

**RELATIONSHIP BETWEEN TEACHING METHODS AND
UNDERSTANDING OF CONTENT: A CASE OF UNIVERSITIES
IN ELDORET MUNICIPALITY**

BY

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DECLARATION

DECLARATION BY THE CANDIDATE

This thesis is my original work and has not been presented for a degree award in any other educational institution.

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DEDICATION

All my dedications are to my beloved parents Mr. Joel Rotich and Mrs. Roselyne Rotich, my sisters Vicky Chesang, Dorothy Chepchirchir, and Mercy Chepkurui and my beloved brother Patrick Kipng'eno, my beloved Valentine and my beloved son Brevin and the whole family of Philip Chumo.

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ABSTRACT

Teaching methods in growing world universities are often out-of-date as a result, the significance of using the most useful methods of teaching and their relation has become an area of major focus in the recent years. The purpose of this study was to investigate the relationship between teaching methods used in universities and understanding of content in Universities. The study was based on Social Constructivism theory which views each learner as a unique individual with unique needs and backgrounds and therefore requiring different teaching methods to understand the content. The study was carried out in both public and private universities in Eldoret Municipality. Four out of 11 universities were purposively selected for the study, from which 384 students were randomly selected. The study adopted a descriptive survey research design. Data was collected through the use of the questionnaire from the students and analysed using descriptive statistics. The results of the study show that lecture, assignment, discussion and individual presentations were the mostly used teaching methods by lecturers. There was no difference in teaching methods used in different universities. There was relationship between teaching methods used and understanding of content in that the following methods enhanced understanding of content namely lecture, individual presentation, assignment, discussion, project, e-learning, demonstration and problem solving method. The study recommends that lecturers should use several methods of teaching in addition to the commonly used methods by lecturers: Role play, brain storming, heuristic methods, seminar and workshop conferences methods should be used in moderation to the one used commonly by lecturers. The results of study would assist the educators in enhancing the current teaching methods so as to make understanding of content more efficient and easy and to make more use of those methods that were not commonly used to be used frequently.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter gives an overview of the study. It examines the background information of the study, the statement of the problem, objectives of the study, hypothesis of the study and the purpose of the study. It also highlights the significance of the study, justifications, assumptions, and limitations of the study, the scope of the study, and the operational definition of terms.

1.2 Background of the Study

The most established appraisal for measuring good teaching is the amount of student learning that occurs that is the amount of content understood by the student. There are consistently high correlations between students' ratings of the amount learned in the course and their overall ratings of the teacher and the course. Studies by Cohen (1981) and Theall Franklin (2001) revealed that, those who understand more gave their teachers higher ratings. This same criterion was also put forth by Angelo (1983), when he said; teaching in the absence of learning is just talking (Doyle, 2004). Therefore, a teacher's effectiveness is again about student learning.

In the indigenous education, parents played a very important role in the education of children. Mothers educated all children in the early years, but later fathers took over the education of the male children while the mother remained in control of the females. Although there was overlap of the roles of parents in tasks of training children before the age of six, the general

rule was that of establishing sexual dichotomy in most work activities (Sifuna and Otiende, 1994, p.135). In the indigenous education parents acted as teachers in educating learners to acquire roles (understanding the culture of the society) using different teaching methods.

Traditional educators used various methods of teaching to attain the educational or learning purpose desired. These methods can be broadly divided into informal and formal. The informal methods of teaching, include learning through play, oral literature, dance, folk-songs and proverbs. Proverbs were used to convey precise moral lessons, warning and advice to learners. These methods had a greater impact on the mind of the learner than ordinary words. Informal methods of teaching also involved subjecting learners to work activities. Learners learned by doing and working hand-in-hand with adults. Formal methods of teaching involved theoretical and practical learning of skills. Learning through apprenticeship, for example, was formal and direct (Kibera and Kimokoti, 2007).

The following methods of teaching were used to teach in various institutions of learning as cited in Too and Mukwa (2002). These methods of teaching are lecture method, discussion method, demonstration method, problem solving, assignment method, supervised study method, simulation and games method, heuristic methods, and project method.

The Lecture method was a teaching and learning procedure in which the lecturer seeks to create interest, to influence and stimulate his/her students, and to get them involved in learning by the use of a verbal message either formally or informally.

Discussion method is a talk or writing in which pros and cons or various aspects of a subject are considered. It involves a planned meeting of a group with a specific purpose. The group seeks to put together their knowledge, ideas and opinions about a certain subject in a co-operative endeavour to learn from each other. The subject is introduced or the question is posed by the teacher or the discussion leader and the business at hand is then thrown for discussion and the leader invites speakers from the group to make their contributions (Ngaroga, 2006). Discussion can either be formal or informal. An informal discussion is that which involves the free verbal interchange of the participants' ideas and views without being governed by a pre-determined set of rules. The teacher is just available as a guide, but not as a leader. A formal discussion is one, which proceeds in a pre-determined manner; according to prescribed procedures.

Problem solving method in this method, the minds of the learners are trained/ sharpened by confronting them with real problems and giving them the opportunity and freedom to solve the problems. The major purpose of the problem is to afford training to the learners in thinking when solving the problems mentally (Too and Mukwa, 2002).

The assignment method is more appropriate for teaching different subjects to learners in the higher classes. The syllabus is divided into significant units or topics; each of which is in turn subdivided into learning assignments for learners. The learners are usually required to prepare the assignments in writing. Written assignments help in organization of knowledges, assimilation of facts and better preparation for examinations.

Supervised study method was another method of teaching for promoting optimum learning that is understanding of content. The main principle is the self-effort of the child, carried on independently in learning new things under the supervision and guidance of the teacher. The learners are busy at work assigned to them. When they meet they ask the lecturer for direction and assistance. The lecturer, when not called upon, walks quietly up and down the classroom or remains at his or her desk watching the learners do their work; continually on the alert for any wrong procedure that the learners may follow. He or she is always ready to direct or assist them. The main aim of the method is to help the students acquire good study techniques and be efficient learners (Too and Mukwa, 2002).

According to Too and Mukwa (2002), we have simulation and games method; simulation can best be defined as role-playing in which the process of teaching is displayed artificially and an effort is made to practice some important skills of communication through this technique. The lecturer and the students simulate the particular role of a person or actual life-situation. The whole programme, thus, becomes training in role perception and role-playing. The simulated techniques comprising role-playing, socio-drama, gaming etc are based on the following assumptions: there are certain patterns of behaviour which are crucial to effective classroom instruction, these patterns of behaviour can be described, practiced and their appropriate use in teaching can be discussed and understood.

You can use simulation as a technique to teach your students to acquire and practice various types of skills. Imagine you are handling a class that requires knowledge and skills for flying an aeroplane in a civil aviation training school. To help your students acquire the needed

skills, you will require a model of an aeroplane. This model will be used to give the trainee pilot practice in using the navigational aids and other controls needed to fly an aeroplane.

Team teaching is a type of instructional organization involving teaching personnel and the students assigned to them. Two or more teachers are given responsibility, working together for all or a significant part of the instruction of the same group of students. Another method is demonstration method is practical display of a process which involves the showing of a process. It is a practical form of learning through imitation whereby the teacher gives several demonstrations of the complete operation with explanation; that is he/she gives the learners a clear picture of what they should be able to do at the end of the teaching session (Ngaroga, 2006).

The heuristic methods are where the learner is supposed to find the answer to his or her problems on his or her own without any aid. The purpose of this method is to utilize the instinct of curiosity in learner and prompt them to adopt a fact-finding approach to all aspects of learning. A spirit of enquiry and adventure is awakened through self-observation and experimentation. The students are trained to discover facts, principles and laws, to systematize the knowledge learnt and to arrive at generalizations, all through self-efforts. Self-observation and experimentation are the procedures students use, students are guided to observe facts correctly, to systematize the knowledge learnt and to arrive at generalizations all through their own efforts. The teacher's role on the other hand is quite challenging. They must have a lot of knowledge and information in store, hence the phrase "store of knowledge and information", and yet give minimum possible help to the students. He should be a good guide, giving that amount of guidance rightly needed by the students. He must be adept in the

art of questioning. He should be sympathetic and courteous to be able to put the learner at ease (Too and Mukwa, 2002).

The project method is a co-operative study of a real life situation by a class or group under the guidance of a teacher, for instance watering our area, transport system in our village or trade in our village. The project method stems from the work of John Dewey, an education reformer, who saw that with urbanization students were losing a great deal of practical knowledge and a sense of co-operation that existed in the rural communities. He thought it was necessary for schools to bridge the gap.

However, there are several other methods that have been innovated with the advent of the information technology which most universities are adopting and moving away from the traditional methods of teaching. These methods include adoption of Information and Communication Technology (ICT) as proposed by the ministry of education such as use of e-learning, email and internet and use of computers to teach such as projectors (Ministry of Education, 2006).

The Ministry, sector partners and stakeholders have developed this National Information and Communication Technology Strategy for Education and Training aimed at guiding the sector in the adoption of Information and Communication Technologies across all levels of education and training. The strategy has been developed taking into consideration the policy environment captured in the National Information and Communication Technology Policy of 2006 and sector policy in Sessional Paper No. 1 of 2005. The strategy has also been developed in line with the E-Government Strategy of 2004 and the wider Economic Recovery

Strategy Paper for Wealth and Employment Creation (ERSWEC). Over the past years, stakeholders have been submitting their comments on the implementation matrix and costing of the various items envisaged in the strategy. Draft strategy was subjected to stakeholder scrutiny and validation in workshops held on 17th January 2006 and 6th February 2006. The strategy identifies the following strategic pillars for sector Information and Communication Technology implementation: Establishment of a policy framework, Digital equipment Connectivity and network infrastructure, Technical support, Harnessing emerging technologies, Digital content development, Integration of Information and Communication Technologies in education, Training (capacity building including professional development), Research and development, Partnerships and resource mobilization , Legal and regulatory framework, and Monitoring and evaluation (Ministry of Education, 2006).

This strategy fits into the Kenya Education Sector Support Programme (KESSP) which is the sector investment programme aimed at achieving Education for All and Millennium Development Goals. The strategy has adopted the same time-frame as Kenya Education Sector Support Programme (KESSP), for ease of monitoring and review in line with changing priorities in the sector. Information and Communication Technology is a cross-cutting issue and requires heavy investments ownership and commitment by all. Only then can the infrastructure (digital equipment and connectivity), Training and Digital Content attract adequate level of funding (Ministry of Education, 2006). Having looked at the several teaching methods used by lecturers to teach, this study sought to investigate the relationship between teaching methods and understanding of the content in Universities within Eldoret Municipality.

1.3 Statement of the Problem

The importance of using effective instructional methods and their effects has become an area of major focus in recent years. According to a World Bank report (2000), teaching methods in developing world universities are often outdated. Thus, educational transformation and reform have become an urgent issue across the globe to meet the demands of new educational objectives in the knowledge-based economy (Barone & Hagner, 2001). Also in the past years, developing countries have witnessed a rapid expansion of higher education (World Bank, 2000). Hence, universities in Kenya are experiencing significant growth in student enrollment and expansion. Hence, according to one national newspaper the result has been there are many graduates who are produced who do not meet the demands of labour market (The Standard July 5, 2013, National News Paper p.21). A survey on the quality of the labour market has found out that there are a high number of graduates with arts and social science degrees who do not meet standards of the labour market in Kenya (The Standard, April 19, 2013, P.42). This was supported by statement by the Education Cabinet Minister in the Daily Nation on Friday June 21, 2013 which noted that local universities and colleges are producing semi-skilled professionals. This human resource is expected to transform Kenya through Vision 2030 into a middle-income economy by improving infrastructure and developing the manufacturing sector.

In addition, the Government of Kenya through the Sessional Paper No. 1 of 2005 promotes the use of Information and Communication Technology in teaching and learning which is supposed to enhance retention of material learned (Ministry of Education, 2006). This has been actualized by the introduction of computers in educational institutions across the

country, thereby making education accessible through Information and Communication Technology.

With the above proceedings, questions are raised on how well the universities in Kenya are preparing graduates for the labour market and whether with the recommendation and introduction of Information and Communication Technology in Kenyan education, students are understanding content better than before. These questions are in the quest to find out if the problem is the teaching methods used in the universities. Therefore, issues arise on the kinds of teaching methods used and their relation on understanding content with an aim of preparing students well for the labour market.

1.4 Purpose of the Study

The purposes of this study was to analyze the various methods of teaching used in Universities within Eldoret Municipality and the relation of the teaching methods on understanding of content.

1.5 Objectives of the Study

- i. To find out the various teaching methods used in different Universities .
- ii. To find out the difference in teaching methods used by lecturers in public and private Universities within Eldoret Municipality.
- iii. To find out the relationship between teaching methods used and the understanding of the content in Universities within in Eldoret Munisipality.

1.6 Hypothesis

The study tested the following hypothesis:

H₀₁: There is no relationship between teaching methods used and the understanding of the content in Universities within Eldoret Municipality.

1.7 Significance of the study

This study was designed to analyse the teaching methods used in Universities within Eldoret Municipality and their relation on understanding of the content. The findings from the study would generate new knowledge on the relationship between teaching methods and understanding of the content in Universities in Kenya. The study findings would be useful to the students and the teachers of all levels to get in-depth understanding of the relationship between teaching methods and understanding content. The knowledge and detailed awareness about the concept of teaching methods and understanding content would help them to accelerate the teaching/learning process in the classroom. The students would be in a better position to solve their difficulties and hurdles in their way of learning when the different teaching methods are used. The teachers would be able to provide suitable environment for the success of the teaching/learning process and adopt the teaching methods that accelerate the learning of the students. The text-book writer would get insight to write the textbooks that best fulfills the teaching/learning needs of the students.

1.8 Scope of the Study

The study sought to investigate teaching methods used in Universities within Eldoret Municipality and their relation on understanding the content. The study targeted University

students within Eldoret municipality. The research was conducted among undergraduate students because they could be reached easily. The study was limited to the relationship between teaching methods used in Universities and their relation on understanding the content. Also the study was limited to the School of Education and Business since they are common in both public and private Universities. There was no manipulation of variables by the researcher.

1.9 Limitations of the Study

The study was conducted in Universities within Eldoret Municipality and therefore, the results may not be generalised to all Universities in the country since not all universities have the same faculties. Also the teaching and learning resources may not be the same in different universities, it requires more research of the same in other towns for purposes of comparison. However, the results may be generalized to all Universities within Eldoret Municipality.

1.10 Assumptions of the Study

The study was based on the following assumptions:

The qualification of lecturers was the same, the size of lecture rooms were the same, had the same number of lecturers in the faculty of Education and Business also the teaching and learning materials such as books for reference and computers were fairly adequate to cater for the learning needs.

Students have the same cognitive ability at each level of sample population. That is all students were assumed to be able to: recall, comprehend, apply, analyse, synthesized and evaluate any concept taught.

The sampled Universities had similar facilities to avoid variations and classifications. This was ensured by using those universities which are well established and approved by the Commission of Higher Education.

1.11 Theoretical Framework

The theoretical framework upon which this study was based was Social Constructivism Theory which views each learner as a unique individual with unique needs and backgrounds. The learner was also seen as complex and multidimensional. Social constructivism not only acknowledges the uniqueness and complexity of the learner, but actually encourages, utilizes and rewards it as an integral part of the learning process in this case the understanding of the content (Wertsch, 1997). Furthermore, it is argued that the responsibility of learning should reside increasingly with the learner (Glaserfeld, 1989). Social constructivism thus emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role. This was achieved through the use of different teaching methods which this study was seeking to investigate.

Von Glaserfeld (1989) emphasized that learners' construct their own understanding and that they do not simply mirror and reflect what they read. Learners look for meaning and will try

to find regularity and order in the events of the world even in the absence of full or complete information. According to the social constructivist approach, instructors have to adapt to the role of facilitators and not teachers (Bauersfeld, 1995). Whereas a teacher gives a didactic lecture that covers the subject matter, a facilitator helps the learner to get to his or her own understanding of the content. In the former scenario the learner plays a passive role while in the latter the learner plays an active role in the learning process. The emphasis thus turns away from the instructor and the content, and towards the learner (Gamoran, Secada, & Marrett, 1998). This dramatic change of role implies that a facilitator needs to display a totally different set of skills than a teacher (Brownstein, 2001). A teacher tells, a facilitator asks; a teacher lectures from the front, a facilitator supports from the back; a teacher gives answers according to a set curriculum, a facilitator provides guidelines and creates the environment for the learner to arrive at his or her own conclusions; a teacher mostly gives a monologue, a facilitator is in continuous dialogue with the learners (Rhodes and Bellamy, 1999). A facilitator should also be able to adapt the learning experience 'in mid-air' by taking the initiative to steer the learning experience to where the learners want to create value. All these are achieved by the choice of teaching methods used by the lecturer which researcher was seeking to investigate.

Aspects of constructivism can be found in self-directed learning, transformational learning, experiential learning, situated cognition, and reflective practice and religious practice as shown in social constructivism model. The teaching method used should be able to bring out all the objectives shown in the model of constructivism. Example, the teaching method used should create awareness of what is taught, bring out multiple perspectives, be learner centred (learner autonomy) and collaborative learning. Other values that teaching bring out clearly

according to constructivism theory were big concepts, real and complex situations, metaphors, critical thinking, process evaluation, life long learning, technology, social context, action oriented approach and cognitivism.

1.12 Operational Definition of Terms

Teaching Methods- These are types of principles and methods used for instruction. There are many types of teaching methods, depending on what information or skill the teacher tries to convey. Class participation, demonstration, recitation, and memorization are some of the teaching methods used. Student success in the classroom is largely based on effective teaching methods. In this study teaching methods are those ways which lecturers use to deliver the content to students in faculties of Education and Business. These methods were also defined as ways through which learner was able to change behaviour once they acquire skills, knowledge and values from the lecture.

Understanding of content – is the ability of the learner to grasp the information and put in real life situations. This is the terminal behaviour (outcome of instruction) of the learner. It is the component of learning objective that describes the behaviour of a student after instruction using the various teaching methods. This was shown when a student was able to perform certain task such as answering questions in exams correctly, drawing a picture or typing a word and when a student is able to focus on statements specifying the acquisition of particular attitudes, values or feelings like showing increased interest or motivation in a subject, or lecture, or to demonstrate some change in attitude or values.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews related studies, teaching methods, effects of teaching methods, students' perception towards teaching methods, teaching methods in university, teaching in university, students' understanding and the conclusion of these reviews.

2.2 Teaching Methods

It should be borne in mind that all decisions regarding teaching procedures in different courses should be governed by objectives of teaching these courses. For the achievement of comprehensive objectives of teaching different course, methods are needed to expose the learner to knowledge and experiences helpful in the development of understanding, critical thinking, practical skills and interest to be developed through a particular course. Each technique would be defined and ways of using them in teaching fully explained (Mukwa and Too, 2002). There are several teaching methods, this includes dramatisation, demonstration, discussion method, questioning, deductive method, inductive method, discovery method, educational visits, project method, lecture method, singing/songs, storytelling, team teaching, supervised teaching, and assignment method. There are also new technologies for teaching and learning; this include e-learning.

2.2.1 Demonstration Method

Demonstration is a practical display or exhibition of a process which involves the showing of a process or the action involved in it. It is a practical form of teaching through imitation

whereby the teacher gives several demonstrations of the complete operation with explanation; he/she gives the students a clear picture of what they should be able to do at the end of the lecture (Ngaroga, 2006).

A single skill element was then demonstrated followed by the student practising each element. This was repeated for other elements until all the skill elements are mastered. The student then adds up the individual skill elements into a complete cycle of operation. Practice follows until the student reaches an experienced standard. This operation was akin to learning by whole, then by parts and finally by whole. This was the method often used by instructors in science lectures, driving schools and computer lecturers.

Demonstration method was applicable in nearly all subjects. Example, in physical Education lessons to teach practical skills, in Science lessons to set up experiments for example dissecting a flower, explaining a chemical process, etc, in Agriculture to show how a machine operates or how a farm tool is used, in Mathematics to arrange solutions to a problem step by step, and in computer classes, to show how to operate a computer.

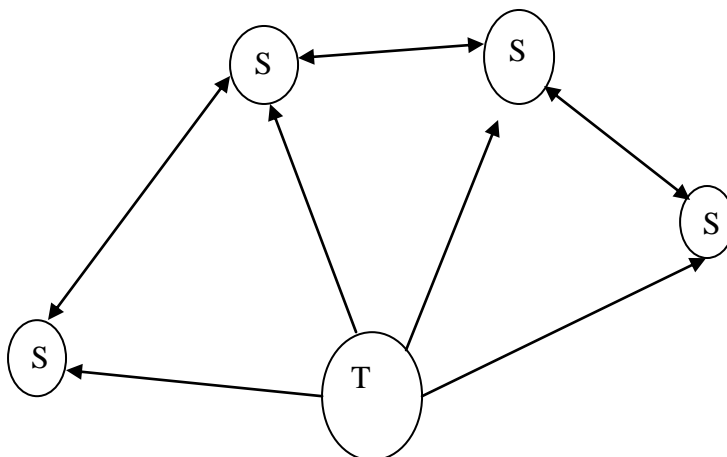
2.2.2 Discussion Method

A discussion is a talk or writing in which pros and cons or various aspects of a subject are considered. A discussion involves a planned meeting of a group with specific purpose or goal. The group seeks to put together their knowledge, ideas and opinions about a certain subject in co-operative endeavour to learn from each other. The subject is introduced or

question posed by the discussion leader (teacher) and the business at hand is then thrown for discussion and the leader invites speakers from the group to make their contributions.

Discussion can be used; to examine a problem and work out solutions, to seek information that is not recorded, to enquire into a matter, to involve the learners in a learning process, to stimulate and develop co-operation, the listening skill and respect for other students' opinions.

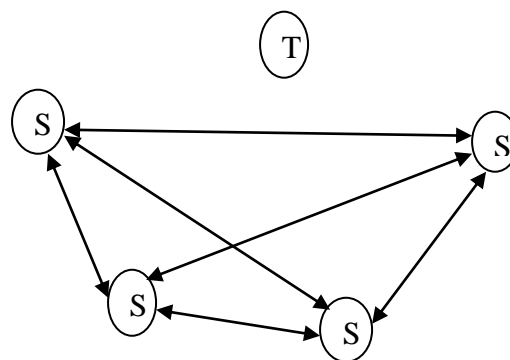
The common approaches to a discussion are either the Socratic or the Discussive. The Socratic approach: This is derived from the method that was used by Socrates to teach his students. In this approach, the leader (teacher) encourages an open exchange of ideas. He or she challenges students, questions them and probes them to give complete answers to defend what they say. It also encourages students to question and interact with each other and probes the learners' thinking by a continuous series of questions which are hoped to lead them to clarify their ideas. The form of interaction and position in a Socratic class can be illustrated as follows:



T- Teacher, S- Student, → - Direction of interaction

The limitations of the Socratic approach are: it is more concerned with the process of debate than with arriving at conclusions and deciding on actions, the teacher sees himself/herself as a source of wisdom and directs students thinking into his/her own channels.

The discussive approach: In this approach, a free and open discussion is allowed. Students must be prepared for a discussion by reading or doing research before entering the discussion. The teacher acts as an observer who listens, notes and evaluates each student's participation. The major limitation in this approach is that the teacher does not guide the discussion or control it. Teacher does not contribute to the discussion. The discussive approach can be illustrated as follows:



T- Teacher, S- Student, → - Direction of interactions

The two approaches can be combined to produce a successful discussion method by planning to have a group that works towards the attainment of a common objective. The whole group, including the teacher, would then be concerned with the task, its elucidation, clarification and solution. This situation would be such that it is clearly a task-oriented one in which there would be absence of a hierarchical structure. The role of the teacher is simply that of a wise

experienced member of a group. The attitude of members of the group is one of co-operation and consultation (Ngaroga, 2006).

2.2.3 The Heuristic Methods

Discovery method refers to an approach of learning where the students make hypotheses, propositions or generalisations, examine or test it and eventually modify the generalisation in the light of new finding (Ngaroga, 2006). According to Mukwa and Too (2002), in heuristic method, the student is supposed to find the answer to his problems on his own without any aid. The purpose of this method is to utilise the instinct of curiosity in children and prompt them to adopt a fact-finding approach to all aspects of learning. A spirit of enquiry and adventure is awakened through self-observation and experimentation. The students are trained to discover facts, principles and laws, to systematise the knowledge learnt and to arrive at generalisations, all through self-efforts.

Students in class may be set to work out the same problem simultaneously, and each child may be made to feel responsible for finding out something for himself. Each learner is allowed to move and discuss the problem with other learners with the ultimate goal of finding something for himself. The student is induced to ask as many questions as possible, and struggle to find the answers to such questions, as far as possible, by himself.

Self-observation and experimentation are the procedures students use. Students are guided to observe facts correctly, to systematise the knowledge learnt and to arrive at the generalisations all through their own efforts. The teacher's role on the other hand is quite

challenging. They must have a lot of knowledge and information in store, hence the phrase “store of knowledge and information”, and yet give minimum possible help to the students. He should be a good guide, giving that amount of guidance rightly needed by the students. He must be adept in the art of questioning. He should be sympathetic and courteous to be able to put the children at ease. Heuristic methods are not only useful in the teaching of science, but can also be used with effect in other disciplines such as Mathematics and humanities.

2.2.4 Team Teaching Method

According to Mukwa and Too, (2002) team teaching is a type of instructional organisation involving teaching personnel and the student assigned to them. Two or more teachers are given responsibility, working together for all or a significant part of the instruction of the same group of students.

It is a form of organisation in which individual teachers decide to pool resources, interest and expertise in order to devise and implement a scheme of work suitable to the needs of their students and the facilities of their school. Teachers formulate common objectives that aim to achieve, under the guidance of either a teacher or one or more of the leaders of the group.

2.2.5 Educational Visits Method

An educational visit refers to a lesson that takes place outside the classroom or school environment to focus on the reality of what there is and what happens out there (Ngaroga, 2006). Educational visits make learning real and concrete, broaden students’ experiences beyond the classroom, motivate and arouse students’ interest, involve the learners in the

process of learning and thus make learning effective, develop an inquiring mind as students ask questions, develop a sense of responsibility as students may be given specific tasks to do and integrate learning in several subjects.

