics, use of community facilities and

work. These are the (DLS) necessary for independent living. Okoko (1998) cited in Ruteere (2013) observes that every good curriculum for learners with MR should contain daily living skills (DLS). Daily living skills just like physical education, are manual skills; therefore, learners with MR can acquire them if teaching methods are applied effectively (Ruteere, 2013). These skills must be developed in whatever the setting, whether home or school, for maximum independence. Development of such skills may assist learners with MR to increase autonomy, co-dependence and nurturing problem-solving in the house, school and in the whole community at large (Lombardi, 2011).

1.1.2 Theoretical Perspective

The study was guided by the Social Learning theory of Bandura (1977) and Skinner (1904-1990). Bandura's Social Learning Theory (1977) states that, "human beings are influenced by their environment". This means that learning involves both external reinforcement and internal cognitive explanations of learning. These account for how we learn from other people. Human beings are social animals. Through interaction and observation, enormous amounts of information and complex skills in the environment are learnt. In social learning theory, there is immediate association of the model behavior through visual coding of the model (Kirk and Gallagher, 1989).

Social learning theory supports the model principle which states that „learners are likely to pay more attention to models with high status, high competence and expertise attributes which teachers are often thought to have. Social learning theory involves a model that is attractive, of high status and admired by the observer. A teacher models the desired behaviour such as eating, table manners, socializing, and assists his/her learners to imitate. The theory encompasses attention (attention paid to the model), retention (remembering what you paid

attention to), reproduction (reproducing the image, including physical capabilities) and motivation (having a good reason to imitate promised incentives and vicarious learning) (Kirk and Gallagher, 1989).

According to Skinner, an organism is in the process of "operating" on the environment. During this process, the organism encounters a special kind of stimulus, called a reinforcing stimulus, or a reinforcer. This special stimulus has the effect of increasing the operant (the behavior just before the reinforcer). That is, the behavior is followed by a consequence, and the nature of the consequence modifies the organism's tendency to repeat the behavior in the future. If the behavior is followed by a rewarding or positive consequence, the behavior tends to be strengthened.

In teaching learners with mental challenges, teachers can apply this theory in classroom situation. Learners can eagerly learn simply because they expect to be rewarded. In classroom situation, teachers can use tangibles in addition to other teaching approaches to reward learners. Shaping is a behavior modification which involves reinforcing successive approximations to a behavior that is beneficial to them.

Similarly self-efficacy is one of the major components of Social Learning Theory. Self-efficacy refers to people's judgment of their capabilities to organize, execute and accomplish certain performances (Kirk and Gallagher, 1989) in Ruteere (2013). Teachers are supposed to be sources of self-efficacy for their learners by giving ability-related activities for the learner to experience success, provide positive vicarious experiences, verbal persuasion and emotional arousal. The Social Learning theory is applicable in the current study because teaching methods are a representation of stimuli for leaners with mental challenges respond to in order to enhance their leaning abilities.

1.1.3 Conceptual Perspective

The independent variable is teaching methods. Peer Tutoring is an instructional strategy designed to effectively teach specific information to students with a variety of skill levels (Martel, 2009). Peer-Tutoring (PT) is defined by Topping (2005) as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. In this study, peer teaching was defined as a method of teaching where learners are paired and are encouraged to teach each other.

The dependent variable was academic achievement of mentally challenged learners. According to Steinmayr, Meißner, Weidinger and Wirthwein (2015), academic achievement represents performance outcomes that indicate the extent to which a person has accomplished specific goals that were the focus of activities in instructional environments, specifically in school, college, and university. School systems mostly define cognitive goals that either apply across multiple subject areas (e.g., critical thinking) or include the acquisition of knowledge and understanding in a specific intellectual domain (e.g., numeracy, literacy, science, history). Academic achievement refers to a student's success in meeting short- or long-term goals in education. In the big picture, academic achievement means completing high school or earning a college degree. Academic achievement may also refer to a person's strong performance in a given academic arena. A student who earns good grades or awards in science has achieved in the academic field of science. Education associations and schools monitor the overall level of student academic achievement to decide what, if any, changes need to be made in the educational system. In this study, academic achievement will refer to the score in the exercise given in the class after the lesson.

MacMillan (1983) has identified three categories of mental retardation: biological, social and psychometric. The first category biological definition was influenced by

the medical profession and included components such as diseases that affect the central nervous system and incomplete cerebral development. Proponents of social definitions viewed mental retardation in terms of social issues and effects resulting from the interaction of the mentally retarded with the environments. These approaches were directed mainly at the mildly retarded and attempted to demonstrate that retardation was primarily a function of the environment in which a person lived. The psychometric definitions resulted from the development of intelligence test. Their ease of administration and the fact that intelligence tests could compare individuals to the normal population made psychometric definitions popular. IQ scores in such definition became the sole determinants for classifying a person as mentally retarded. Learning abilities refer to the capacity of someone to comprehend, to understand from an experience. The present study conceptualizes learning ability as knowledge, comprehension, application and cognitive development.

1.1.4 Contextual perspective

In the West, disability has attracted attention to many policy implementers and researchers. Attention has been given to both the carers of children with disabilities because these groups have repeatedly highlighted their feelings of discrimination, stigma and exclusion (Corrigan *et al.* 2003; Rosenzweig & Huffstutter 2004; Huffstutter *et al.* 2007). Despite these challenges, there is little research from Africa addressing these issues. Studies from Uganda reveal that those who care for children with disabilities who are mainly mothers or grandmothers, together with their children, are subjected to stress in the form of physical ailments, isolation chores (Bwana & Kyohere 2001; Hartley *et al.* 2004). Those who care for children with hearing or speech deficits face challenges of a breakdown in communication because of inadequate knowledge in the use of signs (Hartley *et al.* 2004).In Kilifi County, the Education sector has been one of

the lowest performing areas of the socio- economy. The county has 160 Primary schools with an enrolment of 154,848 (Kilifi County Government, 2014).

1.2 Statement of the Problem

Mental disability in Kenya is a major issue that cuts across all levels of society. Even though the Kenyan government has implemented several laws and policies for people with disabilities, majority of these individuals do not know their rights, privileges, and protections under the new laws and policies that are set in place (Jonathan, 2014). According to the local media paper sources of Kenya (The Link, April 2011), discrimination extends from the mentally challenged child to even their care takers. One of the special education schools located in Kilifi County was noted to have rekindled hope to one of the mothers who had faced rejection from the community because of her disabled child. She also lacked support since the husband had abandoned her. In such rural settings, there are common misconceptions that a person with mental challenge is cursed and is a disgrace to his or her family. In extreme cases, learners with mental challenges are often left behind because they do not easily move at the same pace of learning compared to their peers. Persons with mental challenges are even more disadvantaged because they frequently need specialized education, which is rarely offered in inclusive classrooms. And if special education classes are offered, they are really expensive. These added barriers make it almost impossible for a mentally challenged person especially in rural settings to receive education hence creating disparities. In the view of the above, it was important that research be carried out to establish if academic achievement of mentally challenged learners can be influenced by teaching methods, specifically peer teaching or tutoring among selected primary schools in Kilifi County, Kenya. This can be explained by the fact that mentally challenged children feel at home with their peers as there is no stigmatization in such learning environment.

1.3 Purpose of the Study

The main purpose of the study was to establish the effect of peer teaching on academic achievement among mentally challenged learners in selected primary schools in Kilifi County Kenya. It investigated if there is a significant difference in academic achievement between learners taught using peer teaching (experimental) and those taught by conventional methods (control) among mentally challenged learners in selected primary schools in Kilifi County Kenya.

1.4 Objectives of the Study

i. To examine the level of academic achievement of experimental and control group of mentally challenged learners among selected schools in Kilifi County

ii. To investigate whether there is a significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County

1.5 Research Questions

i. What is the level of academic achievement of experimental and control group of mentally challenged learners among selected schools in Kilifi County?

ii. Is there a significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County?

1.6 Research Hypothesis

H01: There is no significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County?

