AN ASSESSMENT OF CLASSROOM TEACHING STRATEGIES UTILIZED BY NURSE EDUCATORS ON DIPLOMA NURSING STUDENTS AT KENYA MEDICAL TRAINING COLLEGE VIHIGA CAMPUS

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DECLARATION

I declare that this research thesis is my original work and has not been presented for a degree or any other award in any other University.

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Recommendation

This research thesis has been submitted for examination with our approval as university supervisors.

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DEDICATION

This work is dedicated to my children, parents and my husband who gave me moral support while I was working on it.

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ABSTRACT

In recent decades, globally, nursing educators have tended to use innovative teaching strategies in the classroom rather than traditional teaching strategies. This is raid advance due to benefits such as increased self-confidence and competency levels. Despite there being ain technology, little is known about the teaching strategies being used by the nurse educators to prepare students for real life practice experience. Thegoal of the study was to determinethe classroom teaching strategies utilized by nurse educators at KMTC- Vihiga. The study utilized descriptive cross sectional research design. The target population comprised of 11 nursing educators and 350 KRCHN nurse students. The study employed the stratified sampling technique for the nursing student respondents. For the nurse educators, purposive sampling technique was used. Data collection tools were two structured questionnaires which were used toobtain information from respondents. This was after pretest showed validity and reliability of the tool.Data was analyzed using quantitative techniques by use of the Statistical package for Social Science Software version 25 for windows and excel version 10. Descriptive and inferential data analysis were used particularly the Analysis of variance and chi square test. The findings obtained show that nurse educators were predominantly using traditional teaching strategy although the innovative teaching was also minimally used. The chi square analysis showed that no association was found between number of years since last qualification and frequency of use of lecture teaching strategy However, there was an association between number of years since last qualification and utilization of storytelling during teaching by nurse educators On further analysis of variance the study found that there was a statistically significant difference in knowledge between age groups as determined by one way Analysis of variance. Similarly there was a significant difference in attitude towards teaching strategies as determined by one way Analysis of analysis of variance. Pearson product moment correlation coefficient was computed to assess the relationship between nurse educator's knowledge and rating of attitude towards the teaching strategies. There was a significant correlation. This showed that increases in nurse educator attitude were correlated with increase in nurse educators knowledge of teaching strategies.The recommendations included, designing of a curriculum which includes innovative teaching strategies for the nurseeducators. Nurse educatorsshould utilize the computers and internet for the benefit of students learning.

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ABBREVIATIONS

AIDS Acquired Immunodeficiency virus

BScN Bachelor of Science degree in Nursing

CINAHL Cumulative Index to Nursing and Allied Health Literature

ERIC Educational Resources Information center

KAIS Kenya aids Indicator survey

HIVHuman Immunodeficiency virus

KMTC Kenya Medical Training College

KRCHN Kenya Registered Community Health Nurse

KRN Kenya Registered Nurse

M Mean

NCK Nursing Council of Kenya

KNWR Kenya Nursing Workforce Report

NASCOP National AIDS and STI control Program

NCLEX-RN National Council Licensure Examination for Registered nurses

OSCE Objective Structured Clinical Examination

PBL Problem Based Learning

SPSS Statistical Package for Social Science

STI Sexually transmitted Infections

SDStandard deviation

WHOWorld Health Organization

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

Globally,the aims of nursing education is to have harmonious development of the student who is physically, socially, emotionally, spiritually and intellectually capable of rendering effective services to patients, family members, community and clients. The students who graduate from nursing programs should be prepared in such a way that they can competently work in the 21st century's changing health care environment. Early educators such as Dewey (1964) believed that instructional teaching strategies should be learner centered John. Ministry of education, Science and Technology (2015) echoes the same sentiments when it asserts that pedagogical practices should include ICT (Information, Communication and Technology) in teaching and learning. This will help to prepare learners to competitively function within a highly integrated technological-oriented and information based global economy. It will alsomake learning meaningful and provide opportunities to learners to apply competencies in real life situations while empowering them with lifelong learning and contribution towards sustainable development goals.

In China, while reviewing good teaching strategies for nurse educators (Xu, 2016) recommends innovative teaching strategies such as high fidelity simulation, small group activities, games, role playing, case study, debating, and problem based learning, concept mapping, online courses and interactive lecture. To produce nurses prepared to practice in

reformed health care environments we can no longer educate our nursing students using the traditional practices that we have long embraced.The global burden of people with non-communicable diseases such as hypertension, chronic respiratory diseases, diabetes, injuries, disabling conditions and mental illness creates a need for a professionally prepared nurse to deal with those health problems. In order for this to happen, World Health Organization(WHO),developed global standards for education of professional nurses and midwives, that countries would use as a guide in development of their curriculum to train nurses (World Health Organization [WHO], 2009)

The Tyler curriculum model which was first developed in 1949 is prescriptive and United States of America adopted this model for training of nurses. This curriculum has predetermined objectives and is content driven. Curriculum objectives indicate both behavior to be developed and area of content to be applied. This outcome based education focus on student behavior instead of staff and defines outcomes obtained by students. There was no mention of how to teach and facilitate learning (National League of Nursing, [NLN], 2003)

Globally, most countries including Kenya adopted a similar approach to designing curricula and teaching nursing student. Nursing Council of Kenya (NCK), guides the development of curricula in nursing schools and stipulates use of innovative teaching strategies. Kenya Medical training college follows the NCK 2012directives and develops its own curriculum.

In high achieving countries such as United States of America increased innovation in medical devices and software are literally changing the way that nurses practice. While

nurse educators used to use demonstration to teach skills, now simulation technology has taken over to teach nursing skills in the modern nursing classroom. Simulation provides the opportunity for students to actively engage in high risk clinical scenarios where students may not be ready to respond to in an actual clinical setting (Berragan, 2013).

Sub-Sahara Africa continues to report poor health indicators with challenged health care systems due to growing burden of diseases including HIV/AIDS and non-communicable diseases. The Lancet commission and Global health workforce Alliance2013 reported that professional educationincluding nursing had generally not kept up the pace of health care challenges. The review noted that the professional training programs mostly maintained classroom teaching using lectures and seminars which had not proved to be effective in diversifying skills and competencies of health care workers including nurses. The review further indicated that Sub Sahara Countries had increased health care training intakes to solve the shortage of human resource crisis which has led to congestion of students in clinical sites. The increased intakes demand innovative ways to train these growing numbers.

In Kenya, nurses provide the bulk of direct patient care at all levels of health service delivery, they would be charged with the responsibility for the diagnosis, nursing care and management of these patients (Rodgers, 2012)

The King George Hospital Kenyatta National Hospital became the first hospital to start the Kenya Registered Nurse training programme which lasted for three and a half years and the nurses were prepared to work in the hospital setting only. In 1980 there was marked growth in the population of Kenya, As a result of the rapid development going on

in the country at that time; there was increase in rural-urban migration, resulting in uneven distribution of resources, with particular reference to human resources. There was also a growing need for health care providers to engage in effective health care management strategies, to be able to reach every part of the population. Kenya Registered Community Health Nurse (KRCHN) diploma training was commenced in 1987 to prepare nurses who would be able to give comprehensive care to the communities (National Council of Kenya [NCK], 2010).

NCK recommends use of innovative teaching strategies in order to prepare critical thinking nurse professionals. One way to enhance and develop nursing education is to assess the teaching strategies used to teach nursing students.

1.1Statement of the Problem

A review of literature shows that innovative classroom teaching improves student learning. Studies have also shown that a variety of teaching strategies will lead to student improved academic performance (Hasheesh, Mostafa&Obedait, 2011). According to Subhan (2014) Studies undertaken globally and in Africa have revealed that although there is technologicaladvancement, the nurse educator continued to utilize outdated didactic teaching methods. These studies also highlighted the fact that traditional teaching strategies do not stimulate critical thinking in the students and therefore will not prepare student nurses to achieve good grades.

In response to the changing technological environment and increase in the Kenyan population, KenyaMedical Training College has revised the curriculum and recommended innovativeclassroom teaching strategies such as interactive lecture, group

discussion, self-directed learning, case based method, and Role play, projects, and simulation (Mwaluda,et al., 2013)

KMTC Vihiga has two admissions of KRCHN Students in a year. That is in March and September each with a class of fifty (50) students. To enhance student centered learning and better outcomes,KMTC has provided all nurse educators with laptops and internet connectivity, a simulation skills laboratory and liquid crystal display projectors. Despite these inputs there was low performance among nurse students.From the inception of a new campus in Vihiga in September 2013 to April 2015 about60 %(n=120) of the students failed in end of block 1, 2, 3examination achieving less than 50% in the written examination (*Examination office,* 2015).What is not clear is the teaching strategies currently used by nurse educators in the classroom to teach nursing content that may influence the performance in end of block examinations.

1.2Study Purpose

The study purpose was to assess theclassroom instructional strategies which are utilized at Kenya Medical Training college- Vihiga campus

1.3 Research objectives

i)Toestablish the frequencynurse educators use variousteaching strategies in the classroom at Vihiga Kenya Medical Training College

ii) To identify the nurse educators perception of their level ofknowledge on different types of classroomteaching strategies using knowledge scale.

iii) Todetermine students perception of frequency of using various teaching strategies bythe nurse educators in the classroom.

(iv) To determine the attitude of Nurse Educators towards use of teaching strategies using attitude scale

1.4 Research questions.

i) What is the frequency of use of classroom teaching strategies bynurseeducators use?

ii) What is the nurseeducators' perception of their level of knowledge of different types of classroom teaching strategies using knowledge rating scale?

iii) What is the perception of nurse students on frequency of use of teaching strategies by nurse educators in the classroom?

iv) Whatis the attitude of nurse educators towards use of different classroom teaching strategies using attitude rating scale?

1.5 The null hypothesis

There is no significant difference between nurse educators' knowledge with corresponding perception towards use of various teaching strategies.

1.6 Justification of the Study

The study results may make nurse educators reflect on their own teaching strategies and consider options to improve professionally. The study on educational teaching strategies may also help nurse educators' change how they teach and prepare diploma nursing

students. Thenursing students today and in the future may thenexperience a system of nursing education that will prepare them differently than in the past to understand nursing concepts well and help in improved performance.

1.7 Limitations of the study

During the study some respondents left some areas in the questionnaire blank with no response. Participants were from one medical nurse training college. Second, the study sample for the nurse educators was comparatively small (n=10) andwas a sample of convenience. It is possible that the participants were not typical of other nurse educators nationwide. The use of this nonprobability convenience sample could potentially threaten external validity and prohibit the generalization of findings to other nurse educators.

1.8 Delimitation of the study.

Only nurse educators involved in classroom teaching and students in class at the time of the study were asked to complete the questionnaires

1.9 Significance of the study

There is need to improve classroom instruction and adequately prepare students as professional nurses and to be successful in the Nursing council of Kenya Licensing examination. Therefore it is necessary to assess the classroom teaching strategies used by nurse educators to foster learning.

The nurse educators of KMTC Vihiga are likely to review their teaching strategies hence adopt teaching strategies that promote active teaching-learning in the classroom.. It is

anticipated that the study will contribute to a body of knowledge of nursing education and improve teaching-learning process and patient safety.

Subject educators may also benefit by getting a clearer understanding of student perceptions and expectations with regards to the use of various teaching strategies.

Kenya Medical training College (KMTC) in conjunction with quality Management standards are likely to step up quality audits programme to ensure nurse educators are using innovative teaching strategiesand also likely to train nurse educators on innovative teaching strategies hence improving teaching and student performance.

1.10Assumptions of the study

During the study it was assumed that the respondents gave honest responses to the items in the two questionnaires.

1.11Operational Definitions of Terms

Active learning-Student is engaged with the content through writing, discussion, application and reflection.

Simulation-An event or situation made to resemble clinical practice as closely as possible

Student centered learning-This is when the student takes full responsibility for his/her learning, being involvedin and participating in the learning process; the teacher is the facilitator and resource person.

Teaching -Is the act or process of imparting knowledge or helping others to develop understanding or skills.

Strategy- A strategy is the blending and integration of a variety of teaching-learning elements in such a way that students achieve the desired outcomes. It includes the learning content, teaching methods, learning activities and media.

Teaching strategies. A teaching strategy refers to a series of teaching- learning actions that are designed by teachers to assist students to achieve a prescribed learning outcome. In this study teaching strategies refer to the different methods of facilitating learning and critical thinking.

Nursing student achievement -The student scale score on the nursing test of above 50% pass mark

Traditional teaching strategies-Teacher centered teaching techniques given in the lecture style and inflexible. Lessons are usually taught by the teacher introducing skills using a blackboard accompanied by a verbal explanation or lecture and demonstrations.

Innovative teaching strategies-These are teaching strategies which use new and unique methods to motivate students, and facilitate and enhance learning.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter describes the literature review conducted for this study.Knopf (2006) refers to a ‘literature review’ as a methodological process of reviewing important literature and evaluating a body of writing on a specific topic. The purpose of the literature review wasto assess the current instructional teaching strategies that have recently been used in in the classroom. The researcher focused on general education and nursingeducation.

The review focused on the overview of traditional and innovative teaching strategies, use of classroomteaching strategies by nurse educators, perceptions of students on the Nurse educatorsteaching strategies used to teach specific content and knowledge of nurse educators on various teaching strategies.

2.1An overview of traditional and Innovative teaching strategies

When considering their approach to instruction, nurse educators are always looking for the strategy that is most beneficial for all of their students.

The approaches for teaching strategies can be broadly classified into Traditional and Innovative. A very typical feature of traditional strategy is the ‘teacher dominated interaction’’ while innovative strategies are much more student centered(Mmbirimtengerenji& Adejumo, 2015a).When planning lessons, teachers have

to be aware of appropriate teaching strategies and materials that can be used to create meaningful learning opportunities for students.

2.2 Traditional teaching strategies

The traditional strategies are generally teacher directed and follow cookbook steps of activities and demonstrations.Traditional teaching is teaching involving lecturers and the students interacting in a face to face manner in the classroom, and focus exclusively on content in textbooks and using lecture strategy to give notes where students receive the information passively. Many teachers are still teaching their students in the same manner as how they were taught (Gandhi, Mythili&Thirumoothy, 2015).Demonstration on the other hand is a traditional teaching strategy where the instructor shows the procedure or technique. The learner is expected to perform the skill or task exactly as demonstrated. This teacher centered strategy does not provide the student with critical thinking skills and merely gives recall of information (Atalla, 2016).

2.2.1Lecture strategy

Lecture strategy is the oldest method of teaching where the teacher uses verbal messages to communicate the content of instruction to the learners. Formal lectures involve a one way communication from the teacher to the student. The advantage of lecture is that it can be used to convey information that is not readily available to students and to reinforce written work. Lecture strategy is economical for students in terms of time as they get more information.

The disadvantages of lecture are that it tends to make learners passive and hence may lead to limited learning. It may also not be effective in learning complex skills and higher cognitive learning.

Stone, Cooper& Gant (2013) described classroom lecture learning, as a passive teaching strategy. On the other hand Baghcheghi, Koohestani andRezaei (2011) found in their study that those who were exposed to the traditional classroom lecture, were silent listeners who play an inactive role in the learning process and advocated for nurse lecturers to adopt a more learner centered teaching approach. Researchers, who support the value of lectures, do soon condition that the lecture is made interactive by including other teaching strategies (Subhan, 2014).