2.2.6 The Project Method

The project method is a co-operative study of real life situation by a class or group under the guidance of a teacher. The project method stems from the work of John Dewey, an education reformer, who saw that with urbanisation children were losing a great deal of practical knowledge and a sense of co-operation that existed in the rural communities. He thought it was necessary for schools to bridge the gap (Ngaroga, 2006). The project method aims at bridging students into real contact with the activities of their school's neighbourhood, presenting students with real life problems to tackle by thinking and working together and developing further knowledge and skills in school subjects.

2.2.7 Lecture Method

Lecture method involves delivery of information that a teacher intends to communicate to learners. It may involve reading out the notes step by step by the teacher (lecturer) followed by some explanations and illustrations, or verbal exposition of a well thought out lecture plan. It is for most teacher or lecturer centred. The audience or learners have very little participation in the lecture (Ngaroga, 2006).

There are two forms of lecture method. Firstly, formal where communication is mainly one-way. Secondly, informal where communication is two-way; that is from the teacher to the

student and from the student to the teacher. For a teacher, the latter is more appropriate, because you need to communicate to your students and the students need to communicate back to you.

2.2.8 Problem Solving Method

In this method, the minds of the learners are trained/sharpened by confronting them with real problems. The major purpose of problem is to afford training to the students in the thinking when solving the problems mentally (Mukwa and Too, 2002).

Problem solving approach is meaningful, developmental, sequential and based on the discovery of generalisations. It involves the thought process that results from doubt perplexity or a problem. The approach leads to the formulation of generalizations that are useful in future situations involving the solution of problems. It is an important contribution to learning.

2.2.9 The Assignment Method

This method is more appropriate for teaching different subjects to students in the higher classes. The syllabus is divided into significant units on topics; each of which is in turn subdivided into learning assignments for students. The students are usually required to prepare the assignments in writing. Written assignments help in organisation of knowledges, assimilation of facts and better preparation for examinations (Mukwa and Too, 2002).

All these are methods used to teach in various institutions of learning, in this study the researcher was seeking to analyze the various teaching methods used in Universities within Eldoret Municipality and its relation on understanding of content.

2.3 Other teaching methods in Universities

The application of Information and Communication Technologies (ICTs) is already changing the organisation and delivery of higher education. The pedagogical and socio-economic forces that have driven the higher learning institutions (Universities) to adopt and incorporate Information and Communication Technologies in teaching and learning include greater information access; greater communication; synchronous and asynchronous learning; increased cooperation and collaboration, cost effectiveness and pedagogical improvement. The following are modern methods of teaching:

2.3.1 E-learning

The development of science and technology, especially the application of information and communication technologies (ICT) in the new era has greatly influenced teaching and understanding of content in education. Educational transformation and reform have become an urgent issue across the globe to meet the demands of new educational objectives in the knowledge-based economy (Barone & Hagner, 2001). In the new digital and knowledge society in the 21st century, education is facing great challenges from traditional ways of learning towards innovative ways of learning. It also raises great demands for the transformation of teacher roles from the traditional knowledge transmitter to a new set of roles such as facilitator and delegator. This transformation requires that teachers can face their new tasks in a more flexible way and be prepared for their new roles.

Developments in Information and Communication Technologies (ICTs) have impacted all sectors of society, including the education sector. In higher education, application of Information and Communication Technologies in form of e-learning is already changing teaching and learning processes. There are many pedagogical and socio-economic factors that have driven higher learning institutions to adopt e-learning. These include greater information access; greater communication via electronic facilities; synchronous learning; increased cooperation and collaboration, cost-effectiveness for instance by reaching different students and in greater numbers and pedagogical improvement through simulations, virtual experiences, and graphic representations. Both trainers and learners can choose more appropriate applications which are flexible in time, in place, personalized, reusable, adapted to specific domains and more cost-efficient (Fisser, 2001; Pellicione, 2001).

E-learning refers to the use of Information and Communication Technologies to enhance and support teaching and learning processes. It is the instructional content or learning experiences delivered or enabled by electronic technologies and it incorporates a wide variety of learning strategies and technologies. E-learning ranges from the way students use e-mail and accessing course work online while following a course on campus to programmes offered entirely online (Commission on Technology and Adult Learning, 2001; OECD, 2005). It is thus an alternative solution, which enlarges accessibility to training and becomes essential to complement the traditional way of teaching (i.e. face-to-face).

E-learning encompasses a continuum of integrated educational technologies. At one end are applications like Powerpoint, which have little impact on learning and teaching or the

organisation. At the other end are virtual learning environments (VLEs), and managed learning environments (MLEs), which can have significant impact upon learning and teaching strategies, and upon the organisation (OSU, 2003; Julian et al, 2004). Broadly, OSU (2003) views the continuum of e-learning as the educational technology from the supplemental use of technology in the classroom, through blended or hybrid uses comprising a mix of face-to-face and fully online instruction, to fully online synchronous and asynchronous distance learning environments delivered to remote learners.

Functionally, e-learning includes a wide variety of learning strategies and ICT applications for exchanging information and gaining knowledge. Such ICT applications include television and radio; Compact Discs (CDs) and Digital Versatile Discs (DVDs); video conferencing; mobile technologies; web-based technologies; and electronic learning platforms.

Televisions (TV) refers to a receiver that displays a visual images of stationary or moving objects both live or pre-recorded and mostly accompanied by sound which is electronically captured, processed and re-displayed. Likewise, this applies to the term radio- both live generated sound as well as pre-recorded sound. Both TV and radio can improve teaching and learning process in different ways such as by showing processes and activities that may not otherwise be available to the learner. However, digitalization has taken over analog audio and video systems.

Compact Discs (CDs) and Digital Versatile Discs (DVDs) are based upon laser technologies for writing and reading data. They provide a way in which a large amount of multimedia training material can be stored and made available to end-users: CD-ROM can store up to

1GB while DVD can store up to 17 GB. CD-ROM and DVD-based products can be linked with online information sources. This hybrid approach provides the user with access to media-rich up-to-date information.

Video conferencing is a system where two or more participants, based in different physical locations, can see and hear each other in real time (i.e. live) using special equipment, it is a method of performing interactive video communications over a regular high-speed Internet connection. A video conference can be either two-way (point-to-point) or multipoint, linking three or more sites with sound and video. It can also include data sharing such as an electronic whiteboard where participants can draw on, or text based real time 'chat'. Interactive whiteboard is simply a surface onto which a computer screen can be displayed, via a projector (Department for Education and Skill, 2004).

Mobile e-learning (sometimes called 'm-Learning') is a new way to learn using small, portable computers such as personal digital assistants (PDAs), handheld computers, two-way messaging pagers, Internet-enabled cell phones, as well as hybrid devices that combine two or more of these devices into one (Hunsinger, 2005). These technologies have enormous potential as learning tools.

World Wide Web (WWW) is set of software tools and standards that allow users to obtain and distribute information stored on a server and connected to Internet. WWW is a decentralized information system, in which anyone can add new information whenever he/she wants. Lecture notes and other teaching materials are placed on the WWW and linking useful websites to these resources for students to access. In recent years, web and Internet

technologies have matured significantly by providing a uniform access media for both asynchronous and synchronous learning. This phenomenon has significantly increased the popularity of on-line learning (Chen et al., 2004).

E-learning platforms (sometimes called learning management systems (LMS)) are applications used for delivery of learning content and facilitation of learning process. They are developed for administration and teaching in tertiary education. This software enables the administrators and lecturers to treat enrolment data electronically, offer electronic access to course materials and carry out assessments (OECD, 2005). The activities managed by the LMS vary from instructor-led classroom training to educational seminars to Web-based online training. In addition to managing the administrative functions of online learning, some systems help create, reuse, deliver, manage, and improve learning content. These systems are called Learning Content Management Systems (LCMS) (Rengarajan, 2001). LCMS actually provides tools to deliver instructor-led synchronous and asynchronous online training. The LCMS provides tools for authoring content as well as virtual spaces for learner interaction.

2.3.2 Peer Teaching

Although the name sounds straight forward, peer teaching is a complex process by which students learn from students that are more experienced and knowledgeable about the subject material. It has the following benefits: many students feel more comfortable asking questions to other students, rather than their professor, reduced frustration on difficult assignments, more time for individualized attention, teaching others ensures a high level of content mastery, peer instructors gain valuable teaching experience

Vasay (2010) conducted a study of peer teaching in college mathematics, and found that it “greatly affects the intellectual and moral values of the students, such as the ability to express their ideas, mastery of different concepts, time management, and sense of responsibility, sharing, self discipline, self reliance, self confidence, resourcefulness, cooperation and obedience.”

2.4 Effects of Teaching Methods

The importance of using effective instructional methods and their effects has become an area of major focus in recent years. According to Nair and Fisher (2001) in their study of primary and secondary school classroom environments, found that the quality of instruction resulting from using relevant instructional methods is one of the factors contributing to the variance in students’ cognitive and affective outcomes. In a similar study by the same authors using tertiary/higher and senior secondary school education levels, it was found that students at the tertiary levels perceived their classroom environment more favorably in terms of the innovative teaching methods employed by their instructors in their classes. Formal lecture system, which is often passive, was noted to contribute to low retention rate and boredom with students. Thus, teaching methods that enable students to get involved with the teaching material, stir thinking and encourage less memorization are consequently perceived more favorably (World Bank, 2002).

According to a World Bank report (2000), teaching methods in developing world universities are often out-of-date. Further, the report stated that rote learning is common, with lecturers doing little more in the classroom than dictating notes to the students. These passive

approaches to teaching practice have little value in a world where creativity and flexibility are at a premium. The current generation of students requires instructional methods that emphasize active intellectual engagement, participation and discovery, rather than the passive absorption of facts (World Bank, 2000). This, as McKeachie (1964) observed, promotes the fullest intellectual development. Therefore, the use of instructional methods that give students an opportunity to practice thinking skills cannot be underestimated.

Two World Bank reports (2000; 2002) on developing countries' universities have observed that students face difficult conditions of study, which include (i) overcrowded classes (ii) inadequate library and laboratory facilities and (iii) distracting living conditions among others. All these problems could probably be attributed to the high expansion rate of student population without any proportionate expansion of university facilities (Mutunga & Kiai, 1996). In contrast, Matiru (1989) has observed that in a small group or class, lecturers have the opportunity to deepen the understanding of the subject taught. This is because they can initiate interaction among the students by allowing them to talk with each other and do something practical. This makes the classroom learning enjoyable thus boosting the motivation of students

However, the traditional passive view of learning involves situations where material is delivered to students using a lecture-based format. In contrast, a more modern view of learning is constructivism, where students are expected to be active in the learning process by participating in discussion and/or collaborative activities (Fosnot, 1989). Overall, the results of recent studies concerning the effectiveness of teaching methods favor constructivist, active learning methods.

The findings of a study by De Caprariis, Barman, & Magee (2001) suggest that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. Further, research on group-oriented discussion methods has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hachevar, 2005).

Hunt, Haidet, Coverdale, and Richards (2003) examined student performance in team learning methods, finding positive learning outcomes as compared to traditional lecture-based methods. In contrast to these findings, a study by Barnes & Blevins (2003) suggests that active, discussion-based methods are inferior to the traditional lecture-based method. A comparison of lecture combined with discussion versus active, cooperative learning methods by Morgan, Whorton, & Gunsalus (2000) demonstrated that the use of the lecture combined with discussion resulted in superior retention of material among students.

2.5 Students' Perception towards Teaching Methods

Students' role in the classroom is no longer a passive one. Indeed, students' input on the teaching-learning process is paramount as it is their education that is at stake. Inevitably, their perception presents methodological challenges. The opportunity to be "heard" raises their own awareness about their own learning experience (understanding of content) and the teaching process. Wittrock (1986) talks about this reciprocity, suggesting that research on students' thinking and perception functions as a mirror that can be used by both teachers and students to reflect upon their learning (understanding of content) and teaching, hence

enhancing their understanding of teaching and increasing its outcome that is understanding of content taught. In other words, learners' perception and observation on the methodology and content could work in practice and become a part of exploratory studies (Eken, 1999; Sidhu, 2003). The purpose of this study is to analyze teaching methods used in universities within Eldoret municipality and their relation on understanding of content. This is achieved by looking at students' thinking which promised to enhance understanding of teaching and its outcomes by providing information about teaching methods as experienced by the learners (Wittrock, 1986).

In terms of students' preferences for teaching methods, a study by Qualters (2001) suggests that students do not favor active learning methods because of the in-class time taken by the activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active structure. In contrast, research by Casado (2000) examined perceptions across six teaching methods: lecture/discussion, lab work, in-class exercises, guest speakers, applied projects, and oral presentations. Students most preferred the lecture/discussion method. Lab work, oral presentation, and applied projects were also favorably regarded. Hunt et al (2003) also noted favorable student attitudes towards active learning methods.

2.6 Teaching Methods in Universities

The current situation is that universities, especially new universities, now have more diverse student populations. Students are more likely to see themselves as consumers of an educational provision, more directly linked to future employment, through an increase in vocational courses (Northedge, 2003). At the same time, universities are required to consider

the quality of the learning environments they provide for their students (Eurydice, 2000). Therefore, there is need to look at ways of instructing students and their relation on understanding the content.