1.7 Scope of the study

1.7.1 Geographical Scope

The current study aims at establishing the relationship between teaching methods and learning abilities of mentally challenged children. The study will be conducted among selected primary schools in Kilifi County of Kenya. The county is located north and northeast of Mombasa. The county has 160 Primary schools with an enrolment of 154,848. The secondary schools in the county are 23 with an enrolment of 61,112. There are 10 youth polytechnics. The county has a Medical Training College at Kilifi and a Public University called Pwani University.

1.7.2 Content Scope

The study established the level of learning abilities among mentally challenged learners; establish the relationship between teaching methods and learning abilities of learners with mental challenges.

1.7.3 Time Scope

The study was covered in a period of 5 months. In April 2017 the conceptualization of the study was done and proposal was developed. This was followed by proposal defense. Collections of the proposal were done in May 2017, data collection in June 2017, Analysis was done in July 2017 and final report was written in August 2017.

1.8 Significance of the study

The findings of the current study would make available information to teachers and education practitioners on the effectiveness of peer teaching for improving learning abilities of mentally challenged learners.

The findings would also provide suggestions on better teaching methods that help address the academic achievement of mentally challenged learners.

The study would also be used by curriculum developers, policy-makers and other stakeholders in the teaching profession to improve the implementation of better learning methods among mentally challenged learners.

The findings of the study would also form part of literature to other researchers on the influence of peer teaching and academic achievement of learners.

CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of literature on peer teaching and academic achievement of mentally challenged learners. The chapter also presents the conceptual framework, related literature and gaps identified in the literature.

2.1 Theoretical Review

The study was based on social learning theory propounded by (1977) and by Skinner (1904-1990). The social learning theory states that human beings are influenced by their environment. In other words, people are influence by both the external and internal environment. In a class room setting based on Bandura and Skinner's propositions, learners are always influenced by both the internal and external environment in the school. In this case are the teaching methods that are involved in instructing learners with mental challenges. The pioneering learning and motivation theorists usually developed their concepts by experimenting with animals in artificial settings. They observed how animals could solve puzzle boxes or mazes and learned to press leavers. Bandura noticed one omission in the experiments; they were not social because there were no other animals present. This implies that with complete isolation, the animals could not easily socialize with the rest of the other animals. The behaviorists then showed that the same principles in the artificial experiments could be applied to human beings in social contexts. Skinner observed that "just as rats learn to press leavers to get food, people learn to interact with others to obtain social rewards". In this case learners can ably learn from teachers in a school environment through the various teaching methods.

However some other researchers have questioned whether this analogy is really perfect. In response to this statement, Bandura argues that in social situations, we learn a great deal through imitation. In behaviorist theory, learning often appears to be a gradual process in which organisms must act to learn based on their environment. The repetition of that behavior is then based on the type of reinforcement received either positive or negative. Bandura however also argues that in social situations people often learn much more rapidly simply by observing the behavior of others. And so humans appear to acquire large segments of new behaviors all at once, through observation alone. Social learning theory is a combination of behavioral and cognitive theories. Bandura suggests that both internal and external factors are equally important. The basic equation set forth is: Personal factors such as beliefs, expectations, attitudes, and knowledge (cognitive) together with the environmental factors, such as the resources, consequences of action, physical setting (behavioral) and behaviors, such individual actions, choices and verbal statements influence learning and motivation.

One of the more important concepts of social learning theory is observational learning. The power of observational learning has been well documented in the present literature. No-trial learning is when human acquires new behavior all at once, entirely through observation. In this type, one does not need to go through the process of trial and error learning with differential reinforcement for each small response. When this new behavior is acquired through observation alone, the learning appears to be cognitive. Thus Bandura unlike Skinner believes that learning must include internal cognitive variables. Observation also teaches us the probable consequences of new behavior; we notice what happens when others try it. Bandura calls this process vicarious reinforcement. Vicarious reinforcement is also a cognitive process; we formulate expectations about the outcomes of our

own behavior without any direct action on any part (Crain, 1992) cited in Roke (2006).

According to Bandura, symbolic models are another type of model that one can learn from. These are non-live models such as those we see on television or read about in books. Other forms of symbolic models include verbal instructions as well as when an instructor describes actions for driving a vehicle. In this case, the teachers verbal expressions combined with demonstrations usually teaches learners most of what they need to know. Thus it is fortunate that for if we had to learn exclusively from consequences of our own action, and then few would survive class room process (Bandura, 1962).As also described by Bandura, there are four components of observational learning. To successfully imitate this model, one must first attend to the model, secondly one must also have some way of retaining what has been seen, and thirdly one must have the most necessary motor skills to reproduce the behavior. So when these conditions are met, we probably know how to imitate the model. Still one may choose not to because people's actual performances are controlled by fourth; the reinforcement contingencies, many of which are vicarious. The four elements according to Bandura are not separate. Reinforcement processes, in particular, influence what we attend to. As Bandura noted, people often attend to powerful, competent, prestigious models because they have found that imitating them, rather than inferior models, leading to more positive consequences.

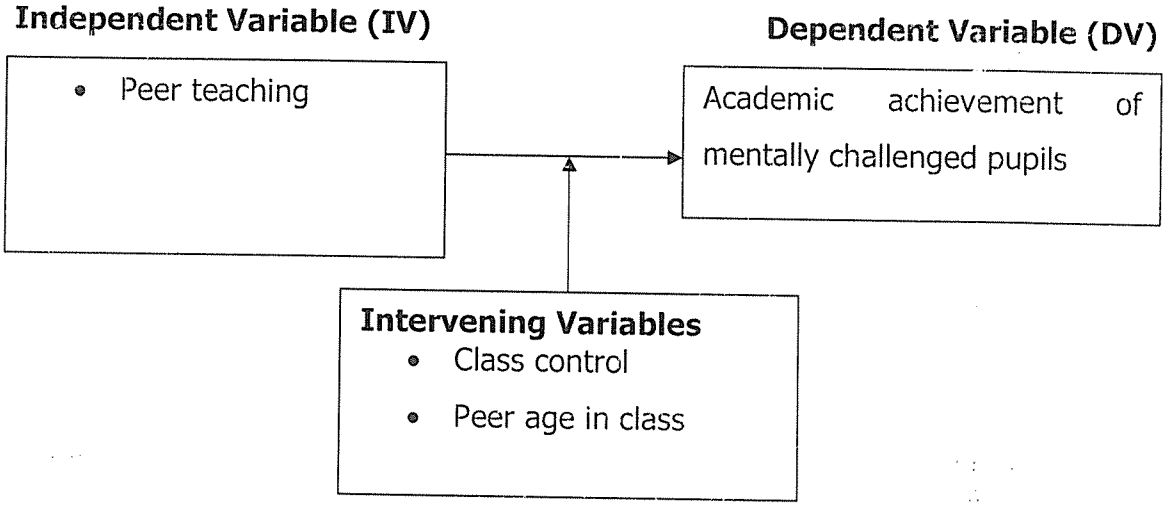
Social learning theory is of interest in the current study because it is built on principle that states that learners are likely to pay more attention to models with high status, high competence and expertise attributes which teachers are often thought to have. Social learning theory involves a model that is attractive, of high status and admired by the observer. A teacher models the desired behaviour such as learning, eating, table manners, socializing, and assists his/her learners to

imitate. The theory encompasses attention (attention paid to the model), retention (remembering what you paid attention to), reproduction (reproducing the image, including physical capabilities) and motivation (having a good reason to imitate-promised incentives and vicarious learning) (Kirk and Gallagher, 1989) cited in Roke (2006).

2.2 Conceptual Framework

The figure below is a diagrammatic representation of the relationship between teaching methods and academic achievement of mentally challenged learners.

Figure 1: Conceptual Framework



Source: Developed based on (Bloom, 1956; Anderson and Krathwohl, 2000; Perry, 1968; Nelson, 2000).