A comparative study conducted at Emory University in Atlanta investigated the advantages of PBL as opposed to the lecture method of teaching(Zhang 2014). The study revealed that the PBL approach helped students gain more knowledge on the disease process by stimulating application of knowledge. It recommended that more didactic methods such as the lecture and case studies, be used to teach subjects that require fundamental knowledge. The more common and less complicated diseases should be taught with a PBL approach, as it required the application of information. PBL is an effective teaching strategy in teaching students in acute nursing care.

A cross sectional study aimed at identifying the pedagogical strategies used by teachers in nursing programs in Italian Universitysystem was conducted by (Pagnucci, Carnevale,Bagnasc,Tolott,Cador&Sasso,2015).The sample consisted of all Italian

Universities offering nursing program.The results showed that the most commonly used strategy was the traditional lecture.

A quasi-experimental study was conducted at University of Medical sciences Tehran-Iran by Sedaghat, AhmadandSadeghi (2014) with the aim of comparing the effect of traditional lecture and blended teaching on students' learning and satisfaction about the tuberculosis disease. The results revealed that initial assessment of the students' knowledge about Tuberculosis in both groups had average scores. There was more increase in knowledge in the blended group compared to the lecture group after the training.

2.2.2Demonstration teaching strategy

Demonstration is a teaching strategy where the teacher shows how to do a procedure or something. The demonstration can be used when the equipment is expensive or resources are limited. It has the advantage of making learners motivated and interested in learning.

It has the disadvantage of making learners passive in the teaching and learning process. For demonstration to be effective there should be return demonstration.The teacher supervises the student doing the skill, or talk to the student through the skill hands on (Mmbirimtengerenji& Adejumo, 2015b).

A study was conducted in Asia Pacific International University by Intachai (2014), the aim was to examine the effectiveness of three teaching strategies for teaching on how to take Blood pressure measurements among nursing students. The strategies consisted of Lecture, demonstration and self-study using video. The researcher used three groups of

students. One group was lectured in the classroom about taking blood pressure measurements while the second groupreceived a demonstration of how to take the blood pressure in the laboratory setting, the third group received a video compact disk on how to take the blood pressure measurements for self-study. The results showed that students' satisfaction of learning how to take blood pressure measurements was higher for the group that received a video compact disk on how to take the blood pressure measurements compared to the other strategies.

Another study which may concur with these findings is that of Attalla (2016), which assessed effectiveness of nursing intervention regarding self-insulin administration among 200 diabetic patients. The Patients were randomly assigned into two groups: control group (100) patients who had routine hospital care, while study group (100) patients utilized nursing intervention. The Researcher administered the nursing intervention usinginstructional videos to provide knowledge and technique of self-insulin administration while control group was given knowledge using lecture followed by demonstration. The results of the study concluded that the knowledge regarding self-administration of insulin practice after the nursing intervention were increased among the study while the control group remained the same.

An experimental study was also conducted at Ghazi University in Turkey by Bulut (2012) and it aimed at determining the effect of two different strategies on student success in the teaching of subcutaneous injection. The students in the study group were placed in the computer equipped classroom and assigned one computer each, with a researcher developed subcutaneous injection practice compact disk(CD) which they were

to study with the presence of an observer, and they could restudy the parts they did not understand clearly. Instruction of the students in the control group started simultaneously with the study group, and the same lesson content as in the subcutaneous Injection Practice CD was delivered through lecture and demonstration methods by using a projector. The study results showed that a greater proportion of the students in the study group performed better in the dexterity –based stage of giving the injection.

The above literature reviews show that Lecture and demonstration teaching strategies are more effective when augmented with other teaching strategies such as videos or compact disk with computer to enhance student learning.

2.3Innovative teaching Strategies

These are new teaching strategies which are student centered and cause active learning in students (Ghafourfard, Haririan, Aghajanloo &Ghane, 2013).To enhance quality of teaching and learning in the classroom innovative strategies such as case based strategy, group discussion,simulation,role play and problem based learning can be utilized. Nursing is a practice based profession which requires students to participate actively in the teaching process.

Information, communication and technology is playing an active role now in nursing education where it can promote learning through the interactive features which exist in it, for example while teachers used to put paper over a question on an overhead projector and remove to reveal the answer, todays educational software has taken these old methods and modernized them. Using the Liquid crystal display for example, the revealer

tool mimics this method, allowing the teacher to hide and reveal information on screen (Mmbirimtengerenji & Adejumo, 2015b).

Introduction of computers has also influenced teaching in the nursing classroom. Computer based teaching strategy is an instructional paradigm which uses computer technology to deliver training or educational materials to users .No textbook is required and it may be self-paced, use of a Compact disk or instruction or through email.

2.3: 1 Concept mapping

Concept mapping is a technique that allows students to understand the relationships between ideas by creating a visual map of the connections. The principal goal is to have your students discover, define and develop an understanding of the interrelated parts of a complex set of ideas or relationships. Discussion and questioning challenges them to think by analyzing, synthesizing, and evaluating thereby developing the skills of critical thinking. (Jaafapour, 2015)

Aquasi-experimentalstudy conducted at Helwan University Egypt -Cairo, by Taie (2014) explored the effect of concept mapping based learning on students cognitive learning levels in a nursing administration course. The experimental class utilized concept maps in teaching, while the control class maintained normal curriculum activities. A pre and posttest was taken for both groups to evaluate their achievements. The results showed that Experimental group knowledge and scores improved after the concept mapping sessions than the score of the class in the control group.

Findings were similar when Jaafapour (2015) assessed concept mapping as a teaching strategy in the academic achievement of nursing students. Quasi-experimental case crossover control design was used. Two modules of fundamentals of nursing and introduction to cancer nursingwere offered to second semester nursing students. The students were divided into two groups. The first groups (group A) were asked to construct a map from the content of each session. The second group (group B) was not engaged in mapping construction and was examined in a multiple choice test (quiz) about the content of each session. The results showed that the students who engaged in mapping construction achieved greater marks in their cumulative tests in comparison to students who received the traditional teaching methods and took quizzes. There was also gradual improvement in students' skill in map construction.

2.3.2 Simulation

Simulation is a learning process that involves students participating in a role particularly in learning a skill and it involves each student participating. Simulation is from the Latin word 'similes' which means 'to act or to resemble'.

A study was conducted at the University of West England using narrative case studies with the aim of gathering data about the impact of simulation upon learning clinical nursing skills for first year undergraduate nursing students. Before the simulation, students were allowed to read and learn about clinical nursing and complete multiple choice questions before attending the sessions. The simulated clinical learning environment was used as a means to assess students. The patient scenarios used model patients who required a range of clinical nursing skills. The OSCE format was linked

closely to the stage of the students' learning and teaching of clinical skills delivered within the program. Interviews were used to test experiences of learning through simulation. The results showed that simulation had impacted upon their learning (Berragan, 2013)

A quasi-experimental study was conducted in South Africa's Gauteng learning Centreamong second year enrolled nursing students who were divided into an experimental group and a control group (Powell,2012).The intervention in the study was simulation training. The researcher examined causal effect that simulation training had on the competency of second year pupil nurses with regard to the procedures; administration of oral medication and observation of patient's neurological function. The control and experimental group initially received demonstrations, in a simulation laboratory on the two selected procedures and they had to practice the procedures under supervision of the nurse educator.The results showed that there was a significant increase in marks scored for the experimental group after the post-posttest for oral medication and neurological observations. The statistics proved that simulation training did benefit the experimental group.

2.3.3 Problem based learning

Problem based learning is an instructional strategy in which students collaboratively solve problems and reflect on their experiences. Students work in small collaborative groupswhere stimulus material triggers discussion. Learning is driven by challenging open ended problems. The teacher takes on the role of facilitator of learning-guiding the

learning process rather than providing knowledge. A problem is presented to the students and they are able to look at it as they relate day to day life .problems are typically in form of cases.

‘Problem based learning is a teaching strategy that enables students to learn while engaging actively with meaningful problems’ (Elaine &Goh, 2016).Problem based learning was first conceptualized in 1960’sat McMaster University Medical School inCanada; thiswas in response to medical students discontentment with lectures delivered in classroom. He also noticed that many Medical graduates were unable to apply classroom teaching to clinical practice.PBL has since been adopted by other disciplines including nursing (ku&Ha, 2016).PBL challenges students to become self-directed life learners, where it promotes ‘deep understanding’ where students study more for meaning and less for reproduction (Zhang, 2014).

A descriptive, cross-sectional, study was conducted amongundergraduate nursing students who are prepared through Problem Based Learning and Lecture Based Learning curricula in two universities in Johannesburg byQamata-Mtshali (2012) with the aim of establishing nursing students’ self-directed learning readiness. The study described the differences between undergraduate nurses prepared under problem based learning and Lecture based learning. The Self-Directed Learning Readiness Scale (SDLRS) which identified self-directed learning readiness abilities in Self-management, Desire for learning and Self- control was used to collect data. The results showed that the PBL group reported a greater desire to learn than the Lecture based Learning group, in Year 4.

PBL group reported an improvement in their self-management ability between year 1 and year 4. While the lecture based learning group reported a decline.

In contrast, aCase study was conducted in Malawi to explore and describe the characteristics and critical success factors that facilitated implementation of PBL in a nursing college. These characteristics and critical success factors could be used to guide implementation of PBL in the whole nursing education system in Malawi and other human resource-constrained countries. The results showed that there should be gradual introduction of PBLand that successfulimplementation was pegged on training of available staff. The results also showed that a well-equipped library, clinical and computer laboratories were needed where students could access information and work on their own.The findings further revealed that collaboration and partnership with other institutions was also an important characteristic.(Giva& duma, 2015).

2.3.4 Role play

This is a dramatic strategy in which a student(s) acts out or imitates a situation, condition or circumstances. Invention should characterize the role play. Role play can be used to teach counseling skills where the student acts out as a counselor while the other acts as the client. Theadvantage includes enabling the students to connect what they learn with the real world.

An Iranian study conducted at Shiraz University of Medical Sciences, aimed at comparing the effect of role playing and lecture on nursing students learning. The study population consisted of an experimental group taught using role playing and the control

group was taught using Lecture. The result showed that role playing improves the students learning more than lecture method. Based on the result of the study, students' scores in the role playing strategy were more than the lecture method significantly (Vizeshfar,Dehgharad,Mahboobeh&Sobhani, 2016).

A study was conducted at the Hong Kong Polytechnic University School of nursing with the aim of exploring how a classroom based innovation of role play can be used in a PBL class. Two role plays case scenario were developed about a patient with an asthmatic attack. The students were to act either as the patient or as the nurse taking care of the patient. At the end, the students evaluated the role play and the results show that role plays helps in training of communication skills on how to deal with patientspromotes active experiential learning as well as critical thinking and encourages creativity among students (Chan, 2012)

2.3.5 Debating

Debate is a teaching strategy where students are divided into two groups of proposing and opposing sides where both groups exchange divergent views about a subject. Debate can be used to teach ethical dilemma's such as the benefits verses risks of keeping an unconscious patient on life support equipment. This can improve critical thinking skills. A debate was held in class and data was collected immediately after class from forty teams of students about their perception on debate. The results showed that most students found debates to be more engaging than lectures. Debate also offered the opportunity for development ofleadership and management competencies such as shared decision making and respect, (Dundas, 2015)

A study was also carried out at the University of Limericks Ireland, by Doody and Condon (2012) the aim was to increase students' involvement through using debate as an assessment strategy with an intellectual disability nursing program. To initiate preparations for the debate, students were provided with a module and assessment introduction. The students were assigned to a four person debate team. Students had to develop arguments to support the view they were assigned, whether or not they actually support that view. The debate topics related to the role of the intellectual disability nurse in supporting people with intellectual disability through the use of allied therapies. The students provided reflective comments such as, debate provided team working, sharing of ideas and information.

2.3.6 Games

A Game is an activity involving skill and knowledge, in which you follow some fixed instructions to try to solve a puzzle. Game is an effective teaching strategy a part from being an amusement. Games can be used to teach intradermal injection technique using hand model where the student has to get the site correctly and marks are awarded.

A Study was conducted at Northwestern state University, college of nursingby Pottere&Tolson(2017), with the aim of teaching basic health assessment in first year BSN program.The game involved teaching how to conduct abdominal assessment. The students were divided into two teams and the game was done in two parts. The first part involved asking questions regarding abdominal assessment. The second part involved the clinical teacher demonstrating to the teams the abdominal assessment. Thestudents

played the game of performing abdominal assessmentas a competition and the teams were awarded marks.

The results showed that gaming allowed active student learning, engaged the students in the learning process, motivated the student to learn, and allowed the student and faculty to assess content weakness and strengths.

A conference paper was presented at the University of Alabama in Huntsville, USA byBoctor(2013).It was based on the use of a board game they generated in a medical/surgical nursing subject, based on the TV game show *Jeopardy*. Having played the game in a class, at the University of Alabama, students were asked to complete a survey asking them to rate on a five point Likert scale, to what degree they enjoyed playing a game and if they felt it had been beneficial to their learning. Student survey results showed that they did find this learning method enjoyable and beneficial to learning, and also indicated a preference for the use of games in this small group of students.

A mixed-method study was conducted in Pennsylvania to explore the views of nursing students and nurse educators regarding the use of games in the classroom. A survey questionnaire using interviews was given to both groups .The responses among students and nurse educators showed that games were rarely used in the classroom. Some educators believe that gaming does not allow students to think at high levels.

2.3.7Case based teaching

Case based teaching helps students develop skills in analytic thinking and reflective judgement by reading and discussing complex real life scenarios. The nurse educator can present students with a description of clinical picture of a disease and students have to manage the condition based on the clinical picture.

A descriptive cross-over study was conducted at the University of Dammam in the Kingdom of Saudi Arabia. The study population consisted of 86 nursing students enrolled in an Anatomy and Physiology class at the college. The students were taught in two sessions. The first session used lectures while the second session used Case-based lectures. At the end of the session, students evaluated the two teaching strategies. The results showed that case based study was more helpful for understanding the topic than lectures (Majeed, 2013)

Ghafourfard et al., (2013) in a quasi-experimental study in Iran investigated the value of case studies in an intensive nursing care course The first part of the study exposed the participants to case-based learning and the second part was presented with the lecture method. The findings indicated that 66.7% of the participants felt that the case study increased their reading comprehension, as opposed to the lecture method and 61.9% of the students perceived an increase in retention of knowledge and felt that this methodology allowed them to complete the course objectives better. In addition 57.1% declared that the case study also increased their motivation to learn and 66.7% said that the case study was overall a better teaching method than the lecture. Ghafourfard et al. (2013) concluded that the case-based teaching method is an important teaching method for nursing.

2.3.8 Humor

Humor is not only amusing but it is a creative teaching strategy which has the ability to provoke laughter among students and hence maintain their classroom attention. A study conducted at Valparaiso University by Alkhatab (2016), aimed at exploring the effect of using humor as a teaching strategy on educational retention and attention of nursing students. The students were assigned to humorous and non- humorous teachers. The participants completed prequizzes and post quizzes with Liker-type scale that asked students to rate their level of attention. The results showed that using humor classrooms increased students' information retention and increased their attention (Alkhattab, 2016).) Other advantages of using humor include enjoyment and amusement in learning(Huss, 2016).