To consider effectiveness and efficiency of university teaching and student learning, some outcome measures are required, one of which has been the development of an articulated account of “graduateness” in the UK system (HEQC, 1995). One of the properties of “graduateness” is being an independent learner. Whilst this is not a new or original outcome of university education, attention on the process of turning new undergraduates into independent or autonomous learners is; to ensure the greatest possible likelihood of graduates being independent learners, universities have considered the learning experiences that are created for their students.

Effective learning environments that promote independence are thought to be those that (UWIC, internet reference): *Are student centred* as opposed to being teacher centred. Promote a *deep approach to learning*, by requiring the student to actively engage with the subject, require students to be *actively* working with the subject, rather than passively sitting and listening to “an expert” talking about it, encourage students to *reflect* upon their learning, to learn from what has gone well and consider what has not worked so well and are *inclusive* of all students by providing teaching methods and learning environments that reach all students. To foster students as independent learners, specific learning / teaching strategies have been developed such as Problem Based Learning (Schwartz, Mennin and Webb, 2001). There has been an increase in the use of strategies such as Personal Development Planning (Learning Teaching Support Network, 2002) and greater study advice is available for

students. These, though, are new initiatives, not traditional university teaching methods. To what extent do the usual teaching methods foster student independence in learning?

Brown (1993) makes it clear that teaching methods can be considered as lying on a continuum from being high in *teacher* participation and control to high in *student* participation and control. A formal lecture is a good example of a teaching method that is high in teacher participation and control. Conversely, student presentations are a teaching method that is high in student participation and control.

The lecture may have survived in higher education because it is relatively easy to prepare and deliver and, given that just the top 15% of school leavers were entering higher education, it was sufficiently effective for those academically bright, interested, committed and motivated students who were recruited. Now that the number of academically less able and perhaps initially less committed students is increasing, passive and un-engaging lectures may be ineffective and do little to promote independent learning in students, although they can, of course, be “enriched” (Biggs, 1999) for greater effectiveness. It is against this statement that the researcher sought to analyse the various teaching methods used in Universities within Eldoret Municipality and their relation on understanding the content.

With the graduateness project, more is now being expected of the greater number of more diverse university students than just subject specific skills and knowledge. It follows from the graduateness remit that targeted and supportive teaching will be required to meet the inclusivity remit. To foster students as independent learners, specific learning/teaching strategies have been developed such as Problem Based Learning (Schwartz, Mennin and Webb, 2001). There has been an increase in the use of strategies such as Personal

Development Planning (Learning Teaching Support Network, 2002) and greater study advice is available for students.

These, though, are new initiatives, not traditional university teaching methods. To what extent do the customary teaching methods foster student independence in learning? Brown (1993) makes it clear that teaching methods can be considered as lying on a continuum from being high in *teacher* participation and control to high in *student* participation and control. A formal lecture is a good example of a teaching method that is high in teacher participation and control. Conversely, student presentations are a teaching method that is high in student participation and control.

2.7 Students' Understanding of Content

To provide supportive and targeted teaching that will promote gradueness, teachers need to know something about their students. Specifically, teachers need to know not just about students' subject knowledge but also about students' conceptions and perceptions of teaching and learning. Experience suggests that teaching small, school-sized classes, on a frequent basis, makes that relatively easy and it often happens implicitly, but how can teachers find out about students in a class of one or two hundred?

There are at least three possibilities. Firstly, the traditional methods of personal tutor systems and teaching students in small tutorial groups can be employed, to the extent that teacher workloads and other resources permit (Maunder and Harrop, 2003). A second method depends on the increasingly widespread use of virtual learning environments, which can also

facilitate engaging with and finding out about students in large classes through their discussion boards and through email communication (Jolliffe, Ritter, and Stevens, 2001). A third method would be to use survey tools to build up a picture of the strengths and weaknesses of a particular student cohort. Admittedly, this will not provide the same detail that individual discourse in the traditional classroom will provide, but it may be sufficient.

Students could be surveyed in induction week to provide information, for instance, on their: Learning styles (Biggs, Kember & Leung 2001); Reflective thinking (Kember et al, 2000; Leung & Kember, 2003) and; Epistemological beliefs (Clarebout et al, 2002; Schommer, 1990, 1998). Students' expectations could also be sought (Maunder & Harrop, 2003). This necessitates the need for analysis of various teaching methods used in Universities and their relation on understanding of the content. Which this study was seeking to find out.

2.8 Summary of Literature

The literature has revealed that learning is a two way process and in terms of students' preferences for teaching methods, the literature suggests that students do not favor active learning methods because of the in-class time taken by the activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active structure. Moreover, the literature has revealed that the development of science and technology, especially the application of information and communication technologies (ICT) in the new era has greatly influenced teaching and learning in education. This educational transformation and reform have become an urgent issue across the globe to meet the demands of new educational objectives in the knowledge-based economy. It also showed that in the new digital and knowledge society in the 21st

century, education is facing great challenges from traditional ways of learning towards innovative ways of learning. It also raises great demands for the transformation of teacher roles from the traditional knowledge transmitter to a new set of roles such as facilitator and delegator. This transformation requires that lecturers face their new tasks in a more flexible way and be prepared for their new roles. Lecturers therefore requires different teaching methods to enable them overcome the new changes and challenges in the knowledge delivery which this study was seeking to investigate.

Further to provide supportive and targeted teaching that will promote graduateness the literature reveals that teachers need to know something about their students. Specifically, teachers need to know not just about students' subject knowledge but also about students' conceptions and perceptions of teaching and learning. The traditional passive view of learning involves situations where material is delivered to students using a lecture-based format. Therefore, universities being the highest level of education was required to have prepared well to face these changes and its challenges by providing the lecturers with learning environment that promotes the use of different pedagogic principles which enables the learners understand the content learnt in classroom well. Thus, this study sought to investigate the relationship between teaching methods and understanding of content in Universities within Eldoret Municipality.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter presents the procedures and methods that were employed in the study area in order to come up with data for analysis. It constitutes: the study area, research design, the sample size, sampling techniques, ethical consideration, data collection and data analysis procedures, reliability and validity of research instruments.

3.2 The Study Location

The study was conducted in both Private and Public Universities within Eldoret Municipality in Uasin Gishu County in Rift Valley province, Kenya. Eldoret is a Municipality in Western Kenya and the administrative centre of Uasin Gishu County as shown in the map in Appendix C. Lying south of the Cherangani Hills, the local elevation varies from about 2100 metres above sea level at the airport to more than 2700 metres in nearby areas (7000–9000 feet). The Public Universities are Moi University, Egerton University, University of Eldoret and University of Nairobi, while Private universities are Bugema University, Catholic University of Eastern Africa, University of Eastern Africa Baraton, Kabarak University, Mt. Kenya University, Kenya Methodist University and African Nazarene University. This was because it had all the faculties/school that were required that was school of Education and Business. School of Education and Business were used for the study because they have all the four level of studies that is first year to fourth year.

3.3 Research Design

This study was conducted through a descriptive survey design. Orodho (2000) notes that descriptive designs are used in preliminary and explanatory studies to enable researchers gather information, summarize, present and interpret it for purposes of classification. In this study the researcher intends to analyse various teaching methods used in Universities through the information gathered from the field, summarize, present and interpret them for purposes of classification. Hence the need to use descriptive survey design.

Koul (1993) argues that descriptive studies provide information useful to the collection of local problems as well as the data that can form the basis for the research of a more fundamental nature. He also argues that it is the only means through which views, opinions, attitudes and suggestions for improvement of educational practice and instruction can be collected. A survey research describes existing phenomenon by asking individuals about their values and perception and attitudes and also by observing their behaviour. Surveys can be used to assess the existing status of two or more variables at a given time. This research therefore considered the survey research most appropriate for the collection and analysis of the data since it enabled the investigator to collect data and use it to find out if there was discrepancy between teaching methods and understanding of the content in Universities within Eldoret Municipality in the school of Education and Business.

Intended for this study, the researcher administered questionnaire to two groups of respondents that was Public and Private Universities from the school of Business and Education. The researcher chose the two schools because they are common in both

universities and the universities vary in terms of the amount of professional development that they provide to teachers and students.

In order to gain a better insight into the teaching methods used in Universities and its relation on understanding the content at the University level, this study was conducted in detail questionnaire to students from selected universities and identified variables for investigation.

3.4 The Study Population

The population in this study constituted all students drawn from selected Universities within Eldoret Municipality. The Public Universities are Moi University, Egerton University, University of Eldoret and University of Nairobi, while Private universities are Bugema University, Catholic University of Eastern Africa, University of Eastern Africa Baraton, Kabarak University, Mt. Kenya University, Kenya Methodist University and African Nazarene University. This is because all students are familiar with the teaching methods used by lecturers to teach in University and they are mature. The target population was approximately 48000 from all the selected universities within Eldoret Municipality.

3.5 Sample size and Sampling procedure

In this study, the researcher determined the sample from the target population. Warwick and Lininger (1975) argue that, the main factor considered in determining the sample size is the need to keep it manageable enough. This enables the researcher to derive from it detailed data at an affordable cost in terms of time, finances and human resource (Mugenda and Mugenda 1999).

The study involved four universities within Eldoret Municipality namely Moi University, Egerton University, Bugema University and Catholic University of Eastern Africa. These universities were selected purposively because they have common characteristics namely both have School of Education and Business, also all their learning have reached fourth year and they have fully established programs in Eldoret Municipality. Students from first year to fourth year was purposively selected to represent the population study from the Private and Public university. A sample size of 384 students was obtained on using a Social science research formula as stated in Research Methods by Mugenda and Mugenda (1999). A sample of 384 students was chosen using simple random sampling from students from four Universities from the school of Business and Education. The sample size was stratified into two equal groups. That is private university took 192 respondents and public university would take 192 respondents. Then each university was proportionately assigned a sample size according to the population study through stratified random sampling, for instance, Moi University with approximately 24000 students, Egerton University with approximately 8000 students, Bugema University with approximately 6000 students and Catholic University of Eastern Africa with approximately 10000 students was 152, 40, 112 and 80 respondents respectively. Then each level of study was randomly stratified into equal number of respondents. Example, Moi University was having 38 respondents in first year to fourth year, Egerton was having 10 respondents, Bugema University was having 20 respondents and Catholic University of Eastern Africa was having 28 respondents in each level of study. Then school of Business and Education was randomly stratified into equal number of respondents in each level of study. Example, school of Business and Education in the Catholic University of Eastern Africa had 14 respondents in first years that was selected randomly. All

respondents from each University in the school were selected randomly in each year of study. This process is illustrated in the table 3.1 below. This procedure was selected because it gives each individual an equal probability of being selected.

Table 3.1 Number of respondents in each University

		Public University		Private University	
Sample size		192		192	
University		Moi	Egerton	Catholic University	Bugema
Sample size		152	40	112	80
Year of study		38 Each	10 Each	28 Each	20 Each
School	Education	19	5	14	10
	Business	19	5	14	10

3.6 Research Variables

Variables are attributes or qualities of the cases that we measure or record. There are two major forms of variables; independent and dependent variables. Independent variables are the factors that explain variation in the dependent variable. Dependent variable is the outcome the researcher was attempting to predict (Kombo, 2005). In this study, the dependent variable was understanding of the content while the independent variable was teaching methods used by lecturers in teaching in Universities within Eldoret Municipality. These methods are lecture method, e-learning method, group discussion method, individual presentation method, assignment method, seminar method, workshop conferences method, brainstorming method, role play method, team teaching method and case study method.

3.7 Instrumentation

This is the process by which data that was used in the study was generated. It involved the use of data collection instrument which in this case was questionnaire. This questionnaire was developed by the researcher according to the variable to be investigated. The questionnaire that was used covered all aspects being studied. Questionnaire was administered to the 384 students who were the accessible population.

3.7.1 The Questionnaire

Questionnaires are the instruments for data collection with structured and open ended questions. The instrument was designed to collect primary data on all research variables according to the study objectives. The questionnaire was used since it gave time respondent to give a well thought out answers. It was also effective for collecting large data over short period of time and ease to collect data from accessible population who are over a wide area of study. This tool was also free from bias of interviewer because answers from the respondent are written.

The instruments consisted of two parts as shown in Appendix B; Section A consisted of structured sections on the background information of the respondent for example, name of school and level of study. Section B consisted of structured as well as open-ended questions on the relationship between teaching methods and understanding of content. It also solicited information on the methods used in different universities. That is reflected in items 3 and 4 which sought to meet objectives 1 and 2 that is teaching methods used in universities by Private and Public university and difference in teaching methods used by lecturers in

different universities. Item number 5 and 6 attempted to answer objective 3 which sought to find out the relationship between teaching methods used and understanding of content.

3.7.2 Reliability of Instrument

Wallen and Fraenkel (2000) refer reliability as the consistency of the scores obtained-how consistent they are for each individual from one administration of an instrument to another and from one set of items to another. Mugenda and Mugenda (1999), say that a reliability of a measuring instrument is the instrument's ability to yield consistent results each time it is applied. To ensure reliability of instrument, research instrument was ascertained by the researcher before going out to collect data. A pilot study was carried out on 10 students from University of Eastern Africa Baraton and University of Nairobi to test the reliability of the questionnaires. Since they are not part of the sample population. The shortcomings, errors and omissions detected in the questionnaire while testing the research instrument was rectified and modified before the final data collection.