The conceptual framework Figure 1 suggests that peer teaching has a direct relationship with academic achievement of mentally challenged learners. The independent variable in this case is the teaching methods. This is categorized into peer teaching and conventional teaching. The dependent variable is academic achievement, that is; the score in class work. On the other hand other variables

that may influence academic achievement include pupil teacher ratio, experience and training of teachers and teachers/pupils attitude

2.4 Related Literature

2.4.1 Mental Retardation

The US Department of Education defines Mental Retardation as "significant sub-average general intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during developmental period that adversely affects a child's educational performance" (Turnbull, Turnbull and Wehmeyer, 2007). From the definition, it is clear that a learner with MR performs significantly below average, as he/she manifests deficits in cognition as well as adaptive behavior. Heward (2006) observes that many individuals with mild MR make tremendous advancements in adaptive skills, some to the point of functioning independently if exposed early to DLS. Some children with mild retardation are not identified until they enter school and sometimes, when more difficult academic work is required. Few go up to class 6 and are able to learn job skills well enough to support themselves independently or semi independently (Heward, 2006). Acquisition of DLS would also activate general development of their intellectual, social, motor and moral characteristics as well as raising their self-esteem.

Children with moderate mental retardation show significant delays in development during their preschool years (Turnbul et al, 2007). People with moderate mental retardation are more likely to have health and behavior problems than are individuals with mild retardation. Individuals with severe and profound mental retardation are almost always identified at birth or shortly afterwards. Most of them have significant central nervous system damage, and many have additional disabilities and/or poor health conditions (Heward, 2006). These two groups hardly function without support from caretakers, who, in most cases are their parents.

2.4.2 Teaching methods

Teaching methods comprise of the principles and methods used for instruction to be implemented by teachers to achieve the desired learning or memorization by learners. The different teaching methods to learners with mental retardation are aimed at making them acquire personal and independent skills. To achieve this, teachers identify and use teaching methods which they feel are effective for learning. Some of the methods presented in the current study include: interactive teaching, cooperative teaching, direct teaching/instructions, group teaching and peer tutoring and just in time teaching.

2.4.2.1 Interactive Teaching

This is a method of teaching where learners are involved in different activities during the lesson. For instance, some learners would be involved in distributing materials, others in arranging tables, while still others did other class activities (MoE, 2001). The involvement made them active and attentive. It also made them feel appreciated. That method was important because it assisted the learners to avoid being engaged in other types of behavior that would make them be withdrawn from the learning situations.

2.4.2.2 Cooperative Teaching

This is a teaching method aimed at improving academic achievement and social acceptance of learners with mild mental disabilities. It involves arranging learners into cooperative learning groups. Rather than competing against one another for grades, group members share the responsibilities for helping each other learn. The emphasis within each group is cooperation and shared responsibility. Cooperative learning arrangements promote increased academic achievements for learners with mild mental disabilities. Cooperative teaching is considered a promising instructional approach (Turnbull et al, 2007). It encourages pupils with varying strengths and abilities to work together toward achieving a common goal.

It is a method in which small heterogeneous groups of learners are actively involved jointly in accomplishing an activity or assignment. The teacher structures the task such that each pupil significantly contributes to the completion of the activity according to his/her ability (Gargiulo, 2006). It increased opportunities for learners to experience success in school. It also benefited all pupils by enhancing their self-esteem as well as increasing acceptance and understanding between learners themselves.

2.4.2.3 Direct Instruction/Teacher-Directed Approach

Direct instruction focuses on the teaching process, offering special educators powerful methods for improving the academic achievement of their learners with mild MR. Teachers ensure that individual learners receive assistance depending on their needs. The teacher maintains a strong academic focus and almost all available instructional time intensity. The teacher also ensures that he/she chooses appropriate tasks for his/her learners, as well as monitoring their progress. Learners with mild MR may not benefit much from direct instruction, reason being that their short attention span, poor memory and general deficits in cognition. Teaching strategies such as IEP, modeling, task analysis among others discussed below are used to enhance learning of DLS.

2.4.2.4 Peer Teaching

This is involvement of other students as instructional aides. Learners with mild MR can serve as tutors for younger peers. Peer teaching allows learners more opportunity for interaction and feedback from one another (Pierangelo and Giuliani, 2008). To ensure success of peer tutoring programs, the teacher must remain actively involved. Teachers facilitate the learning by ensuring that relevant DLS are practiced. Teachers also monitor the performance of both tutors and tutees. Peer tutoring has a potential of improving academic achievement of

learners but it does not necessarily improve the self-concept of learners with mild MR.

2.4.2.5 Group Teaching

In this method, learners doing a learning activity or creating a product in small groups of two to six in or out of class must be carefully managed by the instructor.

2.4.2.6 Just in time teaching

Instructor adjusts class activities to respond to the misconceptions of learners to conceptual questions.

2.4.3 Relationship between Teaching methods and Academic Achievement

Research indicates that various program models, implemented both in special education and general education, can have moderately positive academic and social impacts for students with disabilities (Hocutt, 1996). However, no intervention has been designed that eliminates the impact of having a disability. With few exceptions, students with disabilities have not achieved commensurately with their nondisabled peers; even students with learning disabilities as a group have not been able to achieve at the level of low-achieving nondisabled students. In general, the most effective interventions for students with mental disabilities, whether in special education or general education settings, have employed intensive and reasonably individualized instruction, combined with careful, frequent monitoring of student progress.

Some of the recent studies conducted on teaching methods and learning outcomes of mentally challenged learners have given some direction on instruction methods. For instance in a recent study, educational environment as teacher characteristics, instruction, and classroom climate may be even more important to

the success of students with Educable Mental Retardation than they are to other students (York et. Al, 1992)

In one of the most extensive studies involving students with educable mental retardation and nondisabled students,42 the academic achievement of students with educable mental retardation was predicted by a variety of classroom environment factors (teaching style, classroom climate), while that of non-handicapped students was predicted by their family background (parents' education, economic status).

Variations in the classroom environment accounted for nearly a quarter of the variance in the social acceptance or rejection of the students with mental retardation by their peers. The classroom factors associated with better outcomes for students with educable mental retardation were active involvement of the students in teacher-directed and supervised instruction (as opposed to passive individual seatwork) and the use of cooperative learning approaches, which promoted students' frequent interaction with non-handicapped peers.

Research on the integration of students with severe mental disabilities has emphasized the social and emotional benefits to nondisabled children and teachers, showing increased awareness of the needs of persons with disabilities, increased levels of social development in nondisabled children, increased willingness to work with students with disabilities, and increased skills for teachers (York et. al,1992).

In Kenya, Muthoni (2012) attempted to investigate factors influencing the acquisition of reading skills among learners with disabilities in Kilifi County of Coast Province. It concerned all learners but focused on those who have been traditionally excluded from educational opportunities. It was concerned with all learners with problems in reading comprehension, writing and mathematical computation.

The findings from the study indicated that various factors influenced the acquisition of reading skills among learners with disabilities. The findings showed that most public primary schools lack resources to cater for learners with difficulties in acquisition of reading skills. There is no clear government policy on acquisition of reading skills and the curriculum is too rigid for learners with difficulties in acquisition of reading skills. Most teachers have negative attitude towards learners with difficulties in acquisition of reading skills as they see it as a bother and these learners do lower the mean score. Most of the head teachers are not trained in special needs education thus making it difficult to instil the support of these learners with the problem of acquisition of reading skills in their schools.

A separate study conducted by Kiama (2012) to establish factors that hinder the promotion of autistic children into inclusive education in Kenya. Autism is a mental condition present from early childhood, characterized by difficulty in communicating and forming relationships with other people and in using language and abstract concepts. Results of the study show that resources for autistic learners (50010) and unqualified teachers (54%) in the area of autism are a major hindrance in the promotion of autistic learners into inclusive learning. These findings confirm that besides teachers, physical facilities and learning materials in many schools were not appropriate for children with Autism (50%). Classes in the public schools need restructuring (50%) which requires finance and this could be a hindrance on the side of the school because the funds given for disabled children amounts to 0.2 % which is not enough for all what is required for effective learning.