2.3.9 Story telling

Story telling is a teaching strategy which uses narratives from past experiences both by the nurse educator and student. It can help to enhance self-esteem, develop critical thinking, teaches ethics and cultural sensitivity (Mangol, 2016)

A qualitative study was conducted at George Mason University with the aim of describingthe perception of nurse educators on story telling as pedagogy. The study sample consisted of 21 nurse educators from various countries who gave their perceptions concerning use of storytelling. Data was collected through digitally recorded telephone interview. The results showed thatthe identified benefits for students noted by the interviewed nurse educators in the study were, increased retention of information and

learning growth, greater development in critical thinking, improvement in oral and written communication skills, increased student bonding and team collaboration, and storytelling makes course content come “alive and makes it real” for students (Houston, 2015).A project was conducted to describe the use of digital story telling as a means of teaching nursing students. Lyons (2013) utilized discussion board activities and digital storytelling to teach an undergraduate research course in an accelerated seven week format. The participation of students wasevaluated. The results showed a perceptive increase in student satisfaction and reflective thinking. Similarly a project was conducted at the University of Salford by Fenton (2014) which developed a digital learning object based upon a young persons’ experience of cancer. The patient gave the story concerning her experiencesand selected still images of herself which were taken during the treatment phase of her illness and when she was in remission were then transformed into a digital learning object to be used as a valuable teaching resource by nurse educators. Students were then asked to evaluate the digital learning objects asa learning tool. The results showed that 80% of students rated the digital learning object as interesting and were motivated to explore its content. In the same study, the evaluations highlighted that listening to the young person ‘experiences of her treatment regimens was informative and assisted understanding of a patient’s perspective of care delivery.As a result, these investigators suggest that ‘faculty should consider using instructional technologies.’

2.3. 10 Webbased teaching.

.Web based teaching is an instructional strategy where the educator uses computer with its accessories to teach. This may include internet to search for new information, electronic mail to send notes and videos to teach certain concepts.

A study conducted at the University of Alexandria by El-Sayed,andEl-Hoseiny (2013), aimed to determine the effect of Video based lecturers compared to using traditional lecture teaching strategy for teaching human Anatomy and Physiology courses. The results showed that teaching student nurses using video based lectures was related to higher examination results and reduced failures as compared with the traditional method of teaching anatomy and physiology that was based on print out illustrations. The students also rated highly their acceptance and satisfaction with video based lectures as a teaching strategy.

Teaching strategies can engage a student in an active learning process. It is important for nurse educators to select appropriate teaching strategies in order to deliver high-quality education(Hasheesh, Mostafa&Obeidait,2011)

4.3.11Small group discussion

This is a teaching strategy in which the students under the teachers' direction exchange points of view in order to drive at a collective direction or conclusion. It has the advantage of increasing the learner participation and allows students to share ideas from each other. However, it has the disadvantage of being difficult for a large class and consumes a lot of time.

A study was conducted by Flosason (2010),to examine whether discussing questions in small groups among the students in a psychology class before responding to questions improved accurate responding on similar questions during unit examinations. The results revealed that students tended to answer more questions correctly when they had discussed the questions with a fellow student before they responded.

2.4 Classroom teaching strategies used by nurse educators.

The nurse educator of today does not consider the learner as an empty vessel waiting to be filled up with facts. The student should be motivated to participate actively in the teaching –learning process.

A descriptive study was conducted in United States of America at the University of Alabamaby Nabors (2012) to examine which teaching strategies community college associate degree nurse educators in a southern state were utilizing in the classroomto enhance student learning and develop critical thinking in nursing students who were enrolled in fundamentals and Medical surgical nursing courses

A list of twenty commonly usedteaching strategies were included in the questionnaire, the educators were asked to list which one they used per semester to enhance student learning.

The results showed that associate degree nurse educators were using a variety of instructional strategies in the classroom to enhance student learning and develop critical thinking, but lecture was by far the most frequently used teaching strategy followed

byPowerPoint, discussion, case study, group work and co-operate learning. The strategies used least were; vignette, flash cards, puzzle, debate, games and role play (Nabors, 2012)

Findings were similar when Subhan (2014) evaluated the pedagogical teaching strategies being used by nurse educators at Kwazulu Natal College of nursing campuses, across varied subjects. The results showed that the lecture method of teaching was most favored by lecturers as 63.2% always used itand this was followed by demonstration with (30.1%) always using it.

In conclusion the research studies found that respondents were most comfortable with and were predominantly using traditional teaching strategies; the lecture method and demonstration to teach across all subject areas. Innovative teaching strategies were minimally used, by a small percentage of nurse educators.

2.5 Nurse educator perception of their level of knowledge on different types of classroom teaching strategies.

The changes that are occurring in the social and cultural life of the society as a result of the impact of advancements in the science based technology influence the education pattern of health workers including nurses. Nurse educators should keep abreast with lots of innovation which are taking place in education.

A list of core competencies for nurse educators has been developed which include developing and implementing a relevant course, based on nontraditional teaching and learning strategies that facilitate active learning and achievement of learning outcomes(WHO, 2014).

A study was conducted in Malawi to determine theuse of teaching strategies among nurse tutors. The results showed that the ability of the nurse tutors to use the teaching strategies effectively in class had been found to be very limited. This was due to limited resources and also low level of knowledge about the innovative teaching strategies among the nurse tutors (Mmbirimtengerenji & Adejumo, 2015b).

A study was conductedto explore nurse educators' experiences, current practice and possible improvements to inform the best practice of case based education at a nursing school at the Western Cape in South Africa(Daniels, Fakude, Linda & Marie,2015). The results show that the participants reported being challenged by inadequate skills to facilitate learning in case based education and they also indicated that there was need to strengthen their facilitation skills through further in-service training.

2.6 Perception of students on teaching strategies used by nurse educators.

Teachers are an integral componentof a student's ability to succeed in class. It is therefore important tofind out the student perceptions of their success and how it correlates with the teaching strategies. Perception is the meaning we attach to information that is received by our senses. The meaning we attach to our perceived stimuli is a combination of reality and the way in which we organize data.

A qualitative case study conducted by Johnson (2015) in England, aimed at determining the role of teaching strategies in improving national council licensure examination for registered nurse.first time pass rates. The research population consisted of 15 former nursing program graduates. Data collection was done using focus group discussion and

annual program accreditation documents. The results showed that the use of instructional processes such as simulation technology and problem based learning hadhelped the students to pass the examination on first administration.

In addition Torres, Abbad and Santos (2015)restructured a basic nutrition course by including teaching strategies supported by Information Communication and Technology to assess satisfaction and learning of the students enrolled in it who were studying Bachelor of science degrees in the following disciplines; nursing, pharmacy, physiotherapy, Occupational Therapy and public health students. Moodle was used which included 6 video classes, films and 8 podcasts. The reactions of the students were assessed by the end of the course. The results showed that 50% videos and podcasts were useful and the students wanted them kept in subsequent modules.

A Ghanaian study conducted at Kwame Nkrumah University by Dankwah, (2015) explored the factorswhich affected performance in the Nursing licensure examination among diploma graduates in Ashanti region Ghana. The results showed that 44.8% of participants were satisfied with teaching strategies adopted by tutors whereas 41.3% had no opinion about that. The students' reasons for being satisfied with teaching strategies included adequate professional skills in teaching. Among those not satisfied, reasons cited included tutors focusing on selling handouts instead of giving detailed lecturers.

A study was conducted in Swaziland to explore and describe the perceptions of students and nurse educators regarding the integration of theory and practice in nursing education in higher education institution. The results showed that nurse educators preferred the use of case studies as a teaching strategy. The students felt that after learning how to draw the

nursing care plan during case studies; it became easier to integrate theory with practice (Dlamini, 2011).

A Kenyan study conducted at KMTC Nairobi byAbuga, (2015) explored the effectiveness oflecture, demonstration of skills and group discussion teaching methods on Diploma nursing students. The results indicated that the students had negative perception towards the lecture teaching methods. They considered group discussion and demonstration of skills more effective.

A similar Kenyan study was also conducted at KMTC Nairobi by Nyamu, (2018) to assess the perception of nursing students and tutors on utilization of simulation as a teaching and learning strategy. The results showed that both students and nursing tutors had a positive perception towards the utilization of simulation in teaching and learning.

A descriptive study was conducted by Abdi, Osuga&Muiruri (2012) in Kenya to assess the role of orientation programs in nurse training at GarissaKMTC.The results showed that 46.4% of the participants agreed that the learning institution emphasized on the acquisition of clinical skills and knowledge. Regarding clinical instruction and competence of nursing students, majority (44.1%) of the students very much disagreed that the emphasis on practical skills was given by lecturers in the classrooma qualitative cross sectional study was also conducted by Mwenda (2012) in Kenya. The aim was to analyze the perceptions of participants about the exchange program between Moi University and Linkoping University in Sweden.Study results indicated that the participants appreciated new experiences in the Linkoping hospital which included the degree of automation and use of technology in patient management and advanced and

innovative teaching methods. The exchange program is a strong pillar of the medical education curriculum; enabling students get a global perspective on their education. (Mwenda, 2012)

2.7 Attitudes of nurse educators on use of different teaching strategies

A lot of innovation is taking place in teaching and learning which is occurring on a regular basis due to advancement in the science based technology. Nurse educators should prepare students to take up a proactive role in learning.

A Mixed –Method study was conducted at the University of Texas in the USA by (Marzilli, Dellelo, Marmion, McWhorter, Roberts&Marzilli2014).The aim was to examine Faculty attitudes towards technology use in the classroom. The results from the 72 faculty members interviewed revealed that they had a positive attitude towards technology in the classroom, although the faculty was fearful that technology causes a loss of the humanistic perspective in education. Faculty members also noted that the use of U-Tube videos into lecture facilitated organization of the courses. Use of power point to display images while giving lecture also helped students visualize the people, places and events being discussed. In a study done in Uganda to determine knowledge, and attitude of tutors on innovative teaching strategies, the results revealed that nurse tutors who had training in Medical education had a positive attitude (Drateru, 2016)

Similarly, a Survey was conducted in Kenya with the aim of exploring the acceptability of online learning for continuous professional development among lecturers' in

KMTC.The survey result regarding the degree of technology acceptance showed that the lecturers had a positive attitude towards web-based training (Kyalo&Hopkins, 2013)

In conclusion this chapter reviewed literature on both innovative and traditional teaching strategies The Studies have also found that traditional lecture was still commonly used in teaching nursing content. Lecture had advantages such as conveying information that is not readily available to students. However, studies found out that it can make learners to be passive listeners. The developed countries were embracing innovative teaching strategies compared to developing countries. The extensive review supported the fact that combining teaching strategies was effective for teaching nursing students. Nurse educators should therefore combine innovative and traditional strategies to enable learners be critical thinkers and improve classroom performance.

2.8 Theoretical Framework

Piaget Constructivist theory and Banduras social cognitive theoryserved as the framework for the study.

2.8.1Constructivism theory

This study was guided by constructivism theory. The theory was originated by Jean Piaget 1896-1980.Constructivists include LevVygostky, JeanPiaget, John Dewey, and Jerome Burner. They believed that knowledge is constructed based on personal experiences and hypothesis of the environment. Learners continue to test this hypothesis of the environment through social negotiation. Each person has a different

interpretationand construction of knowledge. The learner is not a blank slate (tabula rasa) but brings past experience and cultural factors to learning (Bhattcharjee, 2015).

John Dewey was an American progressive educationist, psychologist and philosopher. He advocated for learner-centered approach of teaching pedagogy. He is one of the most famous advocates of hands on learning or experiential education. He also advocated that the teacher in the classroom should act as a facilitator and guide (Schweisfurth, 2013). "Constructivist teaching is based on the belief that learning occurs as learners are actively involved in a process of meaning and knowledge construction as opposed to passively receiving information. Learners are the makers of meaning and knowledge. Constructivist teaching fosters critical thinking, and creates motivated and independent learners" (Bhattcharjee, 2015)

2.8.2 Banduras Social learning theory

Banduras social cognitive theory is a learning theory that was originated by Psychologist Albert Bandura (1997) and it is based on the ideas that people learn by watching what others do within the context of social interactions and experiences. Observational learning occurs when a teacher observes a well-trained model teacher and experience increases in their knowledge and understanding. His theory integrates a continuous interaction between behaviors', personal factors –including cognition-and the environment. (Devi, Khandelwal&Das, 2017)

2.8.3Application ofTheories to this Study

Constructivist theory was applied in this study by assessing which teaching strategies nurse educators were using to engage learners in the learning process. The basic principles of construction to provide a conceptual framework for attributes of good teaching. If one believes that the learners construct his or her own understanding, then the focus in the classroom shift from the teacher to the learner, and the learner is viewed as taking an active role in the learning process rather than being passive recipients of knowledge that has been accumulated by others and transmitted to them. Banduras social cognitive theory suggests that people learn by observing others. The social cognitive theory can be used in the classroom where students observe a nurse educator using innovative teaching strategies they will remember sequence of events and imitate the behavior by retaining knowledge and improve performance.

2.9 Conceptual Framework

The conceptual framework shows the interrelationship between the variables of the study and the main focus of the constructivist theory and Bandura social learning theory. In this conceptual framework,Current use of traditional or Innovative teaching strategies by nurse educators, nurse educators knowledge, nurse educator attitudes on teaching strategies and student perception are the main variables in learning nursing content. If the nurse students are to take an active role in learning, then the nurse educator will have to explore effective teaching strategies, use teaching resources in teaching. These strategies are in line with constructivist theory to nursing learning which advocates active participation by the learner.Albert Bandura social cognitive theory 1986, 1997 is based on the assumption that people are purposeful, goal directed humans who are motivated

through believes of self-efficacy and outcome expectations stemming from their actions within specific social context. The resultant effect of such strategies is increased assimilation leading to improved performance in end of block examination and perception of students .

CONCEPTUAL FRAMEWORK

Independent variableDependent variable

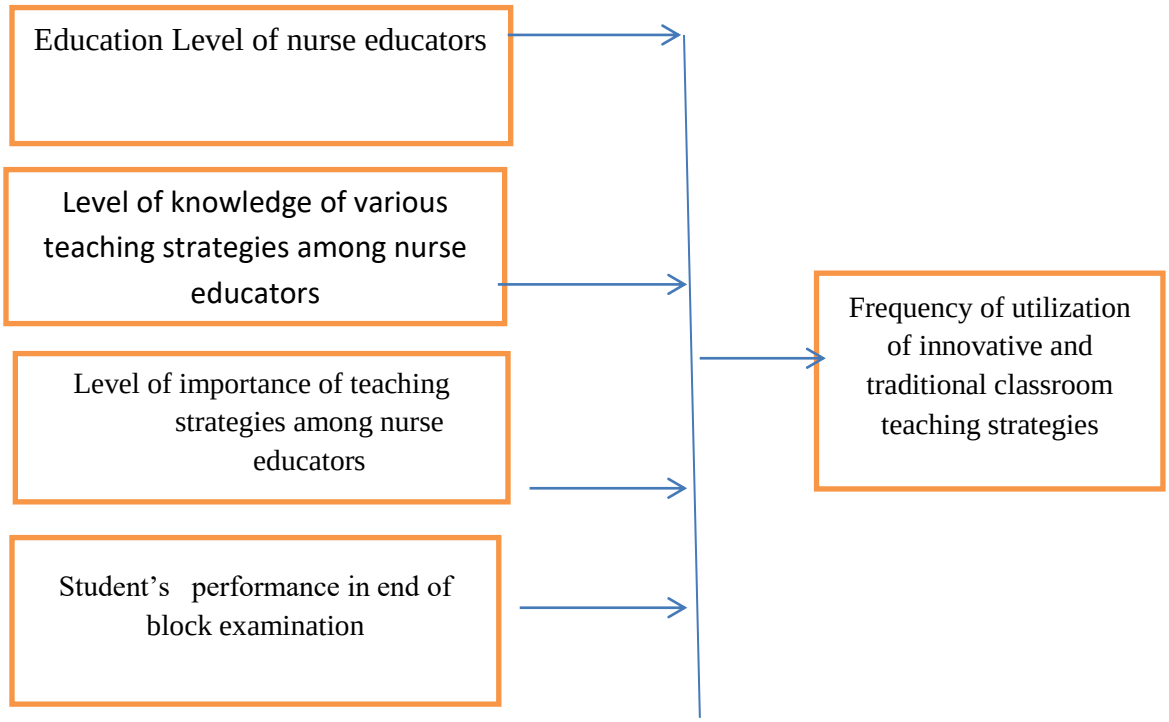

Figure2.1: ConceptualFramework

CHAPTER THREE

RESEARCH METHODOLOGY

3.0Introduction

The aim of this Chapter is to describe the research methodology that wasused to guide the study. It will focus on the research design, variables,Location of the study, targetpopulation, sampling techniques, samplesize determination, researchinstruments, pretesting of the data collection tool, data collection techniques, data analysis and ethical considerations.