The internal consistency method was used to determine the reliability of the instrument. This was determined from scores obtained by administering the questionnaire to a sample of students. The scores obtained were used to determine the mean, and the standard deviation which was used to calculate the internal-consistency of the instrument using Kuder- Richard formula particularly Kuder-Richardson (K-R) 21 formula. This method was used because it reduces the time required to compute a reliability coefficient in other methods. Its application also results in a more conservative estimate of reliability; the estimated coefficient of reliability of data is always lower.

A high coefficient implies that items correlate highly among themselves; ie, there is consistency among the items in measuring the concept of interest. This is called homogeneity of data. The questionnaire stated item on each of the key variables where the study was pilot tested for its reliability. The reliability constituted a co-efficient established by Kuder Richardson KR21 method of 0.70. This co-efficient deemed adequate to allow the instruments to be used as proposed by Wallen and Fraenkel (2000).

3.7.3 Validity of the Instrument

Validity refers to the instruments ability to measure what it purports to measure in terms of measurement procedures. Smith (1991, p.106) defined validity as “the degree to which the researcher has measured what he or she sought to measure”. Cohen and Manion (1994), defined validity as the extent to which the instrument measures what the instrument purpose to measure. Wallen and Fraenkel (2000), defined validity as the appropriateness, meaningfulness, and usefulness of the specific inferences. Therefore, validity is the ability of the instrument to measure and give useful data. Validation is the process of collecting evidence to support such inferences.

Content validity is a measure of the degree to which data collected using a particular instrument represents a specific domain of indicators or content of a particular concept (Mugenda, 1999). Content validity was achieved through identification of the variables that measure the teaching methods and understanding of the content learnt. That is the researcher wrote the definition of teaching methods and understanding of content on a separate sheet of paper and then gave that definition, along with the instrument/questionnaire and a description

of the intended sample to two experts from the department of Educational Psychology, School of Education, Moi University since they have more knowledge on the instrument validity. The experts looked at the definition, read over the items or questions in the questionnaire, and placed a check mark in front of each question or item that they felt does not measure one or more of the objectives. They also placed a check mark in front of each objective not assessed by any of the items. In addition, the experts evaluated the appropriateness of the instrument format. The researcher then re-writes any item or question so checked and resubmitted it to the experts, and/or write new items for objectives not adequately covered. This continued until the experts approved all the items or questions in the instrument and also indicated that they felt the total number of items was an adequate representation of the total domain of the content covered by the variable being measured.

Construct validity refers to the extent to which a test measures characteristics of an individual. In this study, the understanding of the content was achieved by defining the understanding of content and stating the objective concerning understanding of content clearly. To achieve construct validity, the researcher sought supervisory assistance of experts in the field of Educational Psychology, School of Education, Moi University. This was done by giving them the questionnaire to assess if it measures what was intended.

Criterion-related validity refers to the use of a measure in assessing subjects' behaviour in specific situations (Mugenda, 1999) or it refers to the relationship between the scores obtained using the instrument and scores obtained using one or more other instruments or measures (Wallen and Fraenkel, 2000). In this study the criterion-related validity was achieved by using concurrent validity where the researcher presented the questionnaire to

respondents from University of Eastern Africa Baraton and University of Nairobi at same time then used them to compare the results if they are valid.

3.8 Data collection Procedure

The candidate sought permit to conduct research from the Ministry of Education, Science and Technology. A copy is shown in Appendix D. A letter of introduction to heads of schools/faculty of Business and Education was issued to the candidate by Moi University to give the researcher permission to visit the schools in the Moi University, Egerton University, Catholic University of Eastern Africa and Bugema University. The candidate visited the named Universities and sought permission from the University administration and explained the purpose of the visit. The investigator was introduced to the students by the administrator in judged.

The researcher gave out the questionnaires to the students in the students' regular lecture halls by first introducing them to the questionnaire through letter of consent as indicated in Appendix A. The students were advised to respond to the items in the questionnaire to the best of their ability, according to how they actually felt about each of them. The students were told the survey was not a test and that there are no right or wrong answers. They were told that the information in the survey was confidential and that no one at home or at school would ever see their responses. After completion the candidate collected the questionnaires.

3.9 Ethical Consideration

Ethical consideration deals with the respect, confidentiality and security of the participants as well as the rules and regulations governing research. Wallen and Fraenkel (2000) said, ethical

concerns affect quality of research, thus, the following key points should be taken into consideration during research by the researcher. First, the identities of all that participate in study should always be protected; care should be taken to ensure that none of the information collected would embarrass or harm them. If confidentiality cannot be maintained, participants must be so informed and given the opportunity to withdraw from the study. Secondly, participants should always be treated with respect. It is especially important to seek the cooperation of all subjects in the research endeavour. Usually, subjects should be told of the interest of pollster and should give their permission to proceed. Pollster should never lie to subjects nor record any conversations using a hidden tape recorder. Thirdly, candidates should do their best to ensure that no physical or psychological harm will come to anyone who participates in the study.

The researcher in this study explained the aim of the study to the participants. He also assured the respondents of their confidentiality and the ability to withdraw from the study if they deemed so. The candidate also respected the individual's rights and safeguarded their integrity. That was if the respondent refused to participate in the research he or she was not forced. Therefore, the researcher considered the following ethical consideration: The information collected remained confidential that is the researcher would not expose the responses and the respondents were requested not to write their names or admission numbers as was indicated in the consent letter as shown in the Appendix A. No incentives were offered to motivate the respondents for instance the respondents were not given money or sweets to motivate them to fill the questionnaires. Consent was sought and obtained from all the participants by their willingness to fill the questionnaire. The students were not referred as subjects instead they were referred as participants or respondents.

3.10 Data Analysis

The data collected were analysed using both descriptive and inferential statistical techniques. The questionnaires filled by the respondents were checked and those with major response errors were discarded and the remaining were given numbers. Then coding was done. This involved categorization, determination of major categories under which data falls.

Kerlinger (1973), suggested that the categories should be directly related to research problem and they should be constructive and mutually exhaustive. The second stage after categorizing data was quantification that is assigning numerical values to various categories to facilitate the statistics representation of the data. The third stage involved processing, data is transferred to a computer storage to facilitate computation of data. This was followed by tabulation, which is the demonstration of data through suitable methods of statistical representation using frequency distribution tables and percentages. After tabulation of data, data was interpreted to help check if research questions have been answered. Finally after data analysis, conclusions and recommendations were made. For descriptive statistics, frequency distribution tables and percentages was applied while inferential statistics, Chi-Square was used to analyse the relationship between teaching methods and understanding of the content where the hypothesis was rejected when the calculated value of Chi-square was equal or greater than the critical value and accepted when the critical value was greater than the calculated value (Kothari, 2004). Data collected using the questionnaires were sorted out to check completeness and clarity. Data was analysed quantitatively.

3.11 Summary of the Research Design and Methodology

This chapter presented information on the research design for the study as well as the population and sample size. It also discussed instruments used in collecting the data, reliability and validity of the instruments, ethical consideration and data analysis.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the data presentation, analysis, interpretation and discussion of the research findings as was guided by the objectives of the study. In the first section, descriptive statistics is used to provide background information of the respondents who participated in this study. The second section presents the analysis of the responses to the specific research objectives of the study as provided by the respondents in the questionnaires. The purpose of this study was to investigate the relationship between teaching methods used in Universities within Eldoret Municipality and understanding of content.

The study sought to achieve the following objectives:-

- i. To find out the various teaching methods used in Universities within Eldoret Municipality.
- ii. To find out the difference in teaching methods used by lecturers in Public and Private Universities within Eldoret Municipality.
- iii. To find out the relationship between teaching methods and the understanding of the content in Universities within Eldoret Municipality.

4.2 Background Information

The section presents the background of respondents who participated in the study. It entails: The type of university, name of the school/faculty, year of study and percentages of respondents who participated from the four universities within Eldoret Municipality.

4.2.1 Respondents per Faculty/School

Responses were gathered to find out the faculties the students were in. Their responses were summarized in table 4.2.1

Table 4.2.1 Respondents per Schools

Name of school	University	Frequency	Percent
Education	M	74	37.7
	E	19	9.7
	C	56	28.6
	B	47	24
Total		196	100
Business	M	78	41
	E	21	11
	C	58	31
	B	31	17
Total		188	100

Name of the Faculty	Frequency	%
Business	188	49
Education	196	51
Total	384	100

It is evident in table 4.2.1 that 51 % of the respondents were in the school of education while 49% were in the school of business.

4.2.2 Respondents of Study per Year

It was important to find out from the respondents their year of study to determine the influence of teaching methods on learning. Respondents gave their contributions as shown in table 4.2.2

Table 4.2.2 Respondents per Year of study

Name of University	Year of study				Total
	1	2	3	4	
M	40	36	39	37	152
E	11	16	10	3	40
C	11	69	18	16	114
B	15	36	14	13	78
Total	77	157	81	69	384
Percentage	20	41	21	18	100

From the information in Table 4.2.2, 42 % of the respondents indicated that they were in 2nd year, 20 % 1st year whereas 21 % stated 3rd year as their year of study. Only 18 % were in 4th year. The study captured students from all the years of study in order to establish the kind of teaching methods used in each class and its influence on learning.

4.3 Teaching Methods used in Universities

The first research objective was to find out various teaching methods used in universities within Eldoret Municipality. For the achievement of comprehensive objectives of teaching different course, methods are needed to expose the learner to knowledge and experiences helpful in the development of understanding, critical thinking, practical skills and interest to be developed through a particular course. To find out the various methods used in universities respondents were asked to indicate the methods used by the lectures in the two schools. The findings are presented in table 4.3.

Table 4.3 Percentages and Frequencies of teaching methods used by lecturers in Universities

Teaching methods	Frequency	%
Lecture method	344	89
Assignment method	275	71
Discussion method	268	69
Individual presentation	239	62
Demonstration method	143	37
Project method	139	36
Problem solving method	130	34
E-learning method	118	31
Seminar method	78	20
Case study method	75	19
Brain storming	63	16
Team teaching method	61	16

Role play	31	8
Heuristic methods	28	7
Workshop conference method	3	1

The Table 4.3 shows that the lecture method was mostly used by the lecturers as indicated by the percentage of 89 % agreeing that lecturers use it. Assignment method was also used by lecturers as shown by 71 % who accepted the use of it. Discussion method was also used by lecturers in all universities with 69 % accepting the use of discussion method. Individual presentation method was also used by all universities with 62 % accepting the use of it. However, the other methods were not commonly used by lecturers. These methods include demonstration method with 37 % accepting the use of it, project method with 36 % accepting the use of it, e-learning method with 31 % accepting the use of it, seminar method with 20 % accepting the use of it, in Case study method 19 % agree that lecturers use Case study for teaching. Also in both Brain storming and Team teaching methods 16 % accepted that lecturers use them in teaching. Moreover, in Role play 8 % accepted the use of it and in Heuristic methods 7 % accepted the use of it by lecturers and lastly but not least 1 % accepted the use of workshop conference method by lecturers.

Table 4.3 shows that the following methods were used by lecturers to teach in universities namely: lecture method, assignment method, discussion method, individual presentation method, demonstration method, project method, problem solving method, e-learning method, seminar method, case study method, brain storming method, team teaching method, role play, heuristic methods and workshop conference method. The study was concurrent with Sajjad, (1997) who indicated that higher education faculty strives to become more effective teachers

so that students can learn better, and many explore methods to improve their teaching practice. Further, the findings concurred with a study by De Caprariis, Barman, & Magee (2001) who suggested that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. Further, research on group-oriented discussion methods has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005). Depending on the nature of subject, number of students, and the facilities available, there were different methods lecturers were using in the lecturerroom.

Table 4.3.1 Frequency of Teaching methods used in Teaching in each University

Teaching methods	Frequency			
	M	E	C	B
Lecture method	140	37	97	70
Assignment method	119	31	71	51
Discussion method	113	30	73	52
Individual presentation	104	25	59	51
Demonstration method	48	11	59	25
Project method	51	10	47	31
Problem solving method	46	12	48	24
E-learning method	52	13	24	29
Case study method	30	7	23	15
Brain storming	31	7	11	14
Team teaching method	31	7	12	11

Role play	13	1	11	6
Heuristic methods	8	4	12	4
Seminar method	10	3	0	6
Workshop conference method	3	0	0	1

Table 4.3.1 shows that there were 15 methods used in different universities but two methods were not used completely in university C. These methods were Seminars and Workshop conferences methods. Also Workshop conference was not used in E university. This showed that lecturers strive to explore different teaching methods in order to transmit the content to learners. This study was concurrent with Sajjad, (1997) who indicated that higher education faculty strives to become more effective teachers so that students can learn better, and many explore methods to improve their teaching practice. Depending on the nature of subject, number of students, and the facilities available, there were different methods lecturers were using in the lectureroom.

4.4 Difference in Teaching Methods used by Different Universities

The second research objective sought to find out if there was difference in teaching methods used by lecturers in Public and Private Universities within Eldoret Municipality. Table 4.4.0 shows the analysis of the results.