Another study conducted by (Kioko, 2011) to find out the influence of inclusive learning on the social development of children with special needs in Shimbahills preschools, Kwale District, Coast Province Kenya. Findings indicated that, children with special needs were very few in the regular schools as compared to the

general school enrolment due to discriminatory factors, negative beliefs and attitudes people held towards disability. The few children with special needs included in the regular schools were interacting with the rest of the children in play and other academic activities thus indicating social development was taking place among children with special needs. There was lack of clear government guidelines on the policy of inclusion. Due to this, the schools that included children with special needs were categorized as regular schools

2.4.3 Relationship between Peer Teaching and Academic Achievement

Peer Tutoring is an instructional strategy designed to effectively teach specific information to students with a variety of skill levels (Martel, 2009). Henson, Hagos and Villapando (2009) contends that in peer tutoring or peer teaching, students are assembled in groups of two or more and are trained to work together on a specific academic task. The students work together to prompt, monitor, and evaluate each other, while working toward group goals. Peer-Tutoring (PT) is defined by Topping (2005) as the acquisition of knowledge and skill through active helping and supporting among status equals or matched companions. Similarly, Paul, Lisa and Vanesa (2006) opined that Peer tutoring consists of two or more students, working together, teaching and learning from each other.Peer tutoring or teaching allows students work together to learn a specific set of information. Peer tutoring or teaching uses a combination of instructional components that include partner pairing, systematic content coverage, immediate error correction, frequent testing, team competition and point earning (Greenwood, Delquadri & Carta, 1997). Every student in the classroom is involved in the learning process with Peer tutoring or teaching, which allows them to practice basic skills in a systematic and fun way (Terry, 2008).

Peer tutoring or teaching is conducted in a way that encourages positive student interaction by using partner pairing and peer tutoring. In Peer tutoring or teaching, students are taught by peers who are trained to present a weekly set of information where they can provide immediate feedback for correct and incorrect responses. Daily lessons allow each partner to take the role of both the tutor and the tutee (Greenwood et al., 1997). Peer tutoring or teaching uses immediate-response feedback, error correction, and a specific tutoring technique that benefits both the tutor and tutee. When structured correctly, Peer tutoring or teaching allows teachers to actively engage all students in the classroom, while simultaneously monitoring process through daily and/or weekly assessments (Maheady, Harper & Mallette, 2003).

Horvath (2011) reported that, Class-wide peer-tutoring strategy is very important where there is large class size that will not allow teacher to give individualized attention to the students. Research by Brittany and Jennifer (2012) added that, Class-wide peer-tutoring involves pairing brighter students or fast learners (tutors) with less bright or slow learners (tutees) on a particular concept. Another research conducted by Abdulmalik (2015) indicated that in Class-wide Peer-Tutoring session, students are opportune to interact actively among themselves and by so doing learn from their peers. Similarly, Maheady and Gard (2010) reported that Class-Wide Peer-Tutoring has been commonly implemented in many educational settings in variety of contents and across a wide range of ages and gender.

Peer tutoring has been proven effective with students from pre-school to high school levels, and has been used in both general and special education classroom settings. Peer tutoring was initially designed for students in grades 1-6, with diverse skill levels, including students with learning disabilities, limited English proficiency, and other mild disabilities. It has since been expanded to include

newer models that can be used at any grade level with proper modification. New uses include "higher order" skills such as asking thought provoking questions in math and science, and combining class-wide tutoring components with self-management (King, Staffieri & Adelgais, 1998). Peer tutoring has also been used to teach health and safety information to students with mental disabilities, and improve academic, linguistic, and social competence of English language learners (Maheady et al., 2003).Studies on the effectiveness of Peer tutoring have demonstrated an increase in math, reading, social studies, spelling, and vocabulary skills on students with mild disabilities and students who are low-achieving (Harper, Maheady, Mallette, & Karnes, 1999). Results of a study conducted by Veerkamp, Baldwin, Kamps, & Cooper (2007) demonstrated improved performance on middle-school students' weekly vocabulary tests under Peer tutoring conditions compared with teacher-led instruction. Findings from this study showed that Peer tutoring can improve the reading skills of urban middle school students.

In another middle-school study, students with emotional or behavioral disorders used peer tutoring to teach paragraph summarization (Spencer & Mastropieri, 2003). In this study, students scored higher on their social studies content tests and showed higher levels of on-task behavior during the tutoring compared to traditional instruction. Research has also indicated strong outcomes for peer tutoring for students with average to low achievement levels, and students with learning disabilities (Fuchs, Mathes & Fuchs, 1997; Simmons, Fuchs, Fuchs, Hodge & Mathes, 1994; Simmons, Fuchs, Fuchs, Mathes & Hodge, 1995).With proper implementation of peer teaching, students who are advanced, average, low achieving or students with disabilities can increase their mastery of academic skills (Maheady et al., 2003). Using peer tutoringcan help students raise their

achievement levels, retain information learned in the process and use the information learned for other tasks(Greenwood et al., 1997).

At least 25 studies have been found showing peer tutoringto be more effective than teacher-led instruction (Greenwood, Arreaga-Mayer, Utley, Galvin, &Terry, 2001). It has also been successful in aiding the inclusion of students with autism into general education classrooms. Information on the success of peer tutoringhas shown a high degree of success.Studies have found lowered student outcomes have attributed to a reduction in time spent to learn peer tutoringlessons, low quality peer tutoring, and using unchallenging student materials (Greenwood et al., 1997). Additional research is needed in early childhood and high school levels due to current research focus on grades 1-6. Other areas where additional research would benefit would be the role of specific curricula, appropriate methods for training teachers to use peer tutoring, and ways to align instruction with appropriate grade level content standards and benchmarks (Maheady et al., 2003).

2.4.5 Gender and Academic Achievement

The issue of gender cannot be overlooked in this study, since most of the schools in the study area are coeducational with mixed classes of boy and girls. Study conducted by Mari (2009) indicated that, there was a lot of gender influence on students' Performance in science. For example, Kelvin (2016) reported significant impact of gender on academic Performance with boys having better scores than girls in chemistry. Conversely, Adekoya & Olatoye (2011) & Olatoye and Adekoya, (2010) found no gender difference in academic Performance of students exposed to different teaching strategies in science. However, Usman (2010) indicates that, boys perform well in any rigorous work while girls show to settle for less rigorous work. There has been a renewed debate on the controversial issue of gender differences on math and science achievement. This debate currentiy focuses on

why women are not seeking careers in information technology occupations. The most comprehensive reviews of the research in the area of gender differences have shown very few true differences between math and verbal abilities between men and women (Halpern, 2000). In fact, the research has shown only two gender differences in specific sub-areas of spatial and verbal abilities, three-dimensional mental rotation (favoring men), and speech production (favoring women). Other research has also shown a decline in the differences between the genders in the past few decades on standardized test, suggesting that the more exposure that women are getting to math and science classes, the better their scores. Even though this research puts into questions whether gender differences still exist in academic achievement, many researchers are still finding differences in performance as well as general interest in areas related to math and science. Thus, achievement alone cannot be the sole reason for women as they make their career choices.

Work by Eccles, Lord, Roeser, Barber, and Jozefowicz (1997) found that gender differences in enrollment in advanced mathematics courses in high school are mediated by gender differences in expectations for success in math and physics and perceived value of competence in math. Jacobs, Lanaz, Osgood, Eccles, and Wigfield (2002) found that self-concept of ability and task value in math decline for both genders between first and twelfth grades with no real difference between girls and boys trajectories over time. In fact, by the twelfth grade, girls valued math more than boys when controlling for self-concept of ability in math. This research might suggest that women should be just as represented in the technology or mathematical work force as men. This, however, is not the case. Even though women have made great strides in the law, medical, and social science professions, very few can be found in graduate programs or professions in mathematics, computer science, physics, engineering, or information technology

jobs (Eccles, 2001). Many ideas have been put forth on why high achieving women may not be entering this professions including discrimination, gender-typed socialization, and self-concept of ability in these areas, and the value and interest that women have in these professions (Eccles, 2001). In this study, gender differences academic achievement of mentally challenged learners when taught using peer-tutoring strategy was investigated among mentally challenged learners among selected schools in Kilifi County.

2.5 Gaps Identified

From the present literature, most of the studies cited were conducted are dated some long time back. Thus there might be limited validity in comparison to other studies that were conducted later.

CHAPTER THREE
METHODOLOY

3.0 Introduction

This chapter presents methods used in the study. The chapter will majorly focus on the research design, research population, sample size, sampling procedure, research instruments, validity and reliability of the instruments, data analysis, ethical considerations and limitations of the study.

3.1 Research Design

The research design was generally quantitative approach. The study was a quasi-experimental investigation that employed the descriptive,comparativesurvey design. Orodho (2003) writes that descriptive survey design is a method of collecting data by administering a questionnaire to a sample of individuals. On the other hand, Kombo and Tromp (2006) assert that descriptive survey can be used to collect information about the nature of the existing condition, identifying the standards against which existing conditions can be compared as well as determining the relationship between specific events (Orodho, 2004). The design was suitable for the study in that the researcher was able to determine the level of academic achievement among mentally challenged learners and the carry out a comparative analysis between teaching methods (conventional or peer teaching) and academic achievement among mentally challenged learners as well as differences in academic achievement between male and female among mentally challenged learners. Data collected through this design enabled the researcher to present the level of academic achievement and investigate differences between teaching methods (conventional or peer teaching) and academic achievement among mentally challenged learners in Kilifi County, Kenya.

3.2 Target Population

The target population included mentally challenged learners from five randomly selected primary schools in Kilifi County, Kenya. The county has 160 Primary schools with an enrolment of 154,848. Out of the 160 primary schools, 14 of them are special unit public primary schools. Schools where data were collected were

3.3 Sample size

The minimum sample size was obtained using Krejcie and Morgan (1970) table for determining sample size from a give population. Using this table, the sample sizes from different target populations are shown in table 3.1 below.

Table 3.1: Sample Size form Respective Primary Schools

Sampling Unit	Population Size	Sample Size
A	70	60
B	140	100
C	25	21
D	60	54
E	15	15
Total	**310**	**150**

Source: Schools Net Kenya: Education Solutions (2013)

3.4 Sampling Procedure

Both simple random and purposive sampling procedures were used to establish a representative sample of the study. The simple random sampling procedure was used because every member in the sampling unit had an equal chance of participation while the purposive sampling procedure was used because the elements deliberately represent the entire target population of mentally challenged learners in Kilifi County.

3.5 Research Instruments

Research instruments are tools used by researchers to gather data/information from respondents (Cresswel, 2005). In this study, two research instruments were used to collect data. They were observation checklist and a record sheet to record marks scored by students in an exercise after the lesson, their names and gender. The researcher used observation checklist and a record sheet.

3.6 Validity

The validity of the instruments were ensured. Validity is concerned with establishing whether the research instrument content would measure what it is supposed to measure. Validity is the degree to which a test measures what it purports to be measuring (Orodho, 2009). Therefore the record sheet and observation checklist were scrutinized by experts within the department.

3.7 Reliability

The reliability of the instrument was ensured established using test re-test approach to check whether the results are the same. The students who were used in data collection for testing reliability were not included in the final study. The researcher found out that there existed a high correlation between the results from first data collected and the second set of data.

3.8 Data Analysis

Quantitative analysis was conducted to present the findings of the study. The frequency counts were computed in order to present the characteristics of the study population in terms of gender, school and occupations of parents or guardians. Objective one was analyzed using descriptive statistics (Means, Standard deviations). To achieve objective two, the researcher presented the finding using frequency counts and percentages. This is because the study aimed identifying the occupations of parents or guardians of mentally challenged learners. For objective three, to test whether there is a significant difference in

academic achievement between male and female of mentally challenged learners among selected schools in Kilifi County, the researcher used t-test, specifically two independent samples t-test. Objective four of the study was analyzed using two sample independent t-test since the researcher collected data from two sample, that those taught using peer teaching approach and those taught by conventional methods (teacher centered approach).

3.9 Ethical Considerations

Participation in the research as a respondent was voluntary.Permission was also sought from the head teachers and their special unit class teachers during the initial visit to the sampled schools before involving them. The researcher also establish a good rapport with the head teacher and special unit class teachers. Further consultation with special unit class teachers were done to agree on the convenient time for lesson observations. The respondents were assured that the information would be treated as confidential and would be used only for the purpose of the study.

3.10 Limitations of the study

At some time, the researcher would not get response from all the pupils about their academic achievement because some students were not able to communicate well. However the researcher probed further through their teachers to understand.

During this study, certain words and/ phrases were not translated directly from English to Kiswahili and vice versa. These small errors in translation might cause major changes in meaning, thus providing the study with inaccurate information. The researcher tried as much possible to provide detailed meaning of the research instrument.

Other limitation were concerned with the nature of respondents. The participants were mentally challenged learners. As such, some were not able to respond to

simple questions such as the work their parents did. Besides this, organizing such learners during the experiment was not an easy task. By and large, the researcher was able to carry out the study.

Other limitations were related to conceptualization of study variables. The topic continually evolved and as such, more and more needs to address during the research process. However, the research was able to solve this problem by faithfully consulting the experts and specifically the supervisor.

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The purpose of the study is to establish whether there is a significant difference in academic achievement between learners taught using peer teaching (experimental) and those taught by conventional methods (control) among mentally challenged learners in selected primary schools in Kilifi County Kenya. The study was further guided by two objectives; that is; to examine the level of academic achievement of experimental and control group of mentally challenged learners among selected schools in Kilifi County, to investigate whether there is a significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County. In this chapter, the researcher presents the data analysis based on these objectives.

Table 4.1: Sample sizes from Conventional and Peer Teaching Methods

Teaching Methods	Frequency	Percentage
Conventional teaching	190	76.0
Peer Teaching	60	24.0
Total	**250**	**100.0**

Source: Primary Data (2017)

Results in table 4.1 above shows different sample sizes for experimental group and control group. The experimental group are those taught using peer teaching or tutoring methods. Here learners were put in pairs and asked to teach each other or explain to each other the concepts for the lesson. These were 60 (24%) of the sample used in the study. The control group involved those who were taught using conventional methods, conceptualized as those taught using teacher centered methods such as direct method. These were the highest with 190 (76%) of the total number of respondents.

4.1 Demographic Characteristics of Respondents

The study being experimental, the demographic profile of respondents were mainly in terms of gender and age and the schools where the study was carried out. Age was collected as a numerical data, so only gender and school would be presented in terms frequency and percentages. The table showing the gender and schools is APPENDIX V in this study. The results are shown in table 4.2 below;

Table 4.2 Demographic Profile of Respondents

Variable	Category	Frequency	Percent
School	A	60	24.0
	B	100	40.0
	C	21	8.4
	D	54	21.6
	E	15	6.0
	Total	**250**	**100.0**
Gender	Female	106	42.4
	Male	144	57.6
	Total	**250**	**100.0**

Source: Primary Data (2017).

The results in table 4.2 above shows the demographic characteristics of respondents. In terms of schools, where the samples were selected, school B had the most respondents with 100 (40%) of the total respondents followed by school A with 60 (24%), the followed by school D with 54 (21.6%). School C had 21(8.4%) and school D contributed a sample of 15 (6%). In term of gender, most of the respondents (children) were male with 144 (57.6%) while the female or girls were 106 (42.4%). This implies that most of the respondents were boys.

4.2The Level of Academic Achievement of Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

The first objective of the study was to examine the level of academic achievement of experimental and control group of mentally challenged learners among selected schools in Kilifi County. To achieve this, the researcher determine mean score and the standard deviation from an exercise given after teaching in a class. The exercise was marked out of 100 and the students' marks were recorded. The table showing the scores is APPENDIX V in this study. The results are shown in table 4.3a and 4.3b below.

Table 4.3a: Overall Level of Academic Achievement of Mentally Challenged Learners among Selected Schools in Kilifi County

	Range	Minimum	Maximum	Mean	Std. Dev.
Score	25	30	55	40.04	5.778

Source: Primary Data (2017)

Results in table 4.3a shows the descriptive statistics of overall academic achievement among of Mentally Challenged Learners among Selected Schools in Kilifi County. The results reveal that the average performance of students in the exercise was very slightly above 40 percent, that is (40.04%) with standard deviation of (std. dev. = 5.778). The maximum mark or score was 55% and the lowest was 30% giving a range of 25%. This implies that generally, the academic achievement measured in terms of marks score on average is slightly above average that is 50% indicating a low performance in terms of class score. The standard deviations shows the units of difference in marks scored. It shows that the deviations from the mean is slightly below 6% showing a low deviations in marks scored.

Table 4.3 b: Level of Academic Achievement of Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

Method of Teaching	N	Mean	Std. D.
Peer teaching	60	40.68	5.939
Conventional Teaching	189	39.84	5.727

Source: Primary Data (2017)

In term of level of academic achievement for experimental group, those taught using peer teaching and those taught using conventional methods, that is teacher centered methods, also known as control group. The results reveals that the score for the experimental group are high (mean = 40.68%, std. dev. = 5.939) than those taught using conventional methods (mean = 39.84, std. dev. = 5.727). Based on these results we say that students taught using peer teaching perform better that those taught using conventional methods. We also observe that the deviations within the marks scored are differ with peer teaching showing a higher deviation (5.939) than conventional teaching (5.727), though the difference does not seem significant.

4.5 Difference in Academic Achievement between Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

The second objective of the study was to investigate whether there is a significant difference in academic achievement between experimental and control group of mentally challenged learners among selected schools in Kilifi County. To achieve this, the researcher used t-test for two independent samples to investigate whether there existed a significant difference between mean scores of

learners taught using peer teaching and those taught by using conventional teaching methods. The results are shown in the table 4.6 below.

Table 4.4: Academic Achievement between Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

Method of Teaching	N	Mean score	Std. Dev.	t	p-value	Interpretation	Decision
Peer teaching	60	40.68	5.939	0.965	0.337	Insignificant difference	Accept Ho
Conventional Teaching	189	39.84	5.727				

Source: Primary Data (2017)

The results in table 4.6 above reveal that level of academic achievement for experimental group, those taught using peer teaching and those taught using conventional methods, that is teacher centered methods, also known as control group. The results reveals that the mean score for the experimental group are high (mean = 40.68%, std. dev. = 5.939) than those taught using conventional methods (mean = 39.84, std. dev. = 5.727). However, since the t-value and its respective p-value are (t = 0.965, p-value = 0.337), this implies that though the difference in means exists, it is not significant. We therefore accept the null hypothesis that stated that there is no significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya. The research rejected the research hypothesis that there is a significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

In this chapter, the researcher represents the discussion of the study based on the objectives of the study, makes conclusions and recommendations based on the findings of the study.

5.1 Discussions

The study found out that the overall means score for experimental group ways higher than those for control group.

5.1.1 The Level of Academic Achievement of Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

Regarding this objective, the study found out that the overall mean academic achievement of Mentally Challenged Learners among Selected Schools in Kilifi County was very slightly above 40 percent, that is (40.04%) with standard deviation of (std. dev. = 5.778). The maximum mark or score was 55% and the lowest was 30% giving a range of 25%. This implies that generally, the academic achievement measured in terms of marks score on average is slightly above average that is 50% indicating a low performance in terms of class score. The standard deviations shows the units of difference in marks scored. It shows that the deviations from the mean is slightly below 6% showing a low deviations in marks scored. In term of level of academic achievement for experimental group, those taught using peer teaching and those taught using conventional methods, that is teacher centered methods, also known as control group, the study found out that the score for the experimental group are high than those taught using conventional methods. Based on these results we say that students taught using

peer teaching perform better that those taught using conventional methods. These finding are in line with Veerkamp et al (2007) and Spencer et al (2003). Veerkamp et al (2007) concluded that peer tutoring improved performance on middle-school students' weekly vocabulary tests. Spencer et al (2003) students scored higher on their social studies content tests and showed higher levels of on-task behavior during the tutoring compared to traditional instruction.

5.1.2 Difference in Academic Achievement between Experimental and Control Group of Mentally Challenged Learners among Selected Schools in Kilifi County

The study found out that level of academic achievement for experimental group, those taught using peer teaching and those taught using conventional methods, that is teacher centered methods, also known as control group. The results reveals that the mean score for the experimental group are high than those taught using conventional methods. Despite the difference in means, the study found out that the difference was not significant. This implies that though the difference in means exists, it is not significant. We therefore accept the null hypothesis that stated that there is no significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya. The research rejected the research hypothesis that there is a significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya. These finding are in line with Veerkamp et al (2007) and Spencer et al (2003). Veerkamp et al (2007) concluded that peer tutoring improved performance on middle-school students' weekly vocabulary tests. Spencer et al (2003) students scored higher on their social studies content tests and showed higher levels of on-task behavior during the tutoring compared to traditional instruction.

5.2 Conclusions

The conclusions were made based on objectives of the study.

The overall mean academic achievement of Mentally Challenged Learners among Selected Schools in Kilifi County was very slightly above 40 percent. Also the level of academic achievement for experimental group, are high than those taught using conventional methods. Based on these results we say that students taught using peer teaching perform better than those taught using conventional methods.

The mean score for the experimental group are high than those taught using conventional methods. Despite the difference in means, the difference is not significant. The null hypothesis that stated that there is no significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya is thus accepted. The research rejected the research hypothesis that there is a significant difference between academic achievements between experimental and control group of mentally challenged learners among selected schools in Kilifi County, Kenya.

5.3 Recommendations

Based on the findings, the researcher recommends the following

1. There is a need to apply peer teaching since it shown that there is slightly high performance rate than conventional methods. This is evident with regard to the findings of this study.
2. Besides this, there is need to orient, develop and train teachers of mentally challenged learners and thus improve them with respect to teaching methods. It is normally easier to teach the easy way, or feel that they are the only teachers yet students can actually teach themselves. Thus, this is important if mentally challenged learners study well and feel self-worth.

5.4 Areas for Further Research

1. Instructional materials and students' academic performance among mentally challenged learners among selected schools in Kilifi County, Kenya.

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APPENDIX I

INTRODUCTION LETTER

APPENDIX II

TRANSMITAL LETTER

Dear respected respondent: _____

I am a students for KIU and seeking here that you are one of the potential respondents that I hope to seek assistance in completing the survey which is designed for academic research. The data gathered of this survey attempts to understand (Peer Teaching and academic achievement of Mentally Challenged Learners in Kilifi County Primary School, Kenya).To this end I am kindly request that you to help me collect data on the scores of students, gender and their age. Information provided by you and remains confidential and will be reported only as academic format only.

Yours faithfully,

NAME _____

Masters of _____ , KIU

APPENDIX III

CLEARANCE FROM ETHICS COMMITTEE

Date: _____

Candidate's Data

Name: _____

Reg: _____

Course: _____

Title of Study _____

_____

Ethical Review Checklist

The study reviewed considered the following:

___ Physical Safety of Human Subject

___ Psychological Safety.

___ Emotional Security

___ Privacy

___ Written Request for Author of Standardized Instrument

___ Coding of Questionnaires /Anonymity/Confidentiality

___ Permission to Conduct the Study

___ Informed Consent

___ Citations/Authors Recognized

APPENDIX IV
INFORMED CONSENT

I am giving my Consent to be part of the research study of Mrs. _____ that will focus on PEER TEACHINGON ACADEMIC ACHEIVEMENT OF MENTALLY CHALLENGED LEARNERS IN KILIFI COUNTY PRIMARY SCHOOLS, KENYA.

I am assured of Privacy, anonymity and Confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials: _____

Date: ____/_____/_____

APPENDIX V

RECORD SHEET OF DATA COLLECTED

Teaching Method	School	Sex	Age	Score/100	Parents or Guardians occupation
Peer teaching	A	MALE	9	33	CARPENTRY
Peer teaching	A	MALE	10	43	DRIVER
Peer teaching	A	FEMALE	7	43	DRIVER
Peer teaching	A	MALE	7	40	DRIVER
Peer teaching	A	FEMALE	7	30	DRIVER
Peer teaching	A	MALE	9	30	DRIVER
Peer teaching	A	MALE	7	40	DRIVER
Peer teaching	A	MALE	8	41	FARMER
Peer teaching	A	MALE	14	40	FARMER
Peer teaching	A	FEMALE	7	40	FARMER
Peer teaching	A	MALE	15	43	FARMER
Peer teaching	A	MALE	16	31	FARMER
Peer teaching	A	FEMALE	11	41	FARMER
Peer teaching	A	FEMALE	14	33	FARMER
Peer teaching	A	FEMALE	13	40	FARMER
Peer teaching	A	FEMALE	10	50	FISHERMAN
Peer teaching	A	MALE	7	31	FISHERMAN
Peer teaching	A	FEMALE	6	45	GROUNDMAN
Peer teaching	A	MALE	9	51	HOTELIAN
Peer teaching	A	MALE	6	42	HOUSE WORKER
Peer teaching	A	FEMALE	10	43	HOUSE WORKER
Peer teaching	A	FEMALE	6	51	HOUSE WORKER
Peer teaching	A	FEMALE	9	55	HOUSE WORKER
Peer teaching	A	FEMALE	6	32	HOUSE WORKER
Peer teaching	A	MALE	11	40	HOUSE WORKER
Peer teaching	A	MALE	10	41	HOUSE WORKER
Peer teaching	A	FEMALE	6	47	MASONRY
Peer teaching	A	MALE	11	44	MASONRY

Peer teaching	A	FEMALE	7	31	MASONRY
Peer teaching	A	MALE	6	41	MASONRY
Peer teaching	A	MALE	7	45	MECHANICS
Peer teaching	A	MALE	6	33	MECHANICS
Peer teaching	A	MALE	6	30	N/A
Peer teaching	A	FEMALE	10	41	N/A
Peer teaching	A	MALE	17	40	N/A
Peer teaching	A	MALE	8	41	N/A
Peer teaching	A	MALE	22	40	N/A
Peer teaching	A	MALE	11	40	N/A
Peer teaching	A	MALE	17	41	N/A
Peer teaching	A	MALE	8	41	N/A
Peer teaching	A	MALE	9	42	N/A
Peer teaching	A	MALE	13	41	N/A
Peer teaching	A	MALE	11	42	N/A
Peer teaching	A	FEMALE	14	32	N/A
Peer teaching	A	FEMALE	16	40	N/A
Peer teaching	A	FEMALE	8	41	N/A
Peer teaching	A	FEMALE	16	48	N/A
Peer teaching	A	FEMALE	14	51	N/A
Peer teaching	A	MALE	11	44	NURSE
Peer teaching	A	FEMALE	12	42	SHOPKEEPER
Peer teaching	A	MALE	7	43	SMALL BUSINESS
Peer teaching	A	FEMALE	8	32	SMALL BUSINESS
Peer teaching	A	FEMALE	9	48	SMALL BUSINESS
Peer teaching	A	MALE	12	42	SMALL BUSINESS
Peer teaching	A	FEMALE	10	31	SMALL BUSINESS
Peer teaching	A	FEMALE	16	40	SMALL BUSINESS
Peer teaching	A	MALE	12	44	SMALL BUSINESS
Peer teaching	A	FEMALE	16	42	SMALL BUSINESS
Peer teaching	A	FEMALE	13	50	SMALL BUSINESS
Peer teaching	A	MALE	17	42	WATCHMAN

Conventional	B	MALE	15	40	CARPENTRY
Conventional	B	MALE	12	40	COBBLER
Conventional	B	MALE	16	44	COBBLER
Conventional	B	MALE	13	31	DESIGNER
Conventional	B	FEMALE	16	41	DRIVER
Conventional	B	MALE	9	45	DRIVER
Conventional	B	MALE	8	41	DRIVER
Conventional	B	MALE	16	32	FARMER
Conventional	B	MALE	15	40	FARMER
Conventional	B	FEMALE	12	33	FARMER
Conventional	B	MALE	12	41	FARMER
Conventional	B	FEMALE	14	45	FARMER
Conventional	B	MALE	17	44	FARMER
Conventional	B	MALE	16	48	FARMER
Conventional	B	MALE	11	43	FARMER
Conventional	B	MALE	11	43	FARMER
Conventional	B	MALE	14	48	FARMER
Conventional	B	MALE	16	48	FARMER
Conventional	B	MALE	17	41	FARMER
Conventional	B	MALE	13	40	LAUNDRY
Conventional	B	FEMALE	14	41	LAUNDRY
Conventional	B	FEMALE	14	49	MASONRY
Conventional	B	FEMALE	16	45	MASONRY
Conventional	B	FEMALE	13	41	N/A
Conventional	B	MALE	14	40	N/A
Conventional	B	MALE	14	44	N/A
Conventional	B	MALE	17	41	N/A
Conventional	B	MALE	14	49	N/A
Conventional	B	MALE	13	33	N/A
Conventional	B	MALE	17	41	N/A
Conventional	B	MALE	17	41	N/A
Conventional	B	MALE	16	32	N/A

Conventional	B	FEMALE	15	49	N/A
Conventional	B	MALE	13	31	N/A
Conventional	B	MALE	12	46	N/A
Conventional	B	MALE	10	40	N/A
Conventional	B	MALE	15	40	N/A
Conventional	B	FEMALE	13	41	N/A
Conventional	B	FEMALE	12	42	N/A
Conventional	B	MALE	17	31	N/A
Conventional	B	MALE	16	41	N/A
Conventional	B	FEMALE	13	41	N/A
Conventional	B	FEMALE	12	50	N/A
Conventional	B	FEMALE	13	41	N/A
Conventional	B	MALE	14	40	N/A
Conventional	B	MALE	12	40	N/A
Conventional	B	MALE	13	42	N/A
Conventional	B	MALE	14	41	N/A
Conventional	B	FEMALE	14	32	N/A
Conventional	B	MALE	8	31	N/A
Conventional	B	FEMALE	7	41	N/A
Conventional	B	MALE	7	40	N/A
Conventional	B	FEMALE	9	30	N/A
Conventional	B	FEMALE	1	41	N/A
Conventional	B	FEMALE	6	31	N/A
Conventional	B	FEMALE	10	30	N/A
Conventional	B	FEMALE	13	31	N/A
Conventional	B	MALE	15	32	N/A
Conventional	B	FEMALE	13	49	PAITER
Conventional	B	MALE	14	41	SHOPKEEPER
Conventional	B	MALE	11	41	SHOPKEEPER
Conventional	B	MALE	10	43	SHOPKEEPER
Conventional	B	MALE	11	49	SHOPKEEPER
Conventional	B	MALE	12	41	SMALL BUSINESS

Conventional	B	MALE	12		SMALL BUSINESS
Conventional	B	MALE	15	40	SMALL BUSINESS
Conventional	B	MALE	17	40	SMALL BUSINESS
Conventional	B	MALE	12	41	SMALL BUSINESS
Conventional	B	MALE	13	42	SMALL BUSINESS
Conventional	B	MALE	11	48	SMALL BUSINESS
Conventional	B	MALE	13	47	SMALL BUSINESS
Conventional	B	FEMALE	13	41	SMALL BUSINESS
Conventional	B	FEMALE	16	40	SMALL BUSINESS
Conventional	B	FEMALE	13	42	SMALL BUSINESS
Conventional	B	FEMALE	14	41	SMALL BUSINESS
Conventional	B	MALE	11	43	SMALL BUSINESS
Conventional	B	MALE	16	40	SMALL BUSINESS
Conventional	B	MALE	15	33	SMALL BUSINESS
Conventional	B	MALE	13	47	SMALL BUSINESS
Conventional	B	MALE	13	42	SMALL BUSINESS
Conventional	B	MALE	17	42	SMALL BUSINESS
Conventional	B	MALE	10	47	SMALL BUSINESS
Conventional	B	FEMALE	13	46	SMALL BUSINESS
Conventional	B	FEMALE	14	41	SMALL BUSINESS
Conventional	B	FEMALE	15	44	SMALL BUSINESS
Conventional	B	FEMALE	16	32	SMALL BUSINESS
Conventional	B	FEMALE	13	43	SMALL BUSINESS
Conventional	B	MALE	16	40	SMALL BUSINESS
Conventional	B	MALE	17	46	SMALL BUSINESS
Conventional	B	MALE	15	49	SMALL BUSINESS
Conventional	B	MALE	14	33	SMALL BUSINESS
Conventional	B	FEMALE	14	51	SMALL BUSINESS
Conventional	B	FEMALE	15	40	SMALL BUSINESS
Conventional	B	FEMALE	14	45	SMALL BUSINESS
Conventional	B	MALE	16	44	SMALL BUSINESS
Conventional	B	MALE	13	40	SMALL BUSINESS