3.1 Research design

The study adopted a quantitative cross-sectional descriptive research design. Data collection for descriptive research is obtained through methods such as surveys or interviews and subjects are selected that represent the population at large (Creswell, 2014). A cross sectional survey collects data from a particular sample at one point in time in order to describe a larger population at the time of data collection. The design was chosen since it used information obtained as at particular time. The design was considered appropriate for achieving the study objectives.

3.1.1 Study variables

In this study, independent variablesare: Perception of current use of teaching strategies by nurse educators, Perception of level of knowledge of teaching strategies by nurse educators, attitudes towards use of teaching strategies by nurse educators, and perception

on the use of various teaching strategies by nursing students. The dependent variable wascurrent use of traditional and innovative teaching strategies by nurse educators.

3.2 Study area

The study was conducted atVihiga Kenya Medical Teaching College located in Vihiga Sub County within VihigaCounty. Vihiga KMTC offers one diploma course in Kenya Registered community health nursing. The college has two intakes in March and September each year of 50 students. It has a student population of 350 students.

3.3Target Population

The target population comprised of all nursing students and nurse educators at KMTC Vihiga. There are about 350 nursing students and 11 nurse educators. The researcher choose KMTC Vihiga since it is one of the new satellite campuses and has nurse educators who were seconded by the county government health department to teach at KMTC.

3.4 Study Population

The accessible population for this study was diploma KRCHN students and nurse educators at KMTC Vihiga, since these werethe nurse educators and nurse students who were within the researcher's reach.

3.4.1 Inclusion criteria

The inclusion criterion was all nursing students attending block 1,block 2,block 3 and block 4classes who had given consent to take part in the study at the time of data collection. Nurse educators who were involved in the classroom teaching and had given consent to participate at the time of data collectionwere also included.

3.4.2 Exclusion criteria

The study excluded those nurse educators who were not involved in classroom teaching and those who declined to participate for their own reasons. The study also excluded all nursing students who had not consented to participate in the study and not in class at the time of data collection.

3. 5 Sampling technique

3.5.1 Nurse educators sample size determination

Sampling is a statistical technique of selecting a representative sample from a population in whose research findings can be generalized to the whole population (Creswell, 2014).The researcher used purposive samplingtechnique fornurse educators to take part in the research study. Purposeful sampling refers to the deliberate selection of particular settings and persons which provide information relevant to the goals of the study. The reason for choosing purposive sampling was that few nurse educators were involved in classroom teaching. In this case eight nurse educators who are fulltime educators and three part time educators were involved in current teaching at Vihiga Kenya Medical Training College.

3.5.2Nurse student Sample size determination

In the present study, the Cochran's (Bartlett, Kotrlik& Higgins, 2001) sample size formula was used to calculate the sample size. This formula is used in simple random sampling for continuous data. The formula worked because the purpose of the research project was to collect views from the random sample of KMTC nurse students and to be able to generalize findings to the broader population of other KMTC students.

The following is the Cochran formula

$$n0=(t)^2 \frac{x(s)^2}{d^2}$$

The following steps were used

Specifying of the population size

Alpha and margin errorwere set at 0.05 and 3% respectively.

For rating scale questions, the margin of error was0.03 of scale points, so for a 5 point scale, the margin of error was 0.15

Specify variance estimate from published literature of similar studies

S= number of points on the scale/number of standard deviations

For a 5 point scale, this would be 5/6 or 0.83

Now to calculate minimum sample size $n0=\frac{t^2 \text{ x } S2}{d2}$

Where n0 is the minimum estimated sample size

t is the value of the t distribution corresponding to the chosen alpha level for .05 this is 1.96

S is the estimate of standard deviation

d is the margin of error

Therefore $n0 = (1.96)^2 \times (0.83)^2$

$(0.15)2$

$= 3.8416 \times 0.6889$

0.0225

$= 118$

Since the estimate is greater than 5% of the overall population, then the following correction is made to calculate the final sample size:

n1=no/(1+no/population)

Where :n1 is the adjusted minimum estimated sample size

Population is the total population size which is 350

Therefore n1=118/(1+118/350)

=118/(1+0.3371) = 118/1.3371 =88

Since the research study used questionnaires for data collection,the sample was increased by40- 50% to account for lost questionnaires and uncooperative subjects.

The return rate was set at 65%based on previous response rate of similar studies.

Therefore n2 = sample size adjusted for response rate= 88/0.65= 135

The sample size was 135 nurse students.

3.5.3Student nurses sampling procedure

The sampling technique used to select nursing students was stratified random sampling procedure. The stratification was based on college block system of teaching. The 350 students were stratified by year of study. This was achieved by selecting students who were in class. The number of student respondents per year of study was determined by the weight of the class to the total population. Within each block, selection of students was by simple random sampling and there are four teaching blocks where each student attends class for a period of 8 weeks after clinical rotation during the 31/2 years. The college had 7 classes of fifty students each. Four classes were attending block1, 2, 3 and 4 and three classes were in clinical rotation placement between February and April 2018. The researcher then used simple random sampling to select students from block 1 (n=33), block 2 (n=33), block 3(n=33) and block 4 (n=34) in order to make a sample total of 135 nurse students

Table 3.1 Sample size of student nurses

Class	Number of Students	Sample
Introductory block	50	34
Block 1	50	34
Block 2	50	34
Block 3	50	33
Total	200	135

3.6Instrumentation

The study used questionnaires for data collection. There were two sets ofself-administeredquestionnaires meant for nurse educators and student nurses respectively. The questionnaires developed focused on specific variables as presented in the study objectives. The first draft was presented to the supervisors for inputs regarding validity and reliability and format.

3.7 Pretest

Before the actual study the researcher carried out pretest study at Maseno School of nursing. The school was picked because it trains Kenya Registered community health nurses who undergo the same curriculum like KMTC Vihiga. The other reason was that the school was nearer to the researcher. Five nurse educators and ten students were selected using purposive sampling and stratified simple random sampling respectively and given the questionnaires to fill after signing the consent form.

3.7.1Reliability and Validity

The questionnaires reliability was determined by the consistency of the responses from different nursing educators and nursing students during the pretesting of the tools.Cronbach's alpha coefficient is the most commonly used measure of reliability (Polit& Beck 2014). It measures internal consistency of a test or scale and it is expressed as a number between 0 and 1.Reliability of the tool was determined during pretesting and it was found to be 0.925 for the student questionnaire and 0.935 for the nurse educator questionnaire. The data collected in the pretest study confirmed that the tool was valid and reliable. Validity refers to the degree to which the instrument measures what it is

intended to measure. We have various categories of validity. The study used construct validity where by the questions in the instrument tied with the study objectives.

3.8 Methods of data collection

Data collection was done using two self-admonishedsurvey questionnaires for nurse educators and nurse students respectively by the researcher. Voluntary participation and confidentiality was ensured for the subjects by anonymity where subjects did not write their names on the questionnaire. Consent form to participate in the study was utilized. The Researcher approached the students in their various classes and distributed the questionnaires after obtaining consent. Participants took approximately twenty minutes each to complete the questionnaire. The filled questionnaires were collected back by the researcher immediately the students filled them. Data collection spanned for a period of three month from February to April 2018.

The researcher also distributedquestionnaires amongst the nurse educators who were involved in classroom teaching. The participants were requested to sign the written consent before answering the questionnaire. The questionnaires were collected back within a period of one week.

3.9Methods of data analysis

Data collected by the researcher was analyzed quantitativelyAll questionnaires were checked for consistency and completeness before data organization. This was achieved by using Microsoft Excel10 and the software of Statistical package for social sciences version 25.The tool consisted of closed and open ended questions which were analyzed

and presented by descriptive statisticsThe analysis of data is presented in frequencies, percentages and tabular form. Statistical analysis which was performed included the Chi square which was computed to find the association between frequency of use of teaching strategies and number of years since last qualification of nurse educators. Analysis of variance was done to determine variance in knowledge, attitude with level of education and age of nurse educators.Pearson correlation was used to measure the linear association between knowledge and attitude towards use of teaching strategies by nurse educators.

3.10Ethical Considerations

The researcher followed the guidelines for good scientific practice. The researcher sought and was granted permission and approval to carry out the study by Kenya Methodist University Ethics and Research committee prior to data collection, Permission was sought by the researcher and granted by therespective research committees of Maseno School of nursing and Vihiga KMTC.Permission was also granted by National Commission of Science, Technology and Innovation.

The respondents were given the opportunity to withdraw from the study at any time. All respondents were informed of the purpose of the study and that the research results would be made available to all respondents on request. The respondents were informed that they would be protected from discomfort and there is no known anticipated harm in the study except for the time taken to complete thequestionnaires.

CHAPTER FOUR

RESULTSAND DISCUSSION

4.1Introduction.

This chapter presents the studyfindings. The findings are organized to include; a summary of background information of the participants, teaching strategies nurse educators use in classroom., knowledge of the nurse educators, attitudes of nurse educators, and perception of student nurses on use of teaching strategies. The chapter concludes with a discussion of the findings.

4.2 Response rate as shown in the table below

The questionnaires returned were 133 for nurse students and 10 for nurse educators as shown in the table below.

Table4.2: Response rate

Sample	Number of questionnaires distributed	Number of respondents	Response rate
Nurse educator	11	10	90%
Nurse student	135	133	98%

Table 4.2 above shows that 10(90%) of nurse educators responded to the questionnaires contributing to a response rate of 90% while nurse student respondents 133(98%) respondents.

4.3 Background Information of Nurse Educators

Table 4.3: Background Information of Nurse Educators N=10

Distribution of respondents by Age	Frequency	Percentage
31-40	4	40
41-50	3	30
51-60	3	30
Total	**10**	**100**
Gender of respondents		
Male	4	40
Female	6	60
Total	**10**	**100**
Highest qualification obtained		
Masters	1	10
Bachelor's degree	6	60
Higher diploma	2	20
Diploma	1	10
Total	**10**	**100**
Years since obtaining last qualification		
1-5	5	50
6-10	4	40
11-15	1	10
Total	**10**	**100**
Years of teaching experience		
1-5	8	80
16-20	1	10
21-30	1	10
Total	**10**	**100**

According to results in Table 4.3, majority 6(60%) of nurse educator respondents were female while 4(40%) were male nurse educators. The results also showed that 4(40%) nurse educators were in the age range of31-40 years and about 3(30%) were in the 41-50 age group.About3 (30%) were in the 51-60 years age group.The findings show majority of the nurse educators were females. The ratio of Males: Female was 2:3.

Educational attainment of nurse educators show majority 6(60%) had a bachelor's degree, minority 2(20%) had a higher diploma, Few1 (10%) had a Master degree and 1(10%) had a basic diploma

In determination in number of years since last qualification majority 5 (50%) obtained their qualification less than 5years ago followed by few 4(40%) who obtained their qualifications 6-10 years ago. The least 1(10%) of respondents obtained their last qualification 11-15 years ago.Majority 8(80%) of the respondents have been teaching for 5 years and less, about 1(10%) for 16-20 years, and 1(10%) of the respondents were teaching between 21-30 years.4.2.1 Nursing Programs nurse educators are involved in teaching

4.3.1 Nursing Programs nurse educatorsare involved in teaching

About 2(16.7%) of respondents were teaching Midwifery, 2(16.7%) respondents were teaching behavioral science,2(16.7%) were teaching Anatomy and Physiology. Community health was taught by 1(8.3 %).Medical Surgical nursing was taught by2 (16.7 %).Fundamentals of nursing was taught by2 (16.7 %), while Psychiatric nursing was taught by1 (8.3 %) of nurse educators respectively.

Table4.4: Nursing Programs nurse educators are involved in teaching N=10

Nursing program	Frequency	Percentage
Midwifery	2	16.7%
Behavioral Science	2	16.7%
Anatomy/ physiology	2	16.7%
Community health	1	8.3%
Psychiatry nursing	1	8.3%
Medical/ surgical	2	16.7%
Fundamentals of nursing	2	16.7%
Total	**12**	**100%**

4.4Teaching strategies used by nurse educators

The question allowed the sample to choose the frequency of use of teaching strategies. Table 4.5 illustrates that the lecture strategy was the most favored by nurse educators as9(90%) always used the lecture strategy. The innovative teaching strategies were rarely being used as evidenced by, Simulation which was only sometimes used by 4(40%) and never used by majority 6(60%) of nurse educators. Problem based learning was never used by majority 5(50%), sometimes by 4(40%) and Web based teaching was never used by 6(60%), sometimes used by 3(30%) of nurse educators.

Table 4.5:Nurse Educator responses on frequency of use of various teaching strategies N=10

Teaching strategies	N	Always	Sometimes	Never	%Total
Traditional strategies					
Lecture	10	90%(n=9)	10%(n-1)	0%(n=0)	100
Demonstration		40%(n=4)	50%9n=5)	10%(n=1)	100
Innovative strategies					
Group Discussion	10	20%(n=2)	70%(n=7)	10%(n=1)	100
Case Based method	10	20%(n=2)	30%(n=3)	50%(n=5)	100
Simulation	10	0%(n=0)	40%(n=4)	60%(n=6)	100
Debate	10	10%(n=0)	30%(n=3)	60%(n=6)	100
Storytelling	10	0%(n=0)	60%(n=6)	40%(n=4)	100
Concept Mapping	10	0%(n=0)	30%(n=3)	70%(n=7)	100
Problem Based learning	10	10%(n=1)	40%(n=4)	50%(n=5)	100
Web Based teaching	10	10%(n=0)	30%(n=3)	60%(n=6)	100
Humor	10	20%(n=2)	40%(n=4)	40%(n=4)	100
Role play	10	20%(n=2)	30%(n=3)	50%(n=5)	100
Games	10	0%(n=0)	5%(1)	95%(n=9)	100
Valid N (list wise)	10				

4.5Characteristic of innovative and traditional teaching strategy

This was an open ended question and respondents were asked to give their own views on the characteristics of an innovative teaching strategies, 10% of respondents identified it as evidence based1,another 1(10%),identified it as most current while 1(10%), identified it as being creative. A significant percentage 7(70%) gave no answerto the question.

Similarly, respondent were asked to give their views on the characteristics of traditional teaching strategies. A significant percentage 8(80%), gave no answer to the question. A few 1(10%) identified it as ancient, while 1(10%) identified it as teacher centered.Further, respondents were asked to choose which strategy they preferred. Majority 9(90%) preferred innovative teaching strategy. While 1(10%) preferred traditional teaching strategy.

When asked about the reason for using traditional strategy. The majority of respondents gave no response to it 9(90 %). While 1(10 %) said it could give a lot of new knowledge to a large group of students.