Table 4.4.0 Analysis of Teaching methods used by Different Universities

Teaching methods	<u>University</u>			
	M	E	C	B
	%	%	%	%

Lecture method	94	93	81	91
Assignment method	87	89	76	79
Discussion method	82	83	76	74
Individual presentation method	87	89	84	81
Demonstration method	57	61	84	51
Project method	70	67	84	69
Problem solving method	55	67	81	50
E-learning method	63	72	69	63
Case study	43	54	100	39
Brain storming	42	50	50	34
Team teaching method	40	47	52	28
Role play	24	10	100	13
Heuristic methods	14	36	100	13
Seminars	18	33	0	19
Workshop conference	6	0	0	3

The Table 4.4.0 showed that there were 15 methods used in different Universities. Both Public and Private universities within Eldoret Municipality use all the methods for teaching except two methods which were not used by two universities as it shown in table 4.4.0. The Lecture method was the mostly used method in both Public and Private Universities within Eldoret Municipality, for instance, from table 4.4, university M shows that 94 % accepted the use of Lecture method to teach while 6 % did not accept. University E shows that 93 % accepts the use of Lecture method to teach while 7 % did not agree with use of the method, university C accepted with the rest that Lecture method was used in teaching with 80 % accepting the use of it while 20 % did not agree.

Moreover, in University B 91 % accepted the use of Lecture method while 9 % did not accept. Lecture method was accepted mostly by the respondents. It was the mostly used method in both Public and Private Universities within Eldoret Municipality. This was evidently shown by the analysis shown in the table 4.4.0. This finding was in agreement with research finding of McCarthy, (1992) in article “Common Teaching Methods” which states that the strengths of lecture method that it presents factual material in direct, logical manner, contains experience which inspires, stimulates thinking to open discussion, and useful for large groups.

Assignment method shows that both Public and Private Universities within Eldoret Municipality uses it to teach as shown in table 4.4.0 above. The percentages for each university are as follows: university M was 87 % accepted the use of it while 13 % disagree, university E was 89 % accepted the use of assignment method while 11 % did not agree, for university C 76 % accepted the use of the method while 24 % did not accepted the use of the method and for university B 79 % accepted the use of the method while 21 % did not accept the use of the method. These showed that both Public and Private Universities within Eldoret Municipality use Assignment method to teach their students.

Discussion method indicated that both Public and Private Universities use discussion method as teaching method as shown in table 4.4.0. The percentages for university M and university E respectively are 82 % and 83 % whereas university C of was 76 % and university B was 74 %. This showed that it was commonly used in both Public and Private Universities within Eldoret Municipality as shown in table 4.4 above.

Moreover, Individual presentation method was indicated by students from both Public and Private Universities within Eldoret Municipality that it was commonly used by lecturers to teach as shown in table 4.4.0. University M had 87 % accepting the use of Individual presentation method, university E had 89 % accepting the use of Individual presentation, university C had 84 % accepting the use of Individual presentation to teach and university B had 81 % accepting the use of the Individual presentation in teaching.

Demonstration method was another method that students accepted that it was used by both Public and Private Universities within Eldoret Municipality with the following percentages, university M 57 %, university E 61 %, university C 84 % and university B 51 %. Though both the universities accepted the use of it, M, E and B universities do not use it frequently as shown in the table 4.4.0.

Project method was also accepted by students that it was used by both Public and Private Universities within Eldoret Municipality to teach as shown in table 4.4.0. University M had 70 % accepting the use of the project method to teach while university E had 67 % who agreed that the method was used; University C had 84 % accepting the use of project method to teach while university B has 69 % accepting the use of Project method to teach by lecturers.

Problem solving was used by both Private and Public Universities within Eldoret Municipality as shown in the table 4.4.0. The percentage for each university was 55 % for university M, 67 % for university E, 51 % for university B and 81 % for university C. The method was commonly used in university C compared to the other universities.

E-learning method was also indicated by students to be used to teach by lecturers in both Public and Private Universities within Eldoret Municipality. As shown in the table 4.4.0. University M and university B has 63 % accepting the use of it, university C has 69 % accepting the use of E-learning to teach in university while university E has 72 % accepting the use of it. This shows that university E commonly use e-learning method for teaching compared to the other three universities.

Case study method was used by both Public and Private Universities within Eldoret Municipality as shown in the table 4.4.0. It was commonly used in university C with 100 % accepting the use of it. University M had 43 % accepting the use of it, university E had 54 % and university B had 39 % accepting the use of the Case study method to teach by lecturers.

However, most of the remaining methods were not commonly used as shown in the table 4.4.0. These includes Brain storming, where university E and university C had 50 % accepting the use of the method whereas university M and university B had 42 % and 34 % respectively accepting the use of Brain storming by lecturers to teach in both Public and Private Universities within Eldoret Municipality.

Team teaching method was not commonly used by both Public and Private Universities within Eldoret Municipality as shown in table 4.4.0. University C had 52 %, university E has 47 %, university M had 40 % and university B had 28 % accepting the use of Team teaching method by lecturers to teach. Team teaching method was least used by lecturers to teach in university B.

Role play method was also used by both Public and Private Universities within Eldoret Municipality by lecturers to teach as shown in table 4.4.0. This method was not commonly used in university E with 10 % accepting use of it, university B with 19 % accepting the use of it and university M with 24% accepting the use of role play whereas in university C it was used mostly to teach with 100 % accepting the use of it.

Heuristic methods were used in teaching in Universities within Eldoret Municipality. This method was not commonly used as shown in table 4.4.0. University B does not use this method frequently as it was shown by the response of 13 % accepting the use of it while the rest 87 % did not accept the use of it, it followed by university M which has 14 % accepting the use of heuristic methods whereas 86 % did not accept the use of it. University E had 36 % accepting the use of Heuristic methods while university C used Heuristic methods frequently with 100 % accepting the use of the method.

Seminar method was not commonly used in teaching in Universities within Eldoret Municipality as shown in table 4.4.0. The percentage of each university was as follows: University M was 18 %, university E 33 %, and university B 19 %. University C did not use Seminar method to teach since all did not agree with use of the method that was 100 % did not accept the use of the method to teach in their university.

Last but not least, the least used method to teach in Universities within Eldoret Municipality was Workshop conference method as shown in table 4.4.0. This method was not used completely in university E and university C. 100 % of the respondents disagreed with the use

of workshop conference method to teach in these universities. 6 % of respondent from University M accepted the use of this method to teach while 3 % accepted the use of this method from university B. Thus from the results it shows that both Public and Private Universities use workshop conference method to teach while it was not used also in both Public and Private University. Even though two Universities use it to teach, the percentage of those who accepted was small.

The findings on table 4.4.0 showed that both Public and Private Universities within Eldoret Municipality used the same methods of teaching. Hence, there was no difference in teaching methods used by lecturers in both Public and Private Universities within Eldoret Municipality. This finding was in agreement with a research finding of McCarthy, (1992) in an article “Common Teaching Methods” which stated that the strengths of lecture method that it presents factual material in direct, logical manner, contains experience which inspires, stimulates thinking to open discussion, and useful for large groups.

4.5 Relationship between Teaching Methods used and the Understanding of the Content

The third research objective was to find out if there was any relationship between teaching methods used to teach and the understanding of the content in both Public and Private Universities within Eldoret Municipality. Respondents were asked to indicate whether various teaching methods used in their faculties/schools make them understand the content. The findings are shown in table 4.5.

Table 4.5 Relationships between Teaching Methods and Understanding of Content

Do the various teaching methods used in your faculty make you understand the content?

Teaching methods	M	E	C	B
	Yes %	Yes %	Yes %	Yes %
Lecture method	38	9	23	18
Individual presentation	39	9	18	18
Assignment method	37	9	19	8
Discussion method	35	8	19	15
Project method	28	5	24	16
E-learning method	29	9	13	16
Demonstration method	24	4	22	11
Problem solving method	26	6	18	11
Case study method	20	5	15	10
Braining storming	19	4	7	9
Team teaching	19	4	7	7
Role play	14	1	10	6
Heuristic methods	10	3	10	4
Seminars	9	3	0	6
Workshop conferences	6	0	0	3

Note: M, E, C and B stands for Universities used.

The findings in table 4.5 showed the relationship between teaching methods used by lecturers and understanding of the content. This was shown by the percentages of each method from all the four universities, for instance lecture method had 88 % accepting that there was relationship between the lecture method and understanding of the content, individual presentation had 84 % accepting that there was relationship between it and understanding of

the content that is students were able to understand the content taught, assignment method had 80 % accepting that there was a good understanding of the content, discussion method had 78 % accepting that there was a good understanding of the content, project method had 72 % accepting that there was a good understanding of content, e-learning method had 64 % accepting the existence of relationship between it and understanding of the content that is students were able to understand the content, demonstration method had 62 % accepting that there was a good understanding of content and problem method had 60 % accepting that there was a good relationship between it and understanding of content. This research was in agreement with the research study by Casado (2000) who examined perception across six teaching methods, stated that most students preferred the lecture/discussion method. Also studies by Hunt, Haidet, Coverdale, and Richards (2003) examined student performance in team learning methods, finding positive outcomes as compared to traditional lecture based methods. A comparison of lecture combined with discussion versus active, cooperative learning methods by Morgan, Whorton, & Gunsalus (2000) demonstrated that the use of the lecture combined with discussion resulted in superior retention of material among students.

However, the following methods showed that there was a good relationship between it and understanding of the content but with smaller percentages compared to the one discussed above. These methods are case study with 49 % accepting the existence of relationship between it and understanding of the content, brain storming method with 39 % accepting that there was a relationship between it and understanding of the content, team teaching with 37 % accepting that there was a relationship between it and understanding of the content whereas in role play 30 % accepted that there was a relationship between it and understanding of the content, in heuristic methods 26 % accepted that there was a relationship

between it and understanding of the content whereas in seminar method 18 % accepted that there was a relationship between it and understanding of the content and last but not least workshop conference had 8 % accepting that there was a relationship between it and understanding of the content. This was in agreement with the study by Barnes & Blevins (2003) which suggested that active, discussion-based methods are inferior to the traditional based method. The finding of this study therefore, demonstrated that there was a relationship between teaching methods used by lecturers in Public and Private Universities within Eldoret Municipality and understanding of content taught.

Further, the respondents were asked to give their opinion on whether different methods used in universities lead to understanding of content. The table 4.5.1 shows the findings.

Table 4.5.1 Perception of Respondents on Understanding of Content

Teaching methods	Disagree	Neutral	Agree	Total
Role play method	11.4	0	88.6	100
Discussion method	8.6	9.8	81.6	100
Assignment method	14.8	9.2	76.0	100
Demonstration method	0	25	75	100
Lecture method	8	19	73	100
Individual presentation	8.4	19.6	72	100
Brain storming method	21.4	12.5	66.1	100
Case study method	14.5	20.3	65.2	100
Seminars	0	36.8	63.2	100

E – learning method	16	44	40	100
Workshop conferences	50	50	0	100

The finding in table 4.5.1 showed that majority of the respondents (73%) agreed that lecture led to understanding of the content while the rest 8% disagreed and 19 % are neutral. E-learning 40 % agree that it leads to good understanding of the content while 44 % were neutral and 16 % disagree an indication that it was a moderate method when it comes to understanding of content, on demonstration method 75 % agreed, 25 % were neutral and 0 % disagreed that student had a good understanding of content taught, on group discussions 81.6 % were in agreement that student had a good understanding of content while 9.8 % were neutral and 8.6 % disagreed. Further respondents were asked to indicate whether individual presentation leads to understanding of contents, majority 72 % were in agreement that this method led to understanding of content whereas 8.4 % disagree and 19.6 % were neutral, and on assignment 76 % agreed that it leads to good understanding of content whereas 14.2 % and 9.2 % were neutral, on Seminar method 63.8 % agreed that there was good understanding of content taught using seminar method while 36.8 % were neutral and none disagreed. On workshop conferences method 50 % agreed and 50 % disagreed, while on brainstorming majority 66.1 % agreed that there was good understanding of the content while 21.4 % disagreed and 12.5 % were neutral, and on role play method 11.4 % disagreed and 88.6 % agreed that they had good understanding of content. Further, they were asked about their perception of case study on understanding of content and 20.3 % were neutral, 14.3 % disagreed and 65.2 % agreed.

Deducing from the findings was that students were in agreement that role play, discussion method, assignment method, demonstration method, lecture method, individual presentation method, brain storming method, case study and seminars were among the most used methods that had strong relationship with the understanding of content. This showed a strong relationship between methods used and understanding of content. However, the e-learning method and workshop conference score the least percentage when it comes to understanding of content respectively as shown in table 4.5.1. In addition, some methods could not be rated anywhere by the respondents such as problem solving, heuristic methods and project method. This shows that students do not like those teaching methods which involved them so much such as project method, problem solving method and heuristic methods. This was in agreement with findings by Qualters (2001) in terms of students' preferences for teaching methods, students do not favour active learning methods because of the in-class time taken by the activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active. Thus, from table 4.5.1 the findings demonstrated that there was relationship between teaching methods used by lecturers in Public and Private Universities within Eldoret Municipality and understanding of content taught. Also it showed that students' role in the classroom is no longer a passive one. Indeed, students' input on the teaching-learning process is paramount as it is their education that is at stake. Inevitably, their perception presents methodological challenges. The opportunity to be "heard" raises their own awareness about their own learning experience (understanding of content) and the teaching process. Wittrock (1986) talks about this reciprocity, suggesting that research on students' thinking and perception functions as a mirror that can be used by both teachers and students to reflect upon their learning (understanding of content) and teaching, hence enhancing their understanding of teaching and increasing its outcome that is

understanding of content taught. In other words, learners' perception and observation on the methodology and content could work in practice and become a part of exploratory studies (Eken, 1999; Sidhu, 2003).

However, to confirm the relationship between teaching methods and understanding of the content the study used Chi-square test to determine the relationship between teaching methods and understanding of content by using the null hypothesis below where the hypothesis would be rejected when the calculated value is greater than the critical value and accepted when the critical value is greater than the calculated value.

H₀₁ There is no relationship between the teaching methods and understanding of content in universities within Eldoret municipality. The results were as shown in table 4.5.2.

Table 4.5.2 Relationship between Teaching methods and Understanding of content using Chi-square test

There was good understanding of contents when lecturers use the following methods of teaching	Chi-square	Critical value at $\alpha = 0.05$	df
Discussion method	326	9.488	4
Assignment method	235	9.488	4
Individual presentation	161	9.488	4
Other methods	142	9.488	4
Role play	109	9.488	4
Lecture method	105	9.488	4

Seminars	94	9.488	4
Workshop conceference	73	9.488	4
Case study	23	9.488	4
E-learning method	10	9.488	4
Did the various teaching methods used in your faculty make you understand the content	559	5.991	2
Year of study	60	7.815	3

The results showed that the null hypothesis was rejected. This was because the critical value was less than the calculated value as shown in table 4.5.2. Therefore, it proved that there was relationship between the teaching methods used to teach in university and the understanding of content in Universities within Eldoret Municipality. According to the question that the respondents were asked: Did the various teaching methods used in your faculty make you understand the content? The Chi-square value that was calculated (559) was greater than the critical value (5.991) at significance level of 5 %. This was an indication that there was a relationship between teaching methods and understanding of content. Also when the respondents were asked to rate the teaching methods using “ there was good understanding of contents taught when the lecturers used the following methods of teaching” namely: lecture, e-learning, group discussion , individual presentation, assignments, seminars, workshop conferences, brain storming, role play, case study and others the results from table 4.5.3 shows that the calculated value for each teaching method was greater than the critical value at the significance level of 5%. Namely discussion method which had 326 calculated value compared with critical value of 9.488, assignment method with calculated value of 235 as compared to critical value of 9.488, individual presentation method with calculated value of

161 as compared to critical value of 9.488, other methods which included problem solving, project method and heuristic methods had 142 calculated value compared with critical value of 9.4888, role play method with 109 calculated value compared with critical value of 9.488, and lecture method with 105 calculated value compared to critical value of 9.488. Thus, there was a relationship between teaching methods and understanding of content.

In addition to the above methods, seminar method had a calculated value of 94 with 9.488 critical value, workshop conference with calculated value of 73 and critical value of 9.488, case study method with calculated value of 23 and critical value of 9.488, brain storming with calculated value of 16 and critical value of 9.488 and e-learning method had a calculated value of 10 and table critical value of 9.488. This also proved that there was a positive relationship between teaching methods and understanding of content.

Moreover, at each level of study there was relationship between teaching methods and understanding of content as result shows greater value of calculate Chi-square value of 60 than the critical value at significance level of 5 % as shown in table 4.5.3. Hence, this finding demonstrated that there was a good relationship between teaching methods used by lecturers in Public and Private Universities within Eldoret municipality and understanding of content taught. Therefore, this study showed that students' role in the classroom is no longer a passive one and suggests that research on students' thinking and perception functions as a mirror that can be used by both teachers and students to reflect upon their learning (understanding of content) and teaching, hence enhancing their understanding of teaching and increasing its outcome that is understanding of content taught (Wittrock, 1986). In other words, learners' perception and observation on the methodology and content could work in

practice and become a part of exploratory studies (Eken, 1999; Sidhu, 2003). This study findings was similar to study findings by De Caprariis, Barman, & Magee (2001) who suggested that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. It was also similar to research on group-oriented discussion methods that has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hachevar, 2005).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the findings, conclusions and recommendations from the study and suggestions for further research. This study was set to find out the relationship between teaching methods and understanding of the content. To effectively find out this aim, the researcher used the following objectives:

- i. To find out the various teaching methods used in Universities within Eldoret Municipality.
- ii. To find out the difference in teaching methods used by lecturers in Public and Private Universities within Eldoret Municipality.
- iii. To find out the relationship between teaching methods and the understanding of the content in Universities within Eldoret Municipality.

Based on the results of this study, the discussion, the conclusion, recommendations from the research findings and suggestions for further research were looked under the following headings:

5.2.0 Summary and Discussion of the Findings

This section looked at the different methods used by lecturers to teach in universities within Eldoret municipality, analysis of different methods used by different universities within Eldoret municipality and the relationship between teaching methods used by lecturers in different universities within Eldoret municipality and understanding of the content.

5.2.1 Teaching Methods used in Universities within Eldoret Municipality

For the achievement of comprehensive objectives of teaching different courses, methods are needed to expose the learner to knowledge and experiences helpful in the development of understanding, critical thinking, practical skills and interest to be developed through a particular course. With regard to objective one, there were several different methods used by lecturers to teach in both public and private universities within Eldoret Municipality. These methods are: lecture method, assignment method, discussion method, individual presentation method, demonstration method, project method, problem solving method, e-learning method, seminar method, case study method, brain storming method, team teaching method, role play method, heuristic methods and workshop conference method as shown in table 4.3. The findings in table 4.3 indicated that the most used methods by lecturers in both public and private universities were lecture method (89 %), assignment method (71 %), discussion method (69 %) and individual presentation method (62 %). The possible reason for this was that lecture method was easy to use when handling a large number of students and learners are able to get direct feedback from lecturer, while for assignment method students stated that it was used by lecturers to appraised them through Continuous Assessment Tests (CATs). Discussion method was used mostly by lecturers because lecturers group them into several small groups and assigned task to discuss then present during lectures and on individual presentations method students stated that lecturers used when they assigned them individual task, examined and presented a written work for assessment. In addition to the above most used methods, Demonstration method (37 %), Project method (36 %), Problem solving method (34 %), E-learning method (31 %), Seminar method (20 %), Case study method (19 %), Brain storming method (16 %), Team teaching method (16 %), Role play (8 %), Heuristic methods (7 %) and Workshop conference (1 %) were not commonly used by

lecturers as shown in the findings on table 4.3. This could be because, it takes a lot of time to use it, a lot of resources and a lot of personnel was required therefore lecturers preferred the other methods of teaching. Also some of the methods were used only in certain courses only meaning the nature of the course also determined the method used. Some were more involving so that students take a lot of time to respond thus wasting a lot of precious time allocated to the lecturer and therefore preferred to use the simple one. The study was concurrent with Sajjad (1997) who indicated that higher education faculty strives to become more effective teachers so that students can learn better, and many explore methods to improve their teaching practice. Further, the findings concurred with a study by De Caprariis, Barman, & Magee (2001) who suggested that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. Further, research on group-oriented discussion methods has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005). Depending on the nature of subject, number of students, and the facilities available, there were different methods lecturers were using in the lecturerroom.

5.2.2 Difference in Teaching Methods used by Public and Private Universities within Eldoret Municipality

There was no significant difference in teaching methods used by lecturers to teach in different Universities within Eldoret Municipality as shown in the findings in table 4.4. Both Public and Private universities within Eldoret Municipality used the same methods for teaching Workshop conference and Seminar methods which were not used by University E and C. This could be because the same lecturers could be teaching both the universities and also

these methods are the mostly used methods by all lecturers since they are easy to use and did not required a lot of resources in terms of personnel. The study findings show that the Lecture method was the mostly used method in both Public and Private Universities within Eldoret Municipality; for instance, University M (94 %) accepted the use of Lecture method to teach. University E pointed that 93 % accepted the use of Lecture method to teach, University C agreed with the rest that Lecture method was used in teaching with 80 % accepting. Moreover, in University B 91 % accepted the use of Lecture method. Lecture method was accepted mostly by the respondents. It was the mostly used method in both Public and Private Universities within Eldoret Municipality. Other methods included Assignment method, Discussion method, and Individual presentation among others as shown in table 4.4. This finding was in agreement with a research finding of McCarthy, (1992) in an article “Common Teaching Methods” which stated that the strengths of lecture method that it presents factual material in direct, logical manner, contains experience which inspires, stimulates thinking to open discussion, and useful for large groups.

5.2.3 Relationship between Teaching Methods used and the Understanding of the Content

The third research objective was to find out if there was any relationship between teaching methods used to teach and the understanding of the content in Public and Private Universities within Eldoret Municipality. The findings show that there was relationship between teaching methods used by lecturers and understanding of the content that is there was good understanding of the content. This was shown by the percentages of each method from all the four universities as shown in table 4.5, for instance, lecture method had 88 % accepting that there was relationship between the lecture method and understanding of the content,

individual presentation had 84 % accepting that there was relationship between it and understanding of the content that is students were able to understand content taught, assignment method had 80 % accepting that there was a good understanding of the content, discussion method had 78 % accepting that there was a good understanding of the content, project method had 72 % accepting that there was a good understanding of content, e-learning method had 64 % accepting the existence of relationship between it and understanding of the content that is students were able to understand content, demonstration method had 62 % accepting that there was a good understanding of content and problem solving method had 60 % accepting that there was a good relationship between it and understanding of content. This research was in agreement with the research study by Casado (2000) who examined perception across six teaching methods which stated that most students preferred the lecture/discussion method. Also studies by Hunt, Haidet, Coverdale, and Richards (2003) examined student performance in team learning methods, finding positive outcomes as compared to traditional lecture based methods. Also in line with this study was a comparison of lecture combined with discussion versus active, cooperative learning methods by Morgan, Whorton, & Gunsalus (2000) demonstrated that the use of the lecture combined with discussion resulted in superior retention of material among students.

However, the following methods show that there was a good relationship between it and understanding of the content but with smaller percentages compared to the one discuss above. These methods are case study with 49 % accepting the existence of relationship between it and understanding of the content, brain storming method with 39 % accepting that there was a relationship between it and understanding of the content, team teaching with 37 % accepting that there was a relationship between it and understanding of the content whereas in

role play, 30 % accepted that there was a relationship between it and understanding of the content, in heuristic methods 26 % accepted that there was a relationship between it and understanding of the content whereas in seminar method 18 % accepted that there was a relationship between it and understanding of the content and last but not least workshop conference had 8 % accepting that there was a relationship between it and understanding of the content. This was in agreement with the study by Barnes & Blevins (2003) which suggested that active, discussion-based methods are inferior to the traditional based method.

Further, the respondents were asked to give their opinion on whether different methods used in universities led to understanding of content. The findings in table 4.5.1 indicated that majority of the respondents 88.6 % agreed that role play led to understanding, discussion method with 81.6 % agreed that there was a positive understanding of the content, assignment method with 76 % agreed that there was a positive understanding of content when it was used for teaching by lecturers. Demonstration method with 75 %, lecture method with 73 %, and individual presentation with 72 % agreed that there was a good understanding of the content taught when lecturers use them to teach. Also brain storming method with 66.1 %, case study method with 65.2 %, seminar method with 63.2 % and E- learning with 40 % agreed that it had a good understanding of the content. On workshop conferences method 50 % disagreed, 50 % neutral and zero percent agreed. Thus, deducing from the findings was that students were in agreement that role play, discussion method, assignment method, demonstration method, lecture method, individual presentation method, brain storming method, case study and seminars were among the methods that had strong relationship with the understanding of content. This was in agreement with the studies by Hunt, Haidet, Coverdale, and Richards (2003) who examined student performance in team learning methods, finding positive

outcomes as compared to traditional lecture based methods. Similarly to a study on a comparison of lecture combined with discussion versus active, cooperative learning methods by Morgan, Whorton, & Gunsalus (2000) demonstrated that the use of the lecture combined with discussion resulted in superior retention of material among students. This results also show that students favour most those methods which are student-centred in understanding the content than the teacher-centred methods, as it shows that role play, discussion method, assignment method and demonstration method were among the highest in the list when it came to understanding of content. This was in agreement with study by Fosnot (1989), which suggested that the traditional passive view of learning involves a situation where material is delivered to students using a lecture-based format. In contrast, a more modern view of learning is constructivism, where students are expected to be active in the learning process by participating in discussion and/or collaborative activities.

However, the e-learning method and workshop conference scored the least percentage when it came to understanding of content respectively as shown in table 4.5.1. In addition some methods could not be rated anywhere by the respondents such as problem solving, heuristic methods and project method. This illustrated that students were indecisive on making the decision concerning the relationship between understanding of the content taught and teaching methods. This shows that students did not like those teaching methods which involved them so much such as project method, problem solving method and heuristic methods. This was in agreement with findings by Qualters (2001) in terms of students' preferences for teaching methods, students do not favour active learning methods because of the in-class time taken by the activities, fear of not covering all of the material in the course, and anxiety about changing from traditional classroom expectations to the active.