Conventional	B	MALE	17	30	TAILOR
Conventional	B	FEMALE	14	40	TAILOR
Conventional	B	MALE	15	42	TAILOR
Conventional	B	FEMALE	17	48	TEACHER
Conventional	C	FEMALE	11	31	BARBER
Conventional	C	MALE	13	32	DRIVER
Conventional	C	FEMALE	10	31	DRIVER
Conventional	C	MALE	13	43	FISHERMAN
Conventional	C	FEMALE	10	46	HOTELIAN
Conventional	C	FEMALE	11	30	HOTELIAN
Conventional	C	FEMALE	13	33	HOUSE WORKER
Conventional	C	MALE	17	32	N/A
Conventional	C	MALE	9	30	N/A
Conventional	C	FEMALE	15	31	N/A
Conventional	C	FEMALE	9	42	N/A
Conventional	C	FEMALE	13	41	N/A
Conventional	C	MALE	12	30	N/A
Conventional	C	FEMALE	15	43	N/A
Conventional	C	FEMALE	9	31	N/A
Conventional	C	FEMALE	12	47	N/A
Conventional	C	FEMALE	14	31	N/A
Conventional	C	MALE	12	40	SMALL BUSINESS
Conventional	C	MALE	11	30	SMALL BUSINESS
Conventional	C	MALE	12	41	TEACHER
Conventional	C	MALE	10	40	WATCHMAN
Conventional	D	FEMALE	15	45	DRIVER
Conventional	D	MALE	16	31	DRIVER
Conventional	D	MALE	14	41	FARMER
Conventional	D	MALE	13	42	FARMER
Conventional	D	MALE	15	42	FARMER
Conventional	D	MALE	14	40	FARMER
Conventional	D	FEMALE	15	42	FARMER

Conventional	D	MALE	15	31	FARMER
Conventional	D	FEMALE	13	41	FARMER
Conventional	D	MALE	14	42	FARMER
Conventional	D	MALE	13	40	FARMER
Conventional	D	FEMALE	12	42	FARMER
Conventional	D	FEMALE	10	45	FARMER
Conventional	D	MALE	15	30	FARMER
Conventional	D	FEMALE	14	31	FARMER
Conventional	D	MALE	10	42	FARMER
Conventional	D	MALE	8	42	FARMER
Conventional	D	FEMALE	13	44	FARMER
Conventional	D	FEMALE	14	41	FARMER
Conventional	D	MALE	16	30	FARMER
Conventional	D	MALE	11	40	FARMER
Conventional	D	MALE	17	40	FISHERMAN
Conventional	D	FEMALE	15	30	N/A
Conventional	D	FEMALE	16	32	N/A
Conventional	D	FEMALE	13	41	N/A
Conventional	D	FEMALE	17	32	N/A
Conventional	D	MALE	17	30	N/A
Conventional	D	MALE	12	31	N/A
Conventional	D	MALE	14	41	N/A
Conventional	D	MALE	16	31	N/A
Conventional	D	MALE	14	41	N/A
Conventional	D	FEMALE	11	31	N/A
Conventional	D	MALE	10	30	N/A
Conventional	D	FEMALE	16	41	N/A
Conventional	D	FEMALE	13	31	N/A
Conventional	D	FEMALE	12	41	N/A
Conventional	D	MALE	11	43	N/A
Conventional	D	FEMALE	9	41	N/A
Conventional	D	FEMALE	16	41	N/A

Conventional	D	MALE	13	44	N/A
Conventional	D	MALE	15	42	N/A
Conventional	D	FEMALE	17	43	SMALL BUSINESS
Conventional	D	MALE	9	41	SMALL BUSINESS
Conventional	D	MALE	17	42	SMALL BUSINESS
Conventional	D	MALE	9	31	SMALL BUSINESS
Conventional	D	MALE	10	42	SMALL BUSINESS
Conventional	D	FEMALE	11	41	SMALL BUSINESS
Conventional	D	MALE	14	30	SMALL BUSINESS
Conventional	D	MALE	12	51	SMALL BUSINESS
Conventional	D	FEMALE	12	44	SMALL BUSINESS
Conventional	D	FEMALE	16	31	TEACHER
Conventional	D	FEMALE	13	42	TEACHER
Conventional	D	MALE	14	45	TEACHER
Conventional	D	MALE	13	43	WATCHMAN
Conventional	E	MALE	9	44	DRIVER
Conventional	E	FEMALE	13	42	DRIVER
Conventional	E	FEMALE	8	43	FARMER
Conventional	E	FEMALE	15	30	FARMER
Conventional	E	FEMALE	16	40	FARMER
Conventional	E	MALE	10	44	FARMER
Conventional	E	FEMALE	9	43	FARMER
Conventional	E	FEMALE	12	41	FARMER
Conventional	E	MALE	10	42	N/A
Conventional	E	FEMALE	11	52	N/A
Conventional	E	MALE	9	40	SMALL BUSINESS
Conventional	E	FEMALE	16	41	SMALL BUSINESS
Conventional	E	FEMALE	17	51	SMALL BUSINESS
Conventional	E	MALE	18	41	SMALL BUSINESS
Conventional	E	MALE	10	43	TEACHER

APPENDIX VI

Sample Size Determination Using Krejcie and Morgan Table

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	381
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan 1970*

APPENDIX VII

DATA OUTPUT

TYPE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Conventional	190	76.0	76.0	76.0
	Experimental	60	24.0	24.0	100.0
	Total	250	100.0	100.0	

School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	60	24.0	24.0	24.0
	B	100	40.0	40.0	64.0
	C	21	8.4	8.4	72.4
	D	54	21.6	21.6	94.0
	E	15	6.0	6.0	100.0
	Total	250	100.0	100.0	

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FEMA	106	42.4	42.4	42.4
	MALE	144	57.6	57.6	100.0
	Total	250	100.0	100.0	

Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Barber	1	.4	.4	.4
	Carpentry	2	.8	.8	1.2
	Cobbler	2	.8	.8	2.0
	Designer	1	.4	.4	2.4
	Driver	15	6.0	6.0	8.4
	Farmer	45	18.0	18.0	26.4
	Fisherman	4	1.6	1.6	28.0
	Groundman	1	.4	.4	28.4
	Hotelian	3	1.2	1.2	29.6
	Houseworker	8	3.2	3.2	32.8
	Laundry	2	.8	.8	33.6
	Masonry	6	2.4	2.4	36.0
	Mechanics	2	.8	.8	36.8
	N/A	82	32.8	32.8	69.6
	Nurse	1	.4	.4	70.0
	Painter	1	.4	.4	70.4
	Shopkeeper	5	2.0	2.0	72.4
	Small Business	57	22.8	22.8	95.2
	Tailor	3	1.2	1.2	96.4
	Teahcer	6	2.4	2.4	98.8
	Watchman	3	1.2	1.2	100.0
	Total	250	100.0	100.0	

DESCRIPTIVE STATISTICS

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	250	21	1	22	12.51	3.171	-.415	.154	-.044	.307
Valid N (listwise)	250									

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Score	249	25	30	55	40.04	5.778	-.319	.154	-.502	.307
Valid N (listwise)	249									

Peer Teaching VS Conventional Teaching and Academic Achievement

Group Statistics

	EORC	N	Mean	Std. Deviation	Std. Error Mean
Score	Peer teaching	60	40.68	5.939	.767
	Conventional Teaching	189	39.84	5.727	.417

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	.120	.730	.983	247	.326	.842	.856	-.844	2.528
	Equal variances not assumed			.965	96.336	.337	.842	.873	-.890	2.574

Gender and Academic Achievement

Group Statistics

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Score	Female	107	40.28	6.384	.617
	Male	142	39.87	5.292	.444

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Score	Equal variances assumed	4.437	.036	.559	247	.577	.414	.741	-1.045	1.873
	Equal variances not assumed			.545	203.231	.587	.414	.760	-1.085	1.913