4.6 Nurse educators' perception of their level of knowledge on different types of teaching strategies

A high percentage 9(90%)of nurse educators reported as being very knowledgeable in lecture with a mean of 2.70, SD= .949, this was followed by Group discussion6(60%) with a mean of 2.40, SD =.966.The third teaching strategy was case based teaching2(20%) with a mean of 1.40, SD=1.265 and Simulation2(20%) with Mean of 1.40 SD=1.265.The least teaching strategy was Concept mapping0(0%) with a mean of

.40, SD=.843.See table 4.5 for the comprehensive listing of mean perceived level of knowledge with standard deviation for teaching strategies.

Table 4.6:Nurse Educators' perception of their level of knowledge on different types of teaching strategies N=10

Knowledge on teaching strategies	N	Minimum	Maximum	Mean	Std. Deviation
Lecture	10	0	3	2.70	.949
Group Discussion	10	0	3	2.40	.966
Case Based method	10	0	3	1.40	1.265
Simulation	10	0	3	1.40	1.265
Debate	10	0	2	1.10	.994
Games	10	0	3	.80	1.135
Storytelling	10	0	3	.90	1.101
Role play	10	0	3	1.40	1.265
Concept Mapping	10	0	2	.40	.843
Problem Based learning	10	0	3	1.10	1.287
Web Based teaching	10	0	3	1.00	1.054
Humor	10	0	3	1.20	1.229
Demonstration	10	0	3	.90	1.101
Valid N (list wise)	10				

Note.0=not knowledgeable 1=fairly knowledgeable 2=knowledgeable 3= Very knowledgeable

4.7 Perceived effectiveness of nurse educators in using teaching strategies N=10

Respondents were asked to rate how effective each strategy was using the following scale

0= not effective 1=somewhat effective 2= effective3=Very effective. Case based teaching 7(70%) and demonstration7(70%)was perceived to be the most effective teaching strategy by nurse educators with a mean score 2.2,SD of 1.317 and 2.50 SD= .972

respectively.Lecture was the second perceived teaching strategy 6(60%) with mean of 2.60, SD=.972. The other innovative teaching strategies perceived to be effective was role play 4(40%) Group discussion 3(30%) with a mean of1.80, SD=.483 and 2.30 and SD= .483 respectively. The leastinnovative perceived effective teaching strategy wasgames 1(10%) Mean of .80 and SD= 1.135

Table 4.7: Perceived effectiveness of nurse educators in using teaching strategies N=10

Perceived effectiveness	N	Minimum	Maximum	Mean	Std. Deviation
Lecture	10	2	3	2.60	.516
Casebased	10	0	3	2.20	1.317
Simulation	10	0	3	1.50	1.179
Demonstration	10	0	3	2.50	.972
Role play	10	0	3	1.80	1.229
Small group discussion	10	2	3	2.30	.483
Storytelling	10	0	3	1.50	1.179
Debate	10	0	3	1.60	.966
Humor	10	0	3	1.30	1.252
Games	10	0	3	.80	1.135
PBL	10	0	3	1.60	1.135
Concept mapping	10	0	3	1.70	1.059
Web based	10	0	3	1.60	1.174
Valid N (listwise)	10				

4.8Nurse Educator attitudes on importance of teaching strategies

Lecture was perceived to be of very great importance by 7(70%) with a mean of 2.70 SD=.483 group discussion 7(70%) as an innovative teaching strategy followed with Mean of 2.50 SD=.972, this was followed by demonstration teaching strategy 6(60%)

with a Mean of 2.60 SD=.516.The least strategy perceived to be of no importance was games1 (10%) with Mean of 1.00, SD=1054.

Additionally, the majority of respondents viewed learners as being passive learners in the learning process 70 %(n=7), while 30% viewed them as active participants.

Table4.8: Nurse Educator attitudes on importance of teaching strategies N=10

Attitude on Importance of teaching strategies	N	Minimum	Maximum	Mean	Std. Deviation
Lecture	10	2	3	2.70	.483
Small group discussions	10	0	3	2.50	.972
Role play	10	0	3	1.60	1.174
Simulation	10	0	3	1.60	1.430
Case based teaching	10	0	3	1.70	1.494
Debate	10	0	3	1.60	1.174
Games	10	0	3	1.00	1.054
Story Telling	10	0	3	1.30	1.160
Web based teaching	10	0	3	1.40	1.350
Humor	10	0	3	1.20	1.229
Concept Mapping	10	0	3	1.60	1.265
Demonstration	10	2	3	2.60	.516
Problem based learning	10	0	3	1.90	1.370
Valid N (listwise)	10				

Note: 0= of no importance 1= of some importance 2=of great importance 3= of very great importance

4.9 Association of nurse educators knowledge and attitude towards teaching strategies

Table 4.9: Bivariate Pearsoncorrelations

Analysis of variance		Knowledge score	Attitude score
Knowledge score	Pearson Correlation	1	.230
	Sig. (2-tailed)		.523
	N	10	10
Attitude score	Pearson Correlation	.230	1
	Sig. (2-tailed)	.523	
	N	10	10

A Pearson product moment correlation coefficient was computed to assess the relationship between nurseeducator's knowledge and rating of attitude towards the teaching strategies. There was a significant correlationr=0.230, n=10, p=0.523.This showed that increases in nurse educator attitude were correlated with increase in nurse educators knowledge of teaching strategies.

4.10 Association between nurse educator number of years since last qualification and frequency of use of teaching strategies

Table 4.10Association between nurse educator number of years since last qualification and frequency of use of teaching strategies

Teaching strategy	CHI SQUARE TESTS	Value	df	Asymptotic Significance (2-sided)
Lecture	Pearson Chi-Square	1.111[a]	2	.574
	Likelihood Ratio	1.498	2	.473
	Linear Association	.842	1	.359
	N Cases	10		
Small group discussion	Pearson Chi-Square	.635[a]	2	.728
	Likelihood Ratio	.622	2	.733
	Linear Association	.203	1	.652
	N Cases	10		
Problem based learning	Pearson Chi-Square	8.400[a]	4	.078
	Likelihood Ratio	10.044	4	.040
	Linear Association	.172	1	.678
	N Cases	10		
Story telling	Pearson Chi-Square	6.667[a]	2	.036
	Likelihood Ratio	8.456	2	.015
	Linear Association	5.053	1	.025
	N Cases	10		
Debate	Pearson Chi-Square	1.111[a]	2	.574
	Likelihood Ratio	1.668	2	.434
	Linear Association	.090	1	.764
	N Cases	10		
Case based teaching	Pearson Chi-Square	3.556[a]	4	.469
	Likelihood Ratio	4.637	4	.327
	Linear Association	1.451	1	.228
	N Cases	10		
Humor	Pearson Chi-Square	1.378[a]	4	.848
	Likelihood Ratio	1.726	4	.786
	Linear Association	.399	1	.528
	N Cases	10		

In Table 4.10 the results reveal that there was no association between nurse educator number of years since last qualification and frequency of use of lecture teaching strategy during teaching by the nurse educator. This was after the chi square test was ($\chi^2(2) = 1.111$, $p=0.574$).The results also showed that nurse educator number of years since last qualification had no association with frequency of utilizing Small group discussion teaching strategies as the chi square was $\chi^2 (2) = .635, p=.728>0.05$.

However, there was an association between number of years since last qualification and utilization of storytelling during teaching by nurse educators. This was after the chi square test showed $\chi^2 (2) = 6.667$, $p=0.036 <0.05$

4.11: Analysis of variance between knowledge score, attitude score and age

Table4. 11: Analysis of variance between knowledge score, attitude score and age

Analysis of Variance		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score	Between Groups	190.233	3	63.411	2.038	.210
	Within Groups	186.667	6	31.111		
	Total	376.900	9			
Attitude score	Between Groups	152.433	3	50.811	.315	.814
	Within Groups	967.667	6	161.278		
	Total	1120.100	9			

The table 4.11 above shows that there was a statistically significant difference in knowledge between age groups as determined by one way ANOVA F (3, 6) =2.038, *P=0.210*) (P> 0.05). Similarly there was a significant difference in attitude towards teaching strategies as determined by one way ANOVA F(3,6)= 0.315,*P* =0.814 (*P*>0.05) We may therefore conclude that the difference in knowledge and attitude among age groups about teaching strategies by nurse educators is significant.

4.12: **Analysis of variance for knowledge, attitude and level of education**

Table4.12: Analysis of variance for knowledge, attitude and level of education

Analysis of variance		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score	Between Groups	133.186	2	66.593	1.913	.217
	Within Groups	243.714	7	34.816		
	Total	376.900	9			
Attitu//de score	Between Groups	362.386	2	181.193	1.674	.255
	Within Groups	757.714	7	108.245		
	Total	1120.100	9			

The ANOVA was further conducted on knowledge and attitude between different levels of education of nurse educators. Based on the findings there was statistical significant difference in knowledge between levels of education as determined by one way ANOVA F(2,7)= 1.913,P =.217 p>0.05)The results also showed significant difference in attitude towards the teaching strategies by one way ANOVAF(2,7)= 1.674),P= 0.255,p>0.05)

4.13 Barriers of using innovative teaching strategies

With regards to the barriers to using innovative teaching strategies, respondents gave the following responses. Twenty one point six percent8(21.6%) identified lack of equipment,

8(21.6%) identified lack of support given to the new nurse educators, 8(21.6%) identified as lack of knowledge/ skills regarding use of innovative traditional strategies. Lack of in service training on use of innovative teaching strategy was the next most common barrier identified by 7(18.9%) participants. Other barriers were lack of experience in nursing education 5(13.5%)andlackof mentorship1 (2.7%)

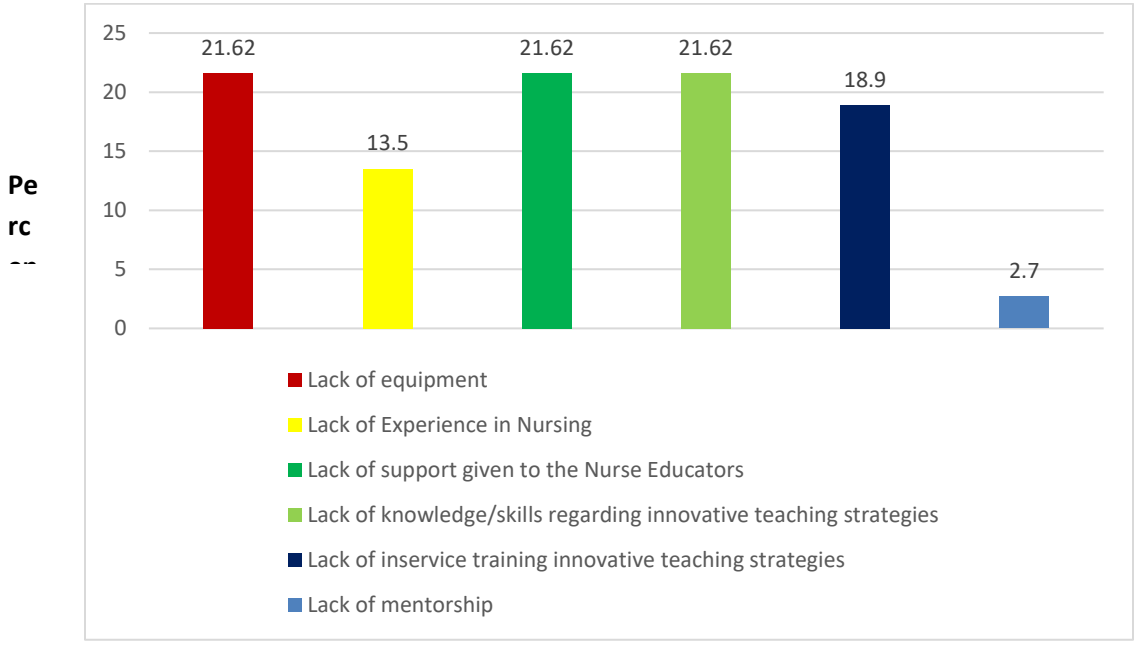

Figure 4.2 Barriers of using various teaching strategies

4.14Teaching strategy where further training needed

Majority8(21 %) indicated a need for further training in web based teaching,13.2% in small group discussion, simulation, concept mapping, Problem based learning respectively. While 7.9 % indicated need for training in case based teaching and debate. At least5.3% indicated that they would require training in lecture, 5.2% in role

play,storytelling andgames respectively. Minority 2.6 % requested for further training in humor. None requested for training in demonstration.

Table4.13: teaching strategy where further training needed N=10

Teaching strategy needs further training in.	Frequency	Percentage
Lecture	2	5.3
Small group discussions	5	13.2
Role play	2	5.2
Simulation	5	13.2
Case based teaching	3	7.9
Debate	3	7.9
Story Telling	2	5.2
Web Based Teaching	8	21
Games	2	5.2
Demonstration	0	0
Humor	1	2.6
Concept Mapping	3	7.9
Problem based learning	2	5.3
Total	**38**	**100%**

According to Table 4.14 majority of respondents requested for further training in web based teaching21 %(n=8)

4.15:Students demographic data

4.15.1Ageand gender of nurse students' respondents

The age for the nurse students varied between 18-34 years (n=133).Student nurses (92.5 %,n=123) of the respondents were in the aged between 18-24 years and about 7.51% (n=10) of the respondents were in the 25-34age groups.The respondents gender distribution was 45.9 %(n=61) males and 54.1 %(n=72) females.

Table 4.14: Age and gender of nurse students N =133

Age in years	**Frequency**	**Percentage %**
18-24	123	92.5
25-34	10	7.5
Total	**133**	**100.0**
Gender		
Male	61	45.9
Female	72	54.1
T**otal**	**133**	**100**

4.15.2 Student responses regarding nurse educators use of teaching strategies in the classroom

Majority 109(82.6%) of respondents indicated that they had seen some of the nurse educators always using lecture while teaching in the classroom. Thenurse students 30(22.8%) also reported that nurse educators always use groupdiscussion. A few 9(6.7%) reported nurse educators always use Simulation, while 72(54.1%) reported that nurse educators never use simulation. Similarly58(54%) nurse students reported that nurse educators never use web based teaching

Table 4.15:Distribution of students responses on nurse educators use of teaching strategies in the classroom N=133

Teaching strategy	N	Frequency of using teaching strategies			
		Always	Sometimes	Never	Total
Traditional strategies					
Lecture	133	82%(n=109)	14.5%(n=19)	3.14%(n=4)	100
Demonstration	133	29%(n=39)	47 %(n=62%)	24%(n=32)	100
Innovative strategies					
Group discussion	133	22.75%(n=30)	45% (n=60)	32%(n=43)	100
Role play	133	12.71%(n=16.9)	37% (n=50)	50% (67)	100
Case based teaching	133	12% (n=16)	49% (n=65)	39%(n=52)	100
Simulation	133	6.7%(n=9)	39%(n=52)	54.1%(n=72)	100
Debate	133	4.28% (n=7)	24.7% (n=32)	70.6%(n=94)	100
Story telling	133	20.56% (27)	56.69%(n=76)	22.67%(n=30	100
Concept mapping	133	16.4% (n=22)	30.6%(n=41)	53%(n=70)	100
Problem based learning	133	9.72% (n=13)	53.75%(n=71)	36% (n=48)	100
Web based teaching	133	14% (n=19)	42%(n=56)	44% (n=58)	100
Humor	133	23.4% (n=31)	53.33% (n=71)	23.03% (n=31)	100
Games	133	0% (n=0)	0% (n=0)	100% (n=10)	100

4.16Mean and Standard deviation of use of teaching strategies from student responses

Table 4.16:Mean and Standard deviationof use of teaching strategiesfrom student responses

Teaching strategy	N	Missing	Mean	Std. Deviation
Lecture	133	0	1.24	0.38
Case based	133	0	2.27	0.57
Simulation		0	2.46	0.60
	133			
Demonstration	133	0	1.98	0.65
Role paly	133	0	2.49	0.68
Small group discussion	133	0	2.09	0.44
Storytelling	133	0	2.03	0.59
Debate	133	0	2.63	0.53
Humor	133	0	2.08	0.65
Games	133	0	2.59	0.57
Concept mapping	133	0	2.39	0.53
Problem based learning	133	0	2.63	0.53
Web based	133	0	2.35	0.63
Valid N (list wise)	133			

The Table 4.16 illustrates the means and standard deviation for various teaching strategies. A mean value of less than or close to 1 indicates that the teaching strategy was always used and those closer to 2 depicts sometimes in use. The mean value greater than 2 tends towards never in use. The analysis indicates that lecture was always in use M=1.245, SD=0.380 while games M= 2.59, SD= 0.57and debate M=2.627, SD = were never in use. The other teaching strategies were sometimes in use as the mean was closer to 2.

4.17 Comparison of responses of nurse educators and student nurses on frequency of use of teaching strategies

Table 4.17: Paired comparisons of nurse educator and student nurses on frequency of use of traditional teaching strategies

Paired samples Test

	Paired Differences							
Nurse educators – Nurse students	Mean	Standard deviation	Standard error of mean	95% confidence interval of the difference		t	df	Sign 2-Tailed
				Lower	Upper			
	9.5	4.5	3.182	0.800	0.11	12.706	2	0.05

A paired samples t test was conducted to compare the results of the frequency of use of traditional teaching strategies by nurse educators Mean=32.5 *SD*= 5.25and nurse students Mean=27.75,*SD*=4.75, t(2)= 12.706,p> 0.05.These result suggest that traditional teaching strategies were always used.

4.15 Discussion of findings

Rapidly changing healthcare conditions necessitates the nurse educators to constantly assess and revise teaching strategies, approaches used to teach new generations of nursinglearners. Therefore utilizing innovative teaching strategies that would promote the evolution of nursing students with higher level of critical thinking, decision making skills, communication and clinical reasoning skills is necessary. The present study sought

to assess the current teaching strategies utilized by nurse educators in the classroom to teach nursing content.

4.15.1Frequency of use of teaching strategies

Findings from nurse educators and nurse students revealed commonly used teaching strategies in theclassroom was the traditional lecture. This was aftera paired samples t test was conducted to compare the results of the frequency of use of traditional teaching strategies by nurse educators Mean=32.5,*SD*=5.25 and nurse students Mean=27.75,*SD*=4.75, t(2)= 12.706,p > 0.05.These result suggest that traditional teaching strategies were always used. Although it is a traditional teaching strategy it is used frequently by a large percentage of nurse educators, therefore making it imperative that educators shift towards innovative teaching strategies to teach present evolving health issues (Zhang ,2014).Demonstration followed next and was always used by 4(40%) and sometimes used by5(50%) of the sample. This is in agreement with Mmbirimtengerenji (2015) whoalso found that Nursetutors in all colleges in Malawi commonly uselecture56.1 %(46) n=82 and demonstration 69.5 %(57) n=82 teaching strategies. Similarly Nabors (2012) found that traditional lecture was more frequently used .This finding was also in agreement with the nursing student 109(82.6%) in the present study who also indicated that Lecture was always used by nurse educators. and about 4(40%) indicated nurse educators always used demonstration.

Observation in learning trends supports innovative teaching strategies as it provided opportunity to each learner to be an active participant unlike traditional teaching strategies where the learner was a passive listener in the classroom. However,

nurseeducatorresponses seemed to contradict the teaching strategy they were using with what they preferred to use in theclassroom.In spite of them knowing that innovative teaching strategy was of great importance for teaching nursing content; majority of them were using traditional teaching strategies, that is lecture and demonstration. These findings agree with Subhan (2014) who observe that nurse educators usually do not use learner centered teachingstrategies due to lack of familiarity with the teaching strategies. The analysis of variance showed a statistically significant difference in knowledge between age groups as determined by one way analysis of variance $F(3,6)=2,038,p>0.05$)The ANOVA was further conducted on knowledge and attitude between different levels of education of nurse educators. Based on the findings there was statistical significant difference in knowledge between levels of education as determined by one way analysis of variance$F(2,7)=1.913,p>0.05$).The higher the educational level ,the knowledge in use of different teaching strategies increased.This is in agreement with Drateu(2016) who found that majority of tutors who had training in Medical education had a positive attitude towards innovative teaching strategies.

In the present study, innovative teaching strategies had minimally been used by nurse educators and performance had not been good among the nurse students.Ghafourfard et al. (2013) recommends the use innovative teaching strategies in the classroom since nursing is a practice based profession which requires students to participate in the learning process.Lecture continues to be the most prevalent teaching strategy utilized as cited in the literature (Mmbirimtengerenji,2015).Lecture strategy has many advantages such as the ability to provide information to a large number of students and cover a large

amount of material quickly, it also helps present large blocks of complex information(Xu,2016).The traditional oral lecture presents some limitations such as there is only one way flow of information which produce insufficient interaction with the students, nurse educators often talk for hours without knowing student response and feedback.

It is also very good to note that nurse educators in KMTC Vihiga use small group discussion sometimes as it is an interactive teaching strategy that promotes interaction between students thus encouraging critical analytical thinking; both the nurse educator and student nurse respondents agreed that the use of small group discussion was sometimes used. The Mean utilization of small group discussion was found to be*M*= 2.50*SD*=.972, which shows the teaching strategy was sometimes in use.

Role play can be used to augment lecture to present theory content. Nurseeducators2 (20%) indicated that they always used lecture, sometimes 3(30%) and 5(50%) never used role play.Subhan noted that role playing can be used to teach communication in nursing education.

Case based teaching was found to be a useful teaching strategy compared with lecture in promoting critical thinking skills as cited by Majeed (2015).The findings of the study indicate that some nurse educators do not use case studies as illustrated by responses of always 20%.sometimes 30% ,never 50% use and a Mean=2.27 Standard deviation=0.57

Regarding debate nurse educators reported that it was rarely used as indicated by responses of 3(30%) whosometimes used and 6(60%) who never use them. Majority

5(50%) of nurse educators indicated not being knowledgeable in using debate as a teaching strategy. Probably this is why they were not using it.Students' respondents also reported that debate was never used by nurse educators, yet the literatures emphasize the importance of debate. Dundas (2015) states that debate is a strategy for development of leadership and management competencies such as shared decision making and respect. Nurse educators can enhance this by involving students in debates. Sessions of debate could be created regarding the ethics and professionalism course through the use of scenarios and case studies.

According to the literature review web based teaching which uses computer technology was embraced in the developed countries (Johnson 2015). In east Africa including Kenya it is still not fully utilized in the nursing classroom. The utilization of simulation as a teaching strategy was found to be very weak in KMTC Vihiga. The Mean =2.4670, Standard deviation=0.606 which indicates that the strategy was rarely used. The demonstration strategy was preferred as it was always (40%) used, sometimesused (50%), never(10%) used by nurse educators Mean=1.98,Standard deviation0.65. These findings could also be attributed to lack of knowledge by nurse educators on use of simulation as a teaching strategy since (50%) showed a need for further training in use of simulation. Technology has advanced and simulators have replaced demonstrations in nursing education (Berragan, 2013).High fidelity simulators can be used to rehearse particular clinical scenarios which assist students understand how torespond topatients, relatives and others in the health care team in a safe environment.

On the use of concept mapping, the results revealed that nurse educators were never using, while findings from students also revealed it was rarely used, always used by(6(6%) sometimes3(30.6%) used and never used by(60%).This lack of usemay have been attributed to the fact that nurse educator thought it was of no importance5(50%) and probably that is why they were not using it ,although4(40%) felt they were knowledgeable in using concept mapping.Jaafapour (2015) observed that concept mapping is very essential in making students achieve greater marks in tests in comparison with students who received the traditional lecture teaching strategy.

There are still nurse educators that sometimes or never use Problem based learning scenarios as a teaching strategy as illustratedby responses of sometimes in use (40%) and never (50%) use by nurse respondents. Majority (60%) of nurse educators reported that they were not knowledgeable in using problem based learning as a teaching strategy. Majority 70% felt problem based learning was not effective and probably that is why they were rarely using PBL in classroom teaching. This is troubling because it was cited in the literature that critical thinking skills can be developed using problem based learning, (Zhang, 2014). The nurse educators can use problem based learning in class by giving a contextualized problem to motivate learners to actively seek relevant knowledge using all possible resources.

Findings from nurse students revealed that games were inadequately used, while findings from nurse educators also revealed majority (100%) never used games in teaching, Similarly, majority (100%) reported not being knowledgeable in the use of games as a teaching strategy and (60%) felt games were not effective (, 60%) felt games were of no

importance, probably this is why they were not using. Games can be used to teach nursing ethics course where nurse educators can create ethical dilemmas on actual or hypothesized cases where students play the game and are required to make ethical decisions. Nabors (2012) echoes the same sentiments when her findings show that nurse educators rarely used games in teaching in the classroom.

Regarding characteristics of innovative and traditional teaching strategies, the findings of this study are an indication, that most nurse educators may not be aware of the differences between traditional and innovative teaching strategies since when asked to state the characteristics of traditional teaching strategy (70%)provided no comment and when asked about characteristic of innovative teaching strategy(80%) provided no comment. A few of the nurse educators do have the theoretical awareness of the elements of an innovative teaching strategy however, are not applying this theoretical knowledge to the choice of their teaching strategy probably due to barriers that they encounter. The characteristics of innovative teaching strategies identified by participants are also supported by (Subhan, 2014).Innovative teaching strategies are student centred teaching strategies which involve the student to be a creative thinker. On the other hand traditional teaching strategies are teacher centred where students are silent listeners and play an inactive role in the learning process (Stone et al, 2013)

4.15.2 Nurse educators perceived level of knowledge on teaching strategies

A high percentage of nurse educators reported as being very knowledgeable in lecture with a mean of 2.70, SD= .949, this was followed by Group discussion with a mean of 2.40, SD =.966.The rest of the teaching strategies had a mean of less than 2 which depicts

that the nurse educators were less knowledgeable in them. Lack of knowledge about the innovative teaching strategies could be the reason for the limited use. This is consistent with the results found in a study that was conducted in Malawi to determine the utilization of teaching strategies among nurse tutors. The results showed that the ability of the nurse tutors to use the teaching strategies effectively in class was found to be very limited. This was not only due to limited resources but also due to low level of knowledge about the innovative teaching strategies among the nurse tutors (Mmirimtengerenji& Adejumo, 2015a).This is also supported by the results of nurse student evaluation of the nurse educator teaching strategies which showed that The lecture strategy was the most frequently used teaching strategy across all subjects. The other strategies were sometimes used or never used.

Similarly a study was conducted to explore nurse educators' experiences, current practice and possible improvements to inform the best practice of case based education at a nursing school at the Western Cape in South Africa(Daniels et al. 2015). The results show that the participants reported being challenged by inadequate skills to facilitate learning in case based education and they also indicated that there was need to strengthen their facilitation skills through further in-service training.

The extent to which the respondents required training in the other teaching strategies was minimal. Training of nurse educators who wish to adopt innovative teaching strategies is salient (Nabors, 2012) especially amongst educators in the current sample who appear to lack proficiency in the aforementioned strategies. Since technology has advanced it is critical then that there is greater innovation in teaching strategies as well. The ages of the

sample reflects mature samples, many of whom have been taught using traditional approaches themselves and hence favor its approach.

4.15.3Nurse educator attitudes towards use of different teaching strategies

The participants in this study indicated that traditional lecture was of very great importance in their teaching, although some respondents rated some innovative teaching strategies as of great importance to their teaching. These results are consistent with studies cited in the literature (Kyalo&Hopkin's,2013) in a survey which was conducted in Kenya to explore the acceptability of online learning showed that lecturers in KMTC were positive about technology acceptance in the classroom.

The barriers which were identified to prevent utilizing innovative teaching strategies the nursing classroom was lack of equipment, lack of knowledge in use of some of the teaching strategies and lack of support given to new nursing educators. The same issues were identified in the literatureSubhan (2014).This was followed by lack of in service training on the use of teaching strategies.

4.15.4Perception of students on frequency use of different teaching strategies by nurse educators

The majority 109(82.6%) of students indicated that the nurse educators were commonly using traditional lecture teaching strategy in the classroom. This is in agreement with

Mmbirimtengerenji (2015) who found that nurse students strongly agreed that nurse tutors frequently using lecture strategy 58(45%) n=129.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summative perspective of the thesis project highlights, the purpose of the project and reflects on the objectives of the project. Secondly it provides objective based conclusions about the study and gives recommendations to the stakeholders of curriculum development**.**

5.1 Summary

The goal of the study aimed at determining theclassroom teaching strategies utilized in the classroom by the nurse educators at Kenya medical training college Vihiga campus.to enhance student learning and academic performance. The study used quantitative cross sectional descriptive research design.

5.1.1The teaching strategies used in the classroom at Vihiga Kenya Medical Training College

The study revealed that nurse educators were predominantly using the traditional teaching strategies: lecture and demonstration strategy. However the innovative teaching strategies were minimally used. The barriers identified were lack of use of innovative teaching strategies were lack of knowledge and lack of enough equipment.

5.1.2 Nurse educators' perception of their level of knowledge on different types of classroom teaching strategies

The study found that the level of knowledge of nurse educators on various teaching strategies was similar to those identified in the literature. The nurse educators identified low level of knowledge among the innovative teaching strategies as noted in previous studies (Mmbirimtengerenji,2013).The one way analysis of variance, showed a significant difference in knowledge between levels of education.

5.1.3 Students perception on frequency of teaching strategies used by nurse educators

Thestudy findings were tied with that of nurse educators where they agreed that most nurse educators were still using traditional teaching strategies mostly lecture and demonstration. The innovative teaching strategies were minimally used.

5.1.4The attitude of nurse Educators towards use of teaching strategies.

The study findingsalso showed that the nurse educators had a positive attitude towards innovative teaching strategies.

5.2 Other relevant findings

5.2.1Utilization of Computer and Internet

Findings indicated that nurse educators were not adequately utilizing Computer and Internet which is one of the teaching resources that could enhance Web based teaching, a modern approach to 21st century learning.

5.3Conclusion

The purpose of the study was to establish the teaching strategies used in the classroom at Vihiga Kenya Medical training college. The null hypothesis was rejected at 0.05 alpha level and therefore, nurse educators' knowledge of teaching strategies influenced their use in the classroom.Overall the data that was found answers the four questions posted at the beginning of the presentation.From the summary of the findings given in section 5.1 it can be concluded that, nurse educators were utilizing traditional teaching strategies. Innovative teaching strategies were minimally used. Analysis of nurse educator responses revealed lecture is the most favored teaching strategy .This is in agreement with Mmbirimtengerenji (2015) who also found that nurse tutors in all colleges in Malawi commonly use lecture and demonstration. The nurse educators had knowledge gap among the innovative teaching strategies. However, they had positive attitude towards innovative teaching strategies.

Finally, findings indicated that nurse educators were not adequately utilizing Computer and Internet which is one of the teaching resources that could enhance Web based teaching, a modern approach to 21st century learning.

5.3Recommendations

Recommendations for future research are presented based on the findings and discussion from this study**.**

5.3. 1Recommendationsbased on Research findings

- A curriculum on innovative teaching strategies should be designed by Kenya Medical training college academic office and Nurse Educators should apply innovative teaching strategies, in their choice of teaching strategies, for subject content.
- Kenya Medical training college should hire educators who have qualifications above the students they will teach.
- KMTC campus Principals should ensure that nurse educators utilize the computers and internet for the benefit of students learning.

5.3.2.Recommendations for Further Research

- The study was carried out in one college. Further research can be done in all other colleges to establish which teaching strategies nurse educators are using in the classroom.
- There is need to carry out research on utilization of skills laboratory in KMTC.This is informed by the fact that the utilization of simulation teaching strategy was low
- Future research can be carried out on knowledge, attitude and practices on computer and internet use by nurse educators. Informed by low use of web based teaching.

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APPENDICES

APPENDIX 1: NURSE EDUCATOR QUESTIONNAIRE
Please tick next to the most appropriate answer in the box provided.

SECTION A

DEMOGRAPHIC DETAILS

1. Gender

Male ( )

Female ( )

2. Age

24 -30 years ( )

31 – 40 years ( )

41 – 50 years ( )

51 – 60 years ( )

61 – 65 years ( )

3. Highest educational qualification.

Doctoral degree in nursing ( )

Master's degree in nursing ( )

Bachelor's degree in nursing ( )

Higher Diploma in nursing ( )

Other: Please specify ----------

Section B: Academic Background

4. When was your latest qualification obtained?

Mark the appropriate box with an √

a)< years ago ( )

b) 6-10 years ago ( )

c) 11-15 years ago ( )

d) 16-20 years ago ( )

e) <20 years ( )

5. Please specify your position

Head of department ( )
Full time lecturer ( )
Part time lecturer ( )
Head of section ( )

Others: specify_____

SECTION C

Teaching Experience

6. How many years have you been teaching?

1-5 years ( )
6-10 years ( )
11-15 years ( )
16-20 years ( )
21-30 years ( )
31-35 years ( )

7. Which courses are you involved in teaching?

Midwifery ( )
Behavioral science ( )
Anatomy and physiology ( )
Community health ( )
Fundamentals of nursing ( )
Medical- surgical nursing ( )
Information, communication and technology ( )

Other; specify_____

SECTION D: Current use of teaching strategies

8. Tick (√) the teaching strategy used or currently in use for teaching students in the current unit you are involved in teaching (You may select more than one strategy).

	Frequency of use		
Teaching strategy	Always	Sometimes	Never
Lecture			
Small Group Discussion			
Role Play			
Simulation			
Debate			
Story Telling			
Concept Mapping			
Pbl			
Web Based Teaching			
Humor			
Demonstration			
Games			
Others(Specify			

9.. Do you assess the level of training of students when deciding on a teaching strategy?

a) Yes ( )

b) No ( )

10.How would you describe your learner's role in the majority of your teacher/learner experience----------?

SECTION D:Nurse educators' perception on knowledge of teaching strategies

11 (a) what is the difference between traditional and innovative teaching strategies?

12. (b) which one do you prefer?

_____

Traditional_____

Innovative_____

13 If the answer is traditional for above question, give reasons why you prefer using it_____

14 .If the answer is innovative strategies, give your reasons_____

15. Please rate your knowledge in using the teaching strategy in the classroom by ticking (√) on your most appropriate response.

Teaching strategy	Very knowledgeable	Knowledgeable	Faily knowledgeable	Not knowledgeable
LECTURE				
SMALL GROUP DISCUSSION				
ROLE PLAY				
CASE BASED TEACHING				
SIMULATION				
DEBATE				
STORY TELLING				
CONCEPT MAPPING				
PBL				
WEB BASED TEACHING				
HUMOR				
GAMES				
DEMONSTRATION				
OTHRES (SPECIFY)				

16..Based on your own estimation ,please rate how effective you think each method is for enhancing learning using the following scale:

1=Not effective

2=somewhat effective

3 =Effective

4=Very effective

Effectiveness of teaching strategies

TEACHING	Not Effective	Somewhat	Effective	Very Effective

STRATEGY		Effective		
Lecture				
Small Group Discussion				
Role Play				
Case Based Teaching				
Simulation				
Demonstration				
Story Telling				
Concept Mapping				
Problem Based Learning				
Games				
Debate				
Web Based Teaching				
Humor				
Others (Specify)				

17. Please indicate the barriers which hinder use of the strategies by ticking (√) Yes or No against the responses

17.1 Lack of equipment Yes ( ) No ()

17.2 Lack of experience in nursing education. Yes ( ) No ( )

17.3 Lack of support given to new nursing educators. Yes ( ) No ( )

17.4 Lack of knowledge and skill regarding the use of innovative strategies Yes ( ) No ( )

17.5 lack of in-service training on the use of teaching strategies

Yes ( )

No ( )

17.6 Other: Specify_____

SECTION F: Nurse Educator attitude on use of teaching strategies

18 Select the teaching strategies that you think will add value to your teaching in order of Importance by putting a tick (√) in the spaces provided. You can choose more than one strategy.

Teaching strategy	of very great importance	Of great importance	Of some Importance	Of no Importance
Lecture				
Small group discussion				
Role play				
Case based teaching				
Simulation				
Debate				
Games				
Story telling				
Web based teaching				
Humor				
Concept mapping				
Problem based learning				
Demonstration				

19. Select the teaching strategy that you will need further training in.

19.1 Lecture method ( )

19.2 Small group discussions ( )

19.3 Role play ( )

19.4 Simulations ( )

19.5 Case based teaching ( )

19.6 Debate ( )

19.7 Story telling ()

19. 8 Web based teaching ()

19.9 Games ( )

19.10 Demonstration ( )

19.11 Humor ( )

19.12 Concept Mapping ( )

19.13 Problem based learning ( )

Others (specify)_____

20 Do new nurse educators receive mentoring from more experienced lecturers?

Yes ( )

No ( )

APPENDIX 2: STUDENT SURVEY QUESTIONNAIRE

Section A: Demographic Information

Please fill in the blanks and place an (√) next to the correct response

1. Please tick your year of study.

First year ( )

2nd year ( )

3rd year ( )

4th year ( )

2. Tick your gender

a) Female ( )

b) Male ( )

3. Please tick your age range

a) Less than 18 years ( )

b) 18-24 years ( )

c) 25-34 years ( )

d) 45-54 years ( )

Section B: Teaching strategies by nurse educators

4. Please rate the following statements regarding your instructor and his/her teaching strategies by placing a (√) next to the most appropriate response.

Teaching strategy	Frequency of use		
	Always	Sometimes	Never
Lecture			
Group discussion			
Role play			
Case based			
Simulation			
Story ttelling			
PPBL			
Web based teaching			
Humor			
Demonstration			
Concept mapping			
Games			
Debate			
Others specify			

5. Select the teaching strategy used or currently being used by the Nurse educator to teach the current subject. (You may choose more than one strategy

Teaching strategy used for introductory block subjects

Teaching strategy	Frequency of use	anatomy/physiology	community health nursing	midwifery	fundamentals of nursing	behavioural sciences	communication	Microbiology
Lecture	Always							
	Sometimes							
	Never							
Group Discussion	Always							
	Sometimes							
	Never							
Role Play	Always							
	Sometimes							
	Never							
CaseBasedTeaching	Always							
	Sometimes							
	Never							
Simulation	Always							
	Sometimes							
	Never							
Debate	Always							
	Sometimes							
	Never							
Story Telling	Always							
	Sometimes							
	Never							
Concept Mapping	Always							
	Sometimes							
	Never							
Pbl	Aways							
	Sometimes							
	Never							
Web based teaching	Always							
	Never							
Humor	Always							
	Sometimes							
	Never							
Demonstration	Always							
	Sometimes							
	Never							
Games	Always							
	Sometimes							
	Never							
Others								

Teaching strategies used for block 1 subjects

	FREQUENCY OF USE	Pharmacology	Medical surgical nursing 1	Family planning	Health promotion	Vaccine &cold chain	Gender
Lecture	Always						
	Sometime						
	Never						
Groupdiscussion	Always						
	Sometime						
	Never						
Role play	Always						
	Sometimes						
	Never						
Case based teaching	Always						
	Sometimes						
	Never						
Simulation	Always						
	Sometimes						
	Never						
Debate	Always						
	Sometimes						
	Never						
Story telling	Always						
	Sometimes						
	Never						
Concept	Always						
	Sometimes						
	Never						
PBL	Always						
	Sometimes						
	Never						
WEB	Always						
	Sometimes						
	Never						
Humor	Always						
	Sometimes						
	Never						
demonstration	Always						
	Sometimes						
	Never						
Games	Always						
	Sometime						
	Never						

Teaching strategies used for block 2 subjects

TEACHING STRATEGY	FREQUENCY OF USE	introduction to research	medical surgical nursing	gynea/sti	paediatrics	primary health care
Lecture	Always					
	Sometimes					
	Never					
Group Discussion	Always					
	Sometimes					
	Never					
Role Play	Always					
	Sometimes					
	Never					
CaseBasedTeaching	Always					
	Sometimes					
	Never					
Simulation	Always					
	Sometimes					
	Never					
Debate	Always					
	Sometimes					
	Never					
Story Telling	Always					
	Sometimes					
	Never`					
ConceptMapping	Always					
	Sometimes					
	Never					
PBL	Always					
	Sometimes					
	Never					
WebBasedTeaching	Always					
	Sometimes					
	Never					
Humor	Always					
	Sometimes					
	Never					
Games	Always					
	Sometimes					
	Never					
Demonstration	Always					
	Sometimes					
	Never					

Teaching strategies used for block 3 subjects

TEACHING STRATEGY	Frequency of use	leadership &management	psychiatry &mental health	teaching methodology	medical surgical nursing 3	communicable diseses	special needs
Lecture	always						
	sometime						
	never						
Group Discussion	always						
	sometimes						
	never						
Role Play	always						
	sometimes						
	never						
Case based teaching	always						
	sometimes						
	never						
Simulation	always						
	sometimes						
	never						
Debate	always						
	sometimes						
	never						
Story Telling	always						
	sometimes						
	never						
Concept Mapping	always						
	sometimes						
	never						
Pbl	always						
	sometimes						
	never						
Humor	always						
	sometimes						
	never						
Demonstration	always						
	sometimes						
	never						
Games	always						
	sometimes						
	never						
Web Bas Teaching	always						
	sometimes						
	never						

APPENDIX 3: INTRODUCTIONLETTER

The Principal

KMTC VIHIGA

P.O BOX 1111-MARAGOLI

Re: Permission to conduct a research study within KMTC Vihiga

My name is Mrs. Mary Amtamwa currently deployed at KMTC Vihiga as Head of Section for Community Health Nursing would like to apply for permission for the above.

I am registered at The Kenya Methodist University pursuing a course of Masters of Science in Nursing Education. The date of registration was on 5th January 2015.My study topic is assessment of classroom teaching strategies used at vihiga KMTC.

The proposed date for dissemination of questionnaires is February2017. The questionnaires will be delivered to the campus and fetched from the campus and the cost will be borne by me.

Participants will include all lecturers involved in theoretical teaching in the campus as well as students who will be in class at the time of data collection. All questionnaires will be numbered to maintain confidentiality. My research is motivated by scientific evidence that there is a need for nurse educators globally to change their teaching strategies. This study will be of great value to educators working in this campus. The study will assist in improving the quality of nurse practitioner, thereby improving the quality of patient care rendered to the population of Vihiga and the country as a whole.

My research supervisors are: Prof.Ruth Gatere (PhD)
Dr. Agnes Mutinda (PhD)

Your kind consideration would highly be appreciated.

Yours faithfully

Mary Amtamwa

Permission to carry out Pilot Study

The Principal

Maseno School of nursing

P.O BOX 30-50313

Maseno

Re: Permission to conduct a research study within Maseno School of nursing.

My name is Mrs. Mary Amtamwa currently deployed at KMTC Vihiga as Head of Section for Community Health Nursing would like to apply for permission for the above.

I am registered at The Kenya Methodist University pursuing a course of Masters of Science in Nursing Education. The date of registration was on 5th January 2015.My study topic is assessment of classroom teaching strategies used at vihiga KMTC.

The proposed date for dissemination of questionnaires is December 2017. The questionnaires will be delivered to the campus and fetched from the campus and the cost will be borne by me.

Participants will include five lecturers involved in theoretical teaching in the campus as well as ten students who will be in class at the time of data collection. All questionnaires will be numbered to maintain confidentiality. My research is motivated by scientific evidence that there is a need for nurse educators globally to use innovative teaching strategies. This study will help me to correct any mistakes identified in the questionnaire. The study will assist in improving the quality of nurse educators, thereby improving the quality of patient care rendered to the country as a whole.

My research supervisors are: Prof.RuthGatere (PhD)

Dr. Agnes Mutinda (PhD)

Your kind consideration would highly be appreciated.

Yours faithfully

Mary Amtamwa

LETTER OF INFORMATION

Dear participants,

Warm greetings to you. You are invited to participate in my research study. Details of the study are contained below.

Title of the research study: Assessment of classroom teaching strategies used by nurse educators in Vihiga Kenya Medical Training College

Principal investigator/ researcher: Mrs. Mary Amtamwa

Supervisors: Prof .Ruth Gatere (PhD)

Dr. Agnes Mutinda (PhD)

Purpose of the study

The purpose of the study is to assess the teaching strategies currently being used by nurse educators at Vihiga KMTC

Outline of the procedure

Thank you for participating in this study:

- You have been invited to be a participant as you are a specialist in nursing education and your expertise and accurate input will be of great value to this study.
- You are kindly requested to complete a survey questionnaire which will take you twenty minutes (20)
- The questionnaire has closed and open ended questions.
- For the closed ended questions, please tick in the box provided the current choice
- For the open ended questions, you can give your opinion. There is no right or wrong answer.
- Please you may complete the questionnaire independently without your colleagues help.
- The questionnaire will be collected one week after.

Risk of discomfort to the participant

There will be no risk or discomforts

The participant is however expected to dedicate twenty minutes of her/his time to complete the questionnaire

Benefits

The study will assist in the identification of the current teaching strategies being used by the nurse educators.

To make recommendation for the introduction of more innovative teaching strategies that would assist nurse educators to adopt.

To make recommendation for in-service training for nurse educators

Where possible to develop guidelines for the use of innovative teaching strategies

Reasons why the participants may be withdrawn from the study

The researcher foresees no reason for withdrawing the participants.

Participation is voluntary, so the participants may withdraw at any point that he/she wishes.

Remuneration

Cost of the study; all costs of the research will be incurred by the researcher.

There is no cost that the participants will have to endure.

Confidentiality

This will be maintained since there will be no use of individual nurse educators names on the questionnaires.

All data will be kept in a secure place; no unauthorized persons will have access to this information.

Research related injuries

This is a non-experimental study so there will be no physical harm to the participants.

Confidentiality will be maintained and psychological harm will be prevented.

I will greatly appreciate if you participate in the study.

Faculty consent form

I have read the information in this form. I hereby, give my consent to be included as a participant in "A study to assess the teaching strategies used at KMTC vihiga.

1. I have read and understood this consent form and the information provided to me.

2. I have been explained to about the nature of the study.

3. I understand that information gained during the research study may be published in the form of a report or a journal article; my personal results will not be identified in any way in these publications.

4. I understand that I may withdraw from the research project at any stage.

(Signature of the Participant)

Researcher to complete: I, Mary Amtamwa, certify that I have explained the nature and purposes of the research study to …….. and consider that He/she understands what is involved.

M.Sc. Nursing Final Year Student Kenya Methodist University

Student Consent Form

You are invited to participate in a research study that will assess the teaching strategies used in the classroom.

Participants recruited for this study are students who are in class.

Participants must be 18 years or older. The study is being conducted by Mary Amtamwa

MSN student at Kenya Methodist University. Your participation in the study

is voluntary. Please read the information below and feel free to ask questions about anything you do not understand before deciding whether or not to participate. Your questions or concerns about this study may be answered by Mary Amtamwa (mobile number 0723 843 214)

Purpose of the Study

The purpose of this study is to assess the teaching strategies used in class by the nurse educators.

Procedures

You have been asked to participate in this study because you are a student of KMTC and in class at the time of study.

As a participant, you will be asked to complete a short questionnaire about your demographic information, perception of teaching strategies by nurse educators and your perception of the strategies on your learning outcomes.

Potential Risks and Discomforts

Part of your time will be taken to answer the questionnaire

Potential Benefits to Subjects and/or Society

Study results may provide a teaching technique to enhance student attention and aid in

Information retention of course materials.

Payment for Participation

You will not receive any payment or other compensation for participation in this study. There is also no cost for you to participate.

Confidentiality

All study data and information will be stored in a secure database. No individual identity

Will be shared. However, the study information may be shared in aggregate form in nursing Publications or presentations.

Participation and Withdrawal

You can choose whether or not to be in this study. If you volunteer to be in this study,

you may withdraw at any time without consequences of any kind. There is no penalty if you

Withdraw from the study. There are no effects on your course grade if you choose to participate or not participate in this study.

Rights of Research Subjects

If you have any questions about your rights as a research subject, you may contact the

Kenya Methodist University Institutional Review Board (IRB). You will be given the opportunity to discuss any questions about your rights as a research subject with a member of the IRB. The IRB has reviewed and approved this study.

I understand the procedures described above. My questions have been answered to my

Satisfaction and I agree to participate in this study. I have been given a copy of this form.

Signature of Student Participant ……Date __

Institutional Research and Ethics committee

Vihiga Kenya medical training College

Po box 1111 Maragoli

10-11-2016

Ref: Permission to conduct a research study within KMTC- Vihiga campus

My name is Mrs. Mary Obaga Amtamwa, currently working at KMTC vihiga as head of section of community health nursing would like to apply for permission for the above.

I am registered at Kenya Methodist University pursuing a course in Masters of Science in Nursing Education. The date of Registration was on5th January 2015.My research topic is Assessment of classroom teaching strategies at vihiga Kenya Medical Training College.

The questionnaires will be delivered to the campus and fetched from the campuses. The cost will be borne by me.

Participants will include all lecturers involved in the classroom teaching in the campus and Students who will be in class at the time of the study.

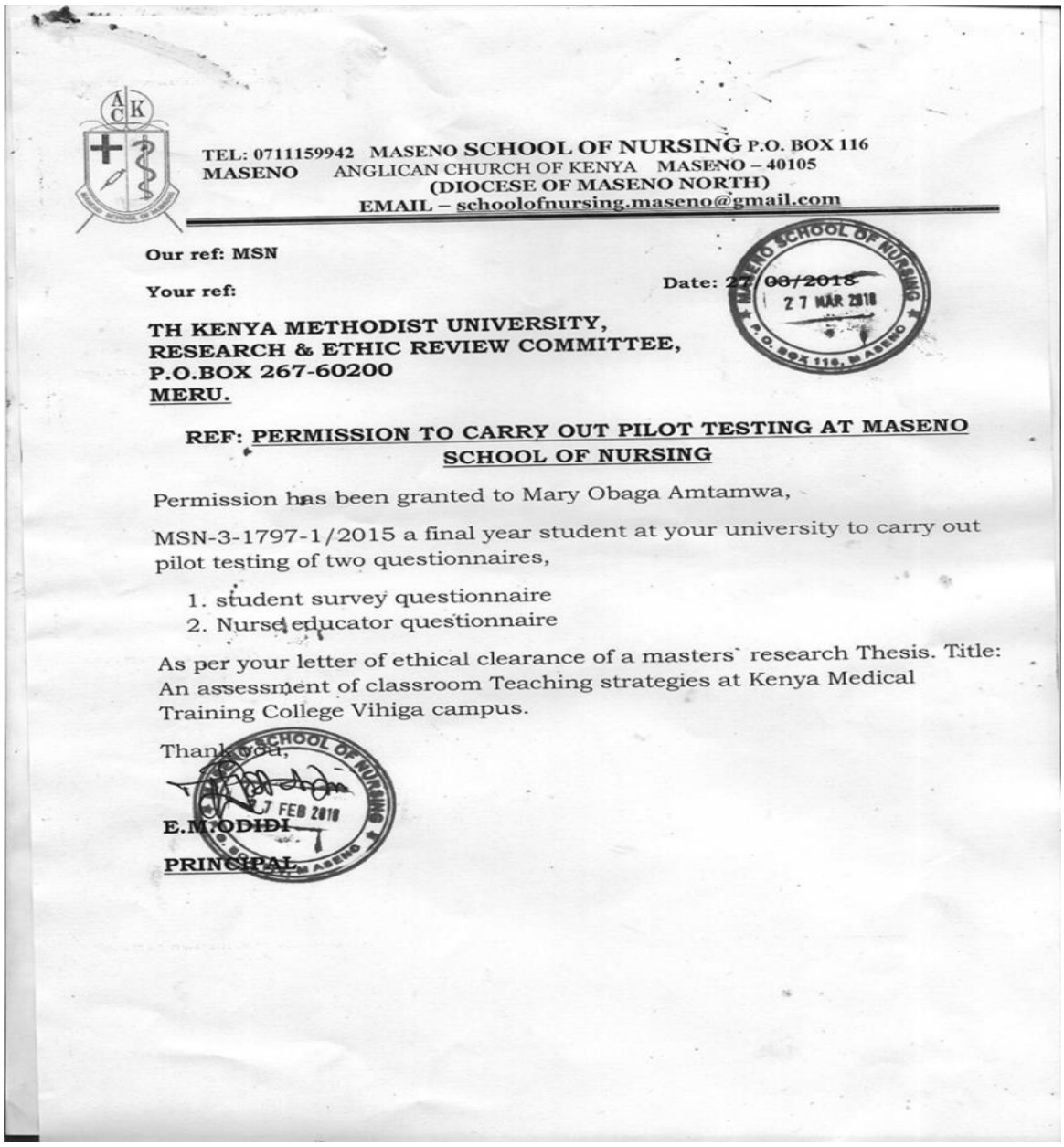
Your kind consideration will be highly appreciated.

Yours faithfully,

Mrs. Mary Amtamwa

0723843214.

APPENDIX 4: PERMISSION LETTER TO CARRY OUT PILOT TESTING



TEL: 0711159942 MASENO SCHOOL OF NURSING P.O. BOX 116
MASENO ANGLICAN CHURCH OF KENYA MASENO – 40105
(DIOCESE OF MASENO NORTH)
EMAIL – schoolofnursing.maseno@gmail.com

Our ref: MSN

Your ref:

Date: 27/08/2018

MASENO SCHOOL OF NURSING
27 MAR 2018
P.O. BOX 116, MASENO

TH KENYA METHODIST UNIVERSITY,
RESEARCH & ETHIC REVIEW COMMITTEE,
P.O.BOX 267-60200
MERU.

REF: PERMISSION TO CARRY OUT PILOT TESTING AT MASENO SCHOOL OF NURSING

Permission has been granted to Mary Obaga Amtamwa,

MSN-3-1797-1/2015 a final year student at your university to carry out pilot testing of two questionnaires,

1. student survey questionnaire
2. Nurse educator questionnaire

As per your letter of ethical clearance of a masters` research Thesis. Title: An assessment of classroom Teaching strategies at Kenya Medical Training College Vihiga campus.

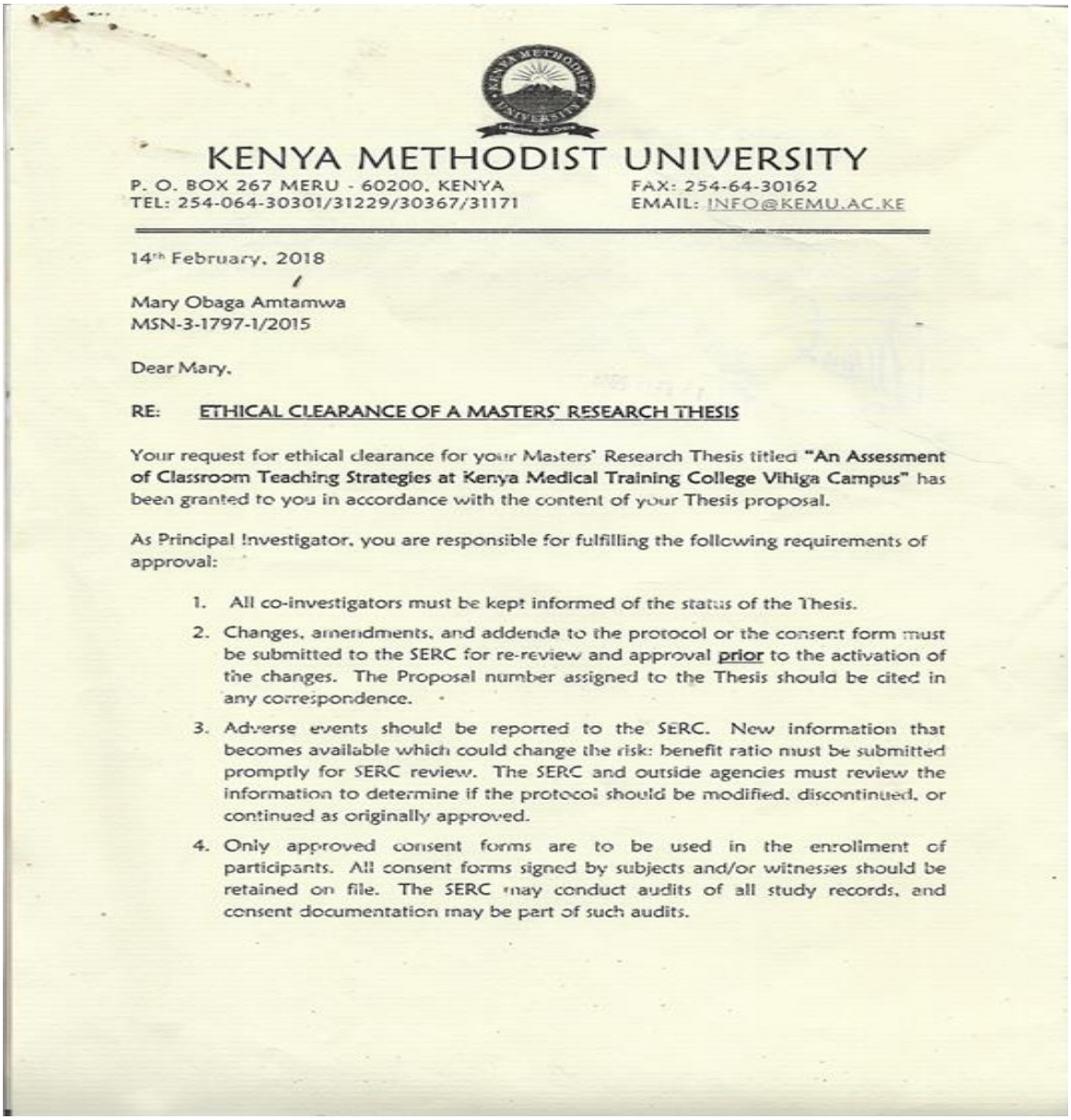
Thank you,

MASENO SCHOOL OF NURSING
27 FEB 2018
P.O. BOX 116, MASENO

E.M.ODIDI

PRINCIPAL

APPENDIX 5:KENYA METHODIST UNIVERSITY APPROVAL



KENYA METHODIST UNIVERSITY

P. O. BOX 267 MERU - 60200, KENYA
TEL: 254-064-30301/31229/30367/31171
FAX: 254-64-30162
EMAIL: INFO@KEMU.AC.KE

14th February, 2018

Mary Obaga Amtamwa
MSN-3-1797-1/2015

Dear Mary,

RE: ETHICAL CLEARANCE OF A MASTERS' RESEARCH THESIS

Your request for ethical clearance for your Masters' Research Thesis titled **"An Assessment of Classroom Teaching Strategies at Kenya Medical Training College Vihiga Campus"** has been granted to you in accordance with the content of your Thesis proposal.

As Principal Investigator, you are responsible for fulfilling the following requirements of approval:

1. All co-investigators must be kept informed of the status of the Thesis.
2. Changes, amendments, and addenda to the protocol or the consent form must be submitted to the SERC for re-review and approval **prior** to the activation of the changes. The Proposal number assigned to the Thesis should be cited in any correspondence.
3. Adverse events should be reported to the SERC. New information that becomes available which could change the risk: benefit ratio must be submitted promptly for SERC review. The SERC and outside agencies must review the information to determine if the protocol should be modified, discontinued, or continued as originally approved.
4. Only approved consent forms are to be used in the enrollment of participants. All consent forms signed by subjects and/or witnesses should be retained on file. The SERC may conduct audits of all study records, and consent documentation may be part of such audits.

5. SERC regulations require review of an approved study not less than once per 12-month period. **Therefore, a continuing review application must be submitted to the SERC in order to continue the study beyond the approved period.** Failure to submit a continuing review application in a timely fashion will result in termination of the study, at which point new participants may not be enrolled and currently enrolled participants must be taken off the study.

Please note that any substantial changes on the scope of your research will require an approval.

Thank You,

KENYA METHODIST UNIVERSITY
DEAN
14 FEB 2018
STUDIES
P.O. Box 267-60200, MERU

Dr. Wamachi
Chair, SERC
Cc: Dean, RD&PGS

APPENDIX 6: KENYA MEDICAL TRAINING COLLEGE APPROVAL

Telegrams "MEDTRAIN" VIHIGA
E-MAIL: vihigamtc@yahoo.com
Please address all Correspondence to:
The Principal
When replying please quote:

Ref: KMTC/VIHIGA/ADM/VOL.II/56

Kenya Medical Training College
P.O. Box 1111 – 50300
VIHIGA.

7th March, 2018

Mary Amtamwa
Kenya Methodist University,
Department of Nursing
P.O. Box
MERU

REF: GRANT OF PERMISSION TO CONDUCT A RESEARCH STUDY WITHIN KMTC VIHIGA

I refer to your introduction letter for research from the above university and your request for permission to carry out research study within KMTC Vihiga dated 2nd February, 2018.

The above request is granted on condition that research ethical issues are professionally taken care of to avoid exposing the confidential data released to you by KMTC Vihiga community.

Thank you.

VIHIGA MEDICAL TRAINING COLLEGE
PRINCIPAL
07 MAR 2018
P.O. Box 1111-50300, MARAGOLI

INDANGASI FLICHINGO
PRINCIPAL,
VIHIGA MTC

APPENDIX 7 NACOSTI Authorization

NATIONAL COMMISSION FOR SCIENCE TECHNOLOGY AND INNOVATION

Telephone +254-20-2213471
22413933105571.2219420
Fax +254.20-318245.318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

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

Ref No.NACOSTI/P/18/45342/22861 Date: **5th March , 2018**

Mary Obaga Amtamwa
Kenya Methodist University
P.O. Box 267 - 60200
MERU

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"an assessment of classroom teaching strategies used at KMTC Vihiga Campus"*** I am pleased to inform you that you have been authorized to undertake research in **Vihiga County** for the period ending **5thMarch, 2019**.

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

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

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

Copy to:

The County Commissioner
Vihiga County.

The County Director of Education
Vihiga County.

APPENDIX 8 : MAP OF VIHIGA COUNTY