Moreover, the hypothesis test showed a clear indication that there was a strong relationship between teaching methods used and the understanding of content in Universities within Eldoret Municipality since the null hypothesis was rejected as shown by the results in table 4.5.2. Therefore, it shows that there was relationship between the teaching methods used to teach in university and the understanding of content in Public and Private Universities within Eldoret Municipality. According to the question that the respondents were asked: Did the following methods used in your faculty make you understand the content? The Chi-square value that was calculated (559) was greater than the critical value (5.991) at significance level of 5 %. This was an indication that there was a relationship between teaching methods and understanding of content.

Further, when the respondents were asked to rate the teaching methods using: “ There was good understanding of contents taught when the lecturers used the following methods of teaching” namely: lecture, e-learning, group discussion , individual presentation, assignments, seminars, workshop conferences, brainstorming, role play, case study and others the results from table 4.5.3 shows that the calculated value for each was greater than the critical value at the significance level of 5%. Namely: discussion method which had 326 calculated value compared with critical value of 9.488, assignment method with calculated value of 235 as compared to critical value of 9.488, individual presentation method with calculated value of 161 as compared to critical value of 9.488, other methods which included problem solving, project method and heuristic method had 142 calculated value compared with critical value of 9.4888, role play method with 109 calculated value compared with critical value of 9.488, and lecture method with 105 calculated value compared to critical

value of 9.488. Thus, from this findings it is shown that there was a relationship between teaching methods and understanding of content. This showed that students preferred student-centred teaching methods for understanding the content. This was in agreement with a study by De Caprariis, Barman, & Magee (2001) which suggested that lecture leads to the ability to recall facts, but discussion produces higher level comprehension. It was also in agreement with the research on group-oriented discussion methods which has shown that team learning and student-led discussions not only produce favorable student performance outcomes, but also foster greater participation, self confidence and leadership ability (Perkins & Saris, 2001; Yoder & Hochevar, 2005)

In addition to the above methods, seminar method had a calculated value of 94 with 9.488 critical value, workshop conference with calculated value of 73 and critical value of 9.488, case study method with calculated value of 23 and critical value of 9.488, brain storming with calculated value of 16 and critical value of 9.488 and e-learning method had a calculated value of 10 and critical value of 9.488. This also showed that there was a positive relationship between teaching methods and understanding of content taught in class.

Moreover, at each level of study there was relationship between teaching methods and understanding of content taught as result showed greater value of calculated Chi-square value (60) than from critical value at significance level of 5 % as shown in table 4.5.3. Thus, there was a relationship between teaching methods and understanding of content.

This study shows that for students to understand the content they need certain principles to enable them understand the content in this case the teaching methods. This study was in

agreement with the study of Nair and Fisher (2001) in their study of primary and secondary school classroom environments, found that the quality of instruction resulting from using relevant instructional methods is one of the factors contributing to the variance in students' cognitive and affective outcomes. In a similar study by the same authors using tertiary/higher and senior secondary school education levels, it was found that students at the tertiary levels perceived their classroom environment more favorably in terms of the innovative teaching methods employed by their instructors in their classes. Thus, teaching methods used to teach contribute a lot to the understanding of content and therefore method used should provide learner with content that would enable him or her understand the challenges entailed in the study.

5.3 Conclusion

The following conclusions were made on the basis of the research findings:

First, the findings show that the following methods were used by lecturers to teach in Universities within Eldoret Municipality: Lecture, Assignment, Discussion, and Individual presentation as the most preferred methods of teaching, others include; Problem solving, e-learning, Seminars, Workshop conference and Team teaching, Demonstration methods, Role play, Project method, Heuristic methods, Case study and Brain storming.

Secondly, the research findings show that lecturers preferred the common methods of teaching in both Public and Private Universities within Eldoret Municipality. These methods were lecture, assignment, discussion, individual presentation, demonstration, project, problem solving, e-learning, case study, brain storming, role play, and team teaching and heuristic methods.

Thirdly, the findings show that there was relationship between teaching methods used in various universities and the understanding of content in Universities within Eldoret Municipality. This was evidently shown when the respondents stated that they had a good understanding of content when the lecturers use lecture method, individual presentation, assignment method, discussion method, project method, e-learning method, demonstration method, and problem solving method.

Fourthly, the results show that students preferred learner-centred methods to be used by lecturers while teaching since they had good understanding of content such as: role play, demonstration method, brain storming method, case study and seminar methods. This was because students' perception agreed that there was good understanding when lecturers use: role play, followed by discussion method, assignment method, demonstration method, lecture method, individual presentation, brain storming, case study, seminar and e-learning respectively. Further more, those methods that were involving such as: problem solving, project method and heuristic methods students could not make any decision concerning them. Meaning they did not support fully the use of them since they were so involving.

5.4 Recommendations

On the basis of the findings, this study concluded that different methods were used for teaching in Universities within Eldoret Municipality, there was no significant difference in methods used by lecturers in different universities and there existed a relationship between teaching methods and understanding of content. Based on these findings, the following recommendations were made:

Because of the significant relationship between teaching methods and understanding of content, this study recommended that lecturers explore all the different methods of teaching so that it promotes a deep approach to learning by requiring the student to actively engage with the subject, encouraging students to reflect upon their learning, learn from what has gone well and to consider what has not worked so well by providing teaching methods and learning environments that reach all students.

Lecturers should also integrate those teaching methods that were not favoured by the students with those that were preferred by the students so that it makes teaching and learning enjoyable and understand the content well. These methods were Demonstration method, Project method, Problem solving method, E-learning method, Seminar method, and Case study method, Brain storming method, Team teaching method, Role play, Heuristic methods and Workshop conference.

Lecturers should use those methods that were student-centre such as: role play, demonstration, discussion method, assignment, individual presentation, brain storming and case study in addition to commonly used methods since students' perception show that they had good understanding of content when they were used.

5.5 Suggestions for Further Studies

The quick explosion of the internet and of the World Wide Web in particular has revolutionized nearly all forms of interaction, but has been slower to affect the methods of teaching. While many institutions utilize Internet resources as a practical tool for

supplementing classroom mechanics, the actual process of instruction has remained primarily a face-to-face process. This study recommends the following suggestions for further studies:

- (1) This study should be replicated in other faculties or schools to check if the same findings are obtained.
- (2) A further study should be done on the impact of new technology on teaching and understanding of content such as Information and Communication Technology.
- (3) Also a further study should be done on the effectiveness of learner-centred teaching methods in comparison to teacher-centred methods and its relationship with the understanding of content.
- (4) The same study should be used in schools and tertiary level to see if the same results are obtained.

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APPENDIX A: CONSENT LETTERCONSENT LETTER.

Yegon Bernard Kipkurui

Department of Educational Psychology

Moi University

P. O. Box 3900,

ELDORET

Dear Participant,

Thank you very much for your willingness to participate in this survey. This questionnaire is meant to find out your opinion on how you understand your academic work. Your responses will enable lecturers and other stakeholders understand how learning conditions can be improved so as to improve on academic performance.

Your responses will be highly appreciated. Please note that all the information you provide will be treated as confidential and will be used only for this research work. Please do not write your name or admission on the questionnaire.

Thank you for your participation and effort in completing the questionnaire.

Yours faithfully,

Yegon Bernard Kipkurui

APPENDIX B: QUESTIONNAIRE

QUESTIONNAIRE

This questionnaire is for a study to analyze teaching methods used in universities and their relation on learning. a) kindly note that this is not an examination.

b) There is no right or wrong answers.

PART A: PERSONAL INFORMATION

1. Name of your school/ Faculty Business () Education ()
2. Year of study 1 () 2 () 3 () 4 ()

PART B: METHODS OF TEACHING

3. The following are methods used in teaching by lecturers at the university. Please (√) tick any that are used by your lecturers.

Teaching methods	Tick (√)
Lecture	
e-learning	
Discussion method	
Individual presentation	
Assignment method	
Seminars	
Workshop Conferences	
Brainstorming	
Role play	
Case study	
Demonstration method	
Problem solving method	
Team teaching method	
Heuristic method	
Project method	

4. Any other method (specify)

.....

.....

5. Did the various teaching methods used in your faculty make you understand the content Yes () No ()

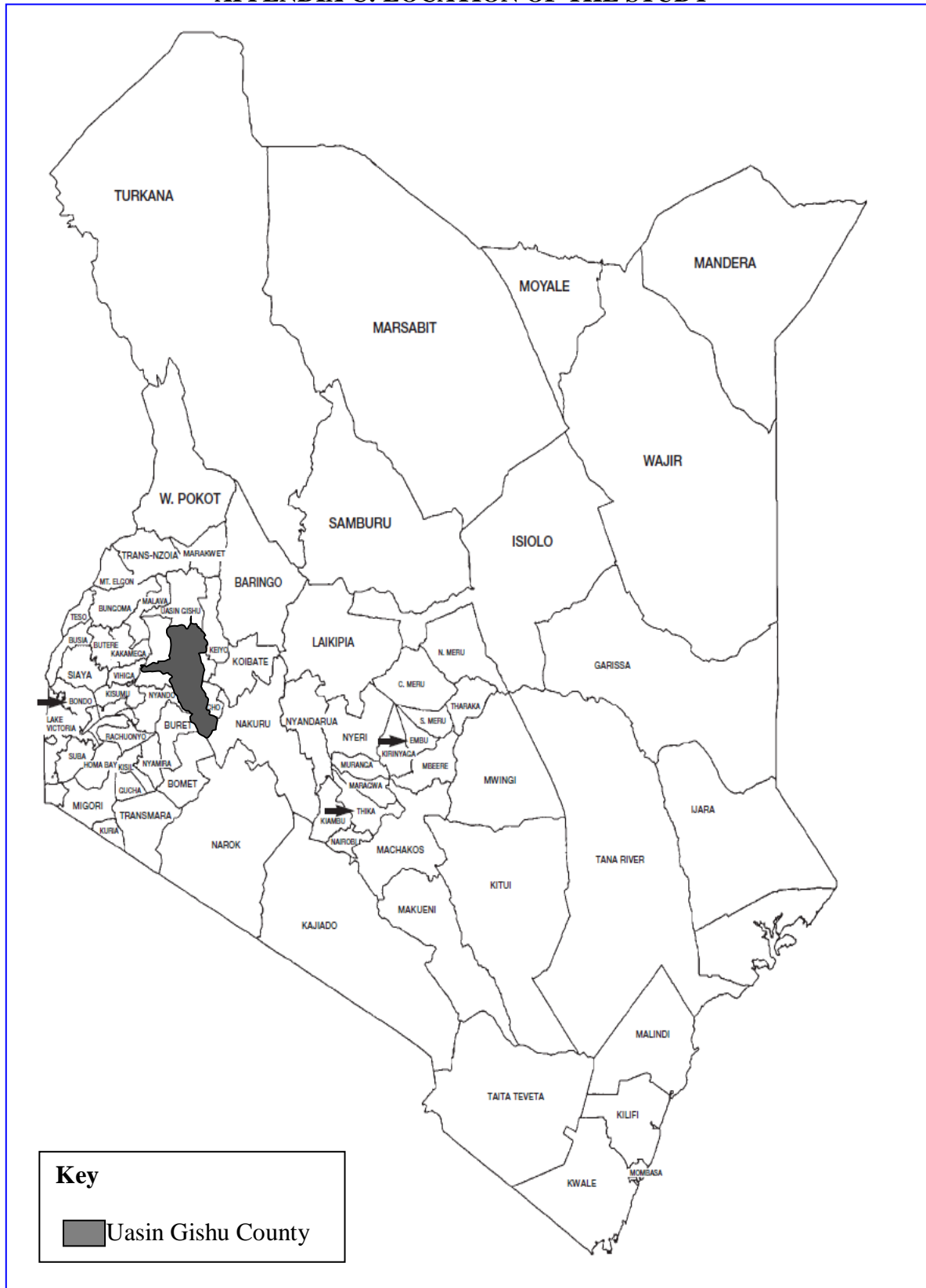
6. Please tick (√) the number that best describe your perception regarding the following statement on the methods of teaching. The numbers represents the following responses:

1 = Strongly disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly agree

	Rating				
	1	2	3	4	5
There is good understanding of contents taught when the lecturers use the following method of teaching					
Lecture					
e-learning					
Group discussion					
Individual presentation					
Assignments					
Seminars					

Workshop Conferences					
Brainstorming					
Role play					
Case study					
Others					

APPENDIX C: LOCATION OF THE STUDY



(Source: Internet Omni Resources - www.omnimap.com)

APPENDIX D: RESEARCH AUTHORIZATION

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
 Telephone: 254-020-241349, 2213102
 254-020-310571, 2213123
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P.O. Box 30623-00100
 NAIROBI-KENYA
 Website: www.ncst.go.ke

Our Ref:

Date:

NCST/RRRI/12/1/SS-011/1432/4

17th October, 2011

Benard Kipkurui Yegon
 Moi University
 P. O. Box 3900
 ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "*An analysis of teaching methods used in universities & their effects on understanding of content: A case of universities in Eldoret municipality*" I am pleased to inform you that you have been authorized to undertake research in **Uasin Gishu County in Rift Valley Province** for a period ending *30th November 2012*.

You are advised to report to the **Vice Chancellors of the selected Public & Private Universities in Rift Valley Province** before embarking on the research project.

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

P. N. NYAKUNDI
FOR: SECRETARY/CEO

Copy to:

The Vice Chancellors
 All Public Universities in Rift Valley Province
 All Private Universities in Rift Valley Province