

**INTER-DISCIPLINARY TRAINING OF COUNSELLORS IN COUNSELLOR
TRAINING INSTITUTIONS
IN KENYA**

BY

PAMELA M. LUNJALU

MOI UNIVERSITY

ELDORET

**A THESIS SUBMITTED TO THE SCHOOL OF MEDICINE
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
THE DEGREE OF DOCTOR OF PHILOSOPHY IN
MEDICAL EDUCATION.**

AUGUST 2015

DECLARATION
DECLARATION BY THE CANDIDATE

I declare that this thesis is my original work and has not been presented for a degree award in any other university. No part of this thesis should be reproduced without prior permission / authority of the author and / or Moi University.

Lunjalu M. Pamela

Date

D.Phil/SM/03/06

Moi University.

DECLARATION BY SUPERVISORS

This thesis has been submitted with our approval as university appointed supervisors.

PROF. PATRICK A. KAFU

Lecturer

School of Education
University of Eldoret
ELDORET

Date

PROF. SIMON KANG'ETHE

Department of Medical Education

School of Medicine

Moi University

ELDORET

Date

DEDICATION

This thesis is dedicated to Dr. Philomena Ndambuki who has inspired me to be what I am today.

ACKNOWLEDGEMENT

This work could not have been possible without the support I received from various sources. I therefore wish to express my sincere gratitude and appreciation to the Almighty God who kept me alive and gave me the grace to pursue this course to the end. A lot of thanks go to Moi University in general and the School of Medicine in particular for providing support and opportunity to do this study. Special thanks go to Prof.Patrick A.Kafu and Prof.Simon Kangethe who supervised this work, for their assistance, guidance and invaluable feedback throughout the preparation of this report. I also acknowledge input received from Prof.Mutema. Thanks to Moi university Medical Education students and staff from all whom I received wonderful insights and had the privilege to interact. Many thanks to Dr. Reuben Nthamburi for his assistance in statistical data analysis.

I am grateful to the National Council for Science and Technology for granting me a research permit and allowing me to access necessary educational and counselling training institutions in Kenya. Many thanks to all Heads of Department, lecturers, trainers, counsellors and students who participated in this research. Their willingness to participate enabled me to complete this study.

Finally, I am greatly indebted to my dear husband Joram, children: Hannah, Micah and Joyce for their forbearance, prayers and encouragement. You were always there for me.

To all these people and many others whom I have not mentioned, I say thank you so much and may God bless you abundantly.

ABSTRACT

Interdisciplinary training approach and the use of media resources is known to play a major role in enhancing teaching and learning in Educational institutions. Despite this awareness, a number of challenges associated with implementation of this approach in training have been revealed. There is therefore need to have a practical strategy for implementation of interdisciplinary training approach and effective use of media resources to facilitate training and preparation of counsellors in addressing emerging and complex counselling issues in the society today. The main objective of this study was to establish the extent of implementation of inter-disciplinary training programme for counsellors. Specifically, the study sought to identify the instructional media resources used in counsellor training institutions, establish the relationship between interdisciplinary training and performance of students, and establish the relationship between instructional media resources and performance of students and, to determine barriers encountered in the implementation of interdisciplinary training programmes in counsellor training institutions in Kenya. The study adopted a descriptive cross-sectional survey design and the problem under study related to the Context-Input-Process-Product conceptual framework. A purposive sampling procedure was used to determine key informants. Therefore the study population included 52 diploma, 80 undergraduate 4th year and 52 masters' students, 20 trainers from Kenya Association of Professional Counsellors and Tec Institute of Management, 2 heads of department, 17 lecturers from Kenyatta and Moi University and 17 counsellors from Moi Teaching and Referral Hospital. After piloting the instrument, data was collected using questionnaires, interview guide and observation checklist. Qualitative data was coded into categorical variables and quantitative data was analyzed using Statistical Package for Social Sciences (SPSS v.17). The relationship variables were analyzed using Pearson Product Moment Correlation and results presented using tables, bar chart and pie charts. Findings revealed that interdisciplinary programmes existed but only in a form of short interactive sessions. The programme lacked the pre-requisite for running inter-disciplinary programmes that bring about meaningful change in the lives of learners. Additionally, instructional media resources played a major role in the performance of students. The newest mode of media technology and textbooks were the most preferred instructional media resources although the slow pace of adoption of media technology, incompetency and inadequacy affected their effective use. Although there was no relationship between interdisciplinary training and the performance of students, the study concluded that inter-disciplinary counselling approach enhances psychological counselling care. The major challenge facing the programme was that some professionals felt highly territorial about their disciplines hence felt threatened as new views of their subjects are promoted. Based on these findings the study recommended the development of policy guidelines to facilitate interdisciplinary education by focusing mainly on teaching processes that bring about collaborative competencies necessary for current and future health professionals.

TABLE OF CONTENTS

<u>DECLARATION</u>	
<u>DEDICATION</u>	
<u>Table of Contents</u>	
<u>LIST OF TABLES</u>	1
<u>ABBREVIATIONS AND ACRONYMS</u>	1
<u>CHAPTER ONE</u>	
<u>INTRODUCTION</u>	
<u>1.0 Overview</u>	
<u>1.2 Background to the study</u>	
<u>1.3 Statement of the Problem</u>	
<u>1.4 Objectives of the Study</u>	
<u>1.4.1 Main Objective</u>	
<u>1.4.2 Specific Objectives</u>	
<u>1.5 Research Questions</u>	
<u>1.6 Research Variables</u>	
<u>1.7 Significance of the study</u>	
<u>1.8 Scope and Limitations of the Study</u>	1
<u>1.9 Definition of Operational terms</u>	1
<u>1.10 Summary of the chapter</u>	1
<u>CHAPTER TWO</u>	1
<u>LITERATURE REVIEW</u>	1
<u>2.1 Introduction</u>	1
<u>2.2.1 Background of inter-disciplinary education</u>	1
<u>2.2.2 Inter-disciplinary Approach to Teaching and Learning</u>	1
<u>2.2.3 Use of Instructional Media Resources</u>	2
<u>2.2.4 Meaning and types of Instructional Media Resources</u>	2
<u>2.2.4.1 Meaning of instructional media resources</u>	2

2.2.4.2 Types of media resources	2
2.2.4.3 Non-Projected media	2
2.2.4.4 Projected Media	2
2.2.4.5 Real or three dimensional Materials	2
2.2.4.6 Computer Technology	2
2.2.4.7 Access to Media Resources	2
2.2.4.8 Competency Considerations	2
2.2.5 Barriers encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with psychological needs	3
2.2.6 Conceptual Framework	3
2.2.6 Summary of the Chapter	3
CHAPTER THREE	3
RESEARCH METHODOLOGY AND DESIGN	3
3.1 Introduction	3
3.2 Research Design	3
3.3 Geographical Location of the Study	4
3.3.1 Moi University	4
3.3.2 Kenyatta University	4
3.3.3 Moi Teaching and Referral Hospital	4
3.3.4 TEC Institute of Management (Eldoret)	4
3.3.5.1 Kenya Association of Professional Counsellors	4
3.3 Study Population	4
3.5 Sample and Sampling Techniques	4
3.6 Data Collection Instruments	4
3.6.1 Self-Administered Questionnaires	4
3.6.2 Interview Schedule	4
3.6.3 Observation Schedule	5

	8
3.7 Piloting	5
3.7.1 Validity	5
3.7.1.1 Construct Validity	5
3.7.1.2 Content Validity	5
3.7.2 Reliability	5
3.8 Data Collection Procedures	5
3.9 Data Analysis Procedures	5
3.10 Ethical Considerations	5
3.12 Summary of the Chapter	5
CHAPTER FOUR	5
DATA PRESENTATION, ANALYSIS AND INTERPRETATION	5
4.0. Overview	5
4.1.1 Background Information of the Respondents	5
4.1.2 Qualifications of trainers and practicing counsellors	5
4.1.2 Inter-disciplinary approach in training and counselling practice	5
4.4.2 Lecturer’s satisfaction with the extent of networking and sharing of best practice with other institutions	6
4.4.3 Professional disciplines of the collaborating Institutions	6
4.5.3 Non Projected Media	7
4.5.4. Students challenges encountered when learning through use of instructional media resources	8
4.5.5. Competency in operating media resources	8
4.5 The third objective of the study sought to establish the relationship between the inter-disciplinary training programme and student performance	9
4.6. The fourth objective was establish the relationship between the instructional media resources and the performance of students	9
4.7 Barriers to inter-disciplinary training programme	9
4.8 Summary of the Chapter	9

<u>CHAPTER FIVE</u>	9
<u>DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS</u>	9
<u>5.0 Introduction</u>	9
<u>5.1 Discussion of Results</u>	9
<u>5.4. Recommendations</u>	10
<u>5.5. Recommendations for Further Research</u>	10
<u>REFERENCES</u>	10
<u>APPENDICES</u>	11
<u>Appendix I: Students Questionnaire</u>	11
<u>Appendix II: Questionnaire for Lecturers / Trainers</u>	11
<u>Appendix III: Heads of Department Interview Guide</u>	12
<u>Appendix IV: Observation Check List</u>	12
<u>Appendix V: Informed Consent Letter</u>	13
<u>Appendix VI: Sample Size Table</u>	13
<u>Appendix VII: Research authorisation</u>	13
<u>Appendix VIII: Institutional Research and Ethics Committee Formal Approval</u>	13
<u>Appendix IX: Request to conduct research</u>	13

LIST OF TABLES

<u>Table 3. 1: Sampling frame</u>	47
<u>Table 4. 157Sex of Respondents</u>	57
<u>Table 4. 2Level of Academic and Professional Qualifications</u>	57
<u>Table 4. 3: Lecturers and Practising Counsellors' Years of Experience</u>	58
<u>Table 4. 4: Awareness of the Programmes</u>	59
<u>Table 4. 5: Lecturers Multiple Response for Inter-Disciplinary Programmes Frequencies</u>	60
<u>Table 4. 6Practising Counsellors Extent of Incorporating Inter-Disciplinary Approach</u> ..	60
<u>Table 4. 7: Multiple Responses on the Inter-Disciplinary Programmes Frequencies</u>	61
<u>Table 4. 8: Benefits of inter-disciplinary counselling programme (Lecturers)</u>	62
<u>Table 4. 9: Diploma Frequencies Multiple Responses</u>	63
<u>Table 4. 10: BA/BED Frequencies Multiple Responses</u>	63
<u>Table 4. 11: Masters Level Frequencies Multiple Responses</u>	64
<u>Table 4. 12 : Postgraduate Frequencies Multiple Responses</u>	64
<u>Table 4. 13 : Practising counsellors Interdisciplinary programs Frequencies Multiple responses</u>	65
<u>Table 4. 14: Satisfaction with the extent of networking and sharing of best practice</u>	65
<u>Table 4. 15: Diploma Professional Disciplines Frequencies Multiple Responses</u>	66
<u>Table 4. 16: Diploma Program Description Frequencies Multiple Responses</u>	66
<u>Table 4. 17: Undergraduate Professional Disciplines Frequencies Multiple Responses</u> ..	68
<u>Table 4. 18: Undergraduate program description frequencies multiple responses</u>	69
<u>Table 4. 19: Master professional disciplines Frequencies multiple responses</u>	69
<u>Table 4. 20: Masters Professional disciplines Frequencies multiple responses</u>	70
<u>Table 4. 21: PhD professional disciplines Frequencies multiple response</u>	70
<u>Table 4. 22: PhD Professional disciplines Frequencies multiple responses</u>	71
<u>Table 4. 23: Practising counsellors Program description Frequencies multiple responses</u>	72
<u>Table 4. 24: Students Frequencies for Media Resources in Enhancing Learning</u>	73
<u>Table 4. 25: Students Mean for Media Resources in Enhancing Learning</u>	73

<u>Table 4. 26: Lecturer’s Degree of Availability Frequencies for Projected Media Resources for Teaching and Learning</u>	74
<u>Table 4. 27: Lecturers Mean on the Degree of Availability of Media Resources for Teaching and Learning</u>	74
<u>Table 4. 28: Students Mean for Non-Projected Media Resources in Enhancing Learning</u>	75
<u>Table 4. 29: Lecturers Views on Availability Frequencies for Non-Projected Media for Instruction</u>	77
<u>Table 4. 30: Lecturers Views on Degrees of Availability Mean for Non-Projected Media for Instruction</u>	77
<u>Table 4. 32: Lecturer response Mean score on the use of projected media to support learning</u>	79
<u>Table 4. 33: Students Mean score on the use of non-projected media to support learning</u>	80
<u>Table 4. 34: Lecturers Mean Score on the Use of Non-Projected Media to Support Learning</u>	81
<u>Table 4. 35: Students Mean Score on Satisfaction of Media Resources in Supporting</u>	82
<u>Table 4. 36: Students Challenges Encountered In the Use of Projected Media in Learning</u>	83
<u>Table 4. 37: Students Challenges Encountered in the Use of Non-Projected Media in Learning</u>	84
<u>Table 4. 38: Students challenges encountered in the use of facilities in learning</u>	85
<u>Table 4. 39: Lecturer’s challenges encountered when using media resources for teaching and learning</u>	86
<u>Table 4. 40: Challenges affecting adequacy</u>	87
<u>Table 4. 41: Policies regulating use of media resources in instruction</u>	90
<u>Table 4. 42: Relationship between inter-disciplinary training programme and student Performance</u>	91
<u>Table 4. 43: Relationship between teaching and learning resources and the Performance of Students</u>	92
<u>Table 4. 44: Lecturers’ Responses on Barriers to Inter-Disciplinary Practice</u>	93
<u>Table 4. 45: Practising Counsellors’ Responses on Barriers to Inter-Disciplinary Practice</u>	94
<u>Table 4. 46: Lecturers’ Responses on the Possible Solutions to the Barriers</u>	94

LIST OF FIGURES

Figure 1. 2: Components of Stufflebeam's (2003) CIPP Model	36
Figure 3. 1: Design of the study.....	40
Figure 4. 1: Lecturers Training in the use of media resources	88
Figure 4. 2: Grade attained in use of media resources training	89

ABBREVIATIONS AND ACRONYMS

CAIPE	Centre for Advancement of Interprofessional Education (in United Kingdom)
CIPP	Context Input Process and Product
CUE	Commission for University Education
ICT	Information Communication and Technology
IREC	Institutional Research & Ethics Committee
KAPC	Kenya Association of Professional Counsellors
MOEST	Ministry of Education, Science and Technology
IMR	Instructional Media Resources
MTRH	Moi Teaching and Referral Hospital
NCTE	National Council of Teachers of English
NPMR	Non-Projected Media Resources
PMR	Projected Media Resources
SPSS	Statistical Package for Social Sciences

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background to the study, statement of the problem, objectives, research questions, significance, scope and limitations and a conceptual model of the study.

1.2 Background to the study

Education is generally changing in terms of teaching, research and learning due to a subtle restructuring of knowledge in the twentieth century thus, moving from narrow to wider, more holistic education. At ever growing rates, students are pursuing courses at the interfaces of disciplines with intent to broadening their educational experiences. Currently there is a growing need among learners at various levels to gain knowledge and skills in one or more fields beyond their primary majors in order to view complex problems and solutions from a holistic and global perspective (Rustum, 2000). It is in this context that educators, researchers and practitioners are turning to inter-disciplinary approaches with the aim of providing ample opportunities to students to reflect upon the process of their problem solving and their insights on the relationship between knowledge base and skills of different disciplines (Stefanovic, 1996). Given this scenario, it is hardly surprising that inter-disciplinary is a concept of wide appeal.

Jacobs (1989) defines inter-disciplinary learning as a knowledge view and curriculum approach that consciously applies methodology and language from more than one

discipline to examine a central theme, issue, problem, topic or experience. Along similar lines but with more granularity, Augsburg, (2005) explains that inter-disciplinary is most often used in educational circles when researchers from two or more disciplines pool their approaches and modify them so that they are better suited to the problem at hand, including the case of the team-taught course where students are required to understand a given subject in terms of multiple traditional disciplines. Klein (1990) concurs, contending that interdisciplinarity implies a deeper degree of collaboration between team members and involves an effort to integrate and translate, at least to some degree, themes shared by several disciplines in order to propose solutions to complex problems in a flexible and open-minded way. The goal of such training is to develop the trainers' capacity for interdisciplinary collaboration and to form teams around the needs of clients and population being served. However, findings from previous studies and literature reviewed have revealed a number of gaps in terms of developing student capacities to integrate or synthesize disciplinary knowledge and modes of thinking (AACU, 2005), thus the need to carry out this study.

The appreciation of inter-disciplinary is not entirely new to liberal arts education. Klein (2005) attests that roots of the concepts lie in a number of ideas that resonate through modern discourse-the ideas of a unified science, general knowledge, synthesis and the integration of knowledge. The history of science from the time of the earliest scholars abounds with examples of integration of knowledge from many research fields. Huber and Hutchings (1993:28) noted that the Greek philosopher Seneca held the view that education should produce citizens who could call their minds their own through study of

the subjects and methods best suited for enlightened decision-making and judgements. From the foregoing discussion there is need for different fields such as social scientists, humanities and scientists to join in addressing complex problems that must be tackled simultaneously with deep knowledge from different perspectives.

However, the arrival of interdisciplinarity may have stirred up controversy than it has settled. Barriers have been daunting, and many efforts at developing interdisciplinary educational programmes have failed or simply fallen by the wayside. This should perhaps not be surprising given that interdisciplinarity is often a “critique of ‘old knowledge’” (Bird, 2001:466) and a “challenge to the limitations or premises of the prevailing organization of knowledge” (Salter and Hearn, 1996: 43). Critics of inter-disciplinary approach still contend that thematic units of different disciplines are likely to fall short of teaching in-depth content to students. Secondly, they argue that the superficial coverage of a topic can give students the wrong idea about school, perhaps missing the idea of curriculum integration in the first place (Barton and Smith, 2000). This argument is mostly advanced by the fear of some teachers who often feel “territorial” about their content areas and sometimes feel threatened when another discipline offers a differing viewpoint from their own (Jacobs, 1989). Furthermore, there is also concern that integrated teaching discounts the value of deep subject-specific knowledge, which is essential for specialization in areas like medicine, law and engineering.

Jacobs (1989) acknowledges the challenges but suggests possible solutions of addressing them. One of the ways would be through cultivating inter-disciplinary as a habit of mind, which, he emphasizes, is both possible and essential to the education of informed and

engaged citizens and leaders capable of analyzing, evaluating, and synthesizing information from multiple sources in order to render reasoned decisions on the increasing complexity of counselling care. The ability to collaborate is clearly vital when the plethora of health professionals and their specialization and the role differentiation combine with the complexity of counselling service demands to make interdependency among professionals essential. While there is some consensus about what are-or should be-the goals of such programmes, there is less agreement about how best to structure these inter-disciplinary programmes and even how to measure their success. This study seeks to determine the extent of implementation of inter-disciplinary approach to training counsellors.

The world is passing through a phase of expansion in the need for new educational and training provision, at least partly due to the rapid changes in the educational system. Currently, higher education in Kenya has been experiencing myriads of challenges ranging from the surging numbers of students, financial constraints, changes in curriculum and teaching/learning strategies to competition from other regional institutions. One of the options out of these challenges has been the adoption and adaptation to modern media resources in the teaching and learning process. Accordingly, various media resources have been used with varied levels of effectiveness (Kei, 2011). It is in this context that there is need to constantly develop and design appropriate media resources that can facilitate the process of teaching and learning. This is more so in professional disciplines such as education where there is explosion of knowledge and technology required in order to solve the existing and emerging educational issues.

The need to use media resources in training counsellors to ensure effective learning and practice has been recognized for many years. A lot of effort has been made over the years to make educationists aware of the usefulness of media resources. Brusca (1995) found that apart from training institutions being on a swift path to integrate learning technologies into classroom practice, they are also increasingly making media and technology an educational priority. Findings from previous studies indicate that programmes that use a variety of media resources for training yield positive results for teachers and students and emphasize that teachers require professional guidance to master the technological devices designed for today's classrooms order to help their graduates to be better equipped and well prepared for the evolving demands of the society (Mutema et al, 2006). Unfortunately, however, although more and more media resources continue to enter learning institutions and classrooms, not enough teachers are receiving adequate training to successfully use these available tools and technology-based media resources. It is worth noting however that although laudable efforts have been put in place, the state of counselling training programme reflects quite a different picture thus affecting the quality of psychological counselling services offered to individuals with psychological and emotional needs. The writing of this thesis was therefore necessitated by the need to determine the media resources used in inter-disciplinary training in order to foster inter professional interactions that enhance the counselling training and practice.

1.3 Statement of the Problem.

The overall purpose of training and counselling institutions is to produce counsellors who are well equipped with appropriate knowledge, practical and intellectual skills to intervene effectively with clients representing a broad range of psychological and emotional counselling needs. The issues facing communities today are changing rapidly and in some ways are more complex than in the past hence, demand approaches to problem solving that draw on the skills and perspectives of diverse disciplines and professions. In order to accomplish these objectives, educators, trainers and practitioners need to apply inter-disciplinary training approach to prepare their graduates well for the evolving demands of the society and conduct research that contributes to knowledge and practice of counselling.

Collaboration emanates from the understanding that complex psychological health needs of the society exceed the capability of any single discipline therefore, the appreciation of roles and contributions that each discipline brings to the care delivery experience. Such professional socialization and the ability to work together is the result of shared educational and practical experience designed to enhance the counselling practice.

However, while interdisciplinary education has been recommended as part of a holistic, cooperative agenda for health care, institutions have traditionally emphasized and rewarded discipline-specific teaching and research. In fact, very few learning institutions for health professionals include any interdisciplinary experiences, either classroom or clinical, as part of their course work (Larson, 1995).

Consequently, learners are denied an opportunity to pursue knowledge and skills beyond their primary majors hence, unable to view complex problems and solutions from a holistic and global perspective. Furthermore, rigorous studies have not yet been conducted to evaluate the impact of inter-disciplinary training of counsellor; most studies have focused mainly on tangible outcomes such as grants, papers and patents in health professions in the United Kingdom (UK) and United States (US). This is a critical gap in the examination of interdisciplinarity. This study proposes to address the gap between the inter-disciplinary training process and outcome by focusing specifically on the use of selected media in training counsellors hence suggest ways of improvement to enhance the production of competent psychological counsellors.

1.4 Objectives of the Study

This study was guided by the main objective and specific objectives as outlined below.

1.4.1 Main Objective

The main objective of this study was to establish the extent of implementation of the inter-disciplinary approach in training and practice of counsellors caring for persons with emotional and psychological needs.

1.4.2 Specific Objectives

The specific objectives of this study were to:

- a) Identify the major types of teaching and learning resources used in training of counsellors in the counsellor training programmes.

- b) Establish the relationship between the inter-disciplinary training programme and performance of students.
- c) Establish the relationship between instructional media resources and the performance of students.
- d) Identify barriers encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with psychological needs.

1.5 Research Questions

The main research question that guided the study was, to what extent is the interdisciplinary approach to training being implemented to meet the range of service needs of persons with psychological and emotional needs?

Within this context, the following specific questions were addressed:

- a) What are the major types of instructional media resources used in training of counsellors in counsellor training programmes?
- b) What is the relationship between the inter-disciplinary training programme and performance of students?
- (c) What is the relationship between instructional media resources and the performance of students?
- (d) What barriers are encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with emotional and psychological needs?

1.6 Research Variables

A variable is any trait, attribute or characteristic in research that varies (Eaves, 2010). The independent variables, defined by Gurmu (2011) as those attributes which are thought to influence the dependent variable, were: Interdisciplinary training of counsellors and instructional media resources used in training counsellors. These were the presumed causes that could be attributed to the presumed effect – performance of students and therapeutic counselling outcomes – which were dependent variables in this study.

1.7 Significance of the study

Inter-disciplinary teaching is a relatively new approach in learning institutions in Kenya. It is hoped that the Ministry of Education Science and Technology (MOEST) may use the findings of this study as an indicator of the challenges facing the implementation of the inter-disciplinary approach to education in counsellor training institutions and therefore advice the Commission for University Education (CUE) on the changes to make to address the situation.

Additionally, findings of this study could contribute to the development and evaluation of inter-disciplinary of health and psychological health research training programmes as it presents and evaluates a novel curriculum for training learners in inter-disciplinary theories, concepts, and methods of mental health promotion that can be replicated in other settings and context (Shalline et al., 2009)

Effective teaching, learning and assessment is a major goal of the Medical Education programme. It is therefore hoped that this information will provide new knowledge on the relevant areas of emphasis that will strengthen instructional processes and bring about new opportunities for curriculum design and training.

1.8 Scope and Limitations of the Study

Although there are many organizations and institutions offering counselling psychology training programmes, this study was limited to five main training and counselling institutions in Kenya namely: Kenyatta University, Moi University, Kenya Association of Professional Counsellors, Tec Institute of Management (Eldoret) and Moi Teaching and Referral Hospital, psychological counselling department. The study focused on Heads on Department, trainers/lecturers, students and counsellors in counselling psychology programmes. These institutions were chosen because they have a long standing history of training educationists and counsellors therefore believed to provide the required sample for the study. However findings from this study could still be generalized to other training institutions and organizations with some modifications to suit their institutional needs.

1.9 Definition of Operational terms

The following are the definitions of terms that were used throughout this study.

Discipline Field- Refers to a specific body of teachable knowledge with its own background of education, training, procedures, methods, and content areas.

Inter-disciplinary education/teaching/training- Refers to an educational approach in which two or more disciplines collaborate in the learning process with the goal of fostering interprofessional interactions that enhance practice of each discipline. Such inter-disciplinary education is based on mutual understanding and respect for the actual and potential contributions of the disciplines.

Media resources/ teaching and learning resources are synonymous in this study and refer to all the materials and physical means an instructor might use to implement instruction and facilitate students' achievement of instructional objectives. These may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real objects, and videotape and films, as well newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing.

Non-projected media - These refer to teaching aids that are not projected, or passed through sound and light. These include: chalk board, flip charts, posters, books, manuals handouts, students learning guides and periodicals.

Physical facilities include libraries, skills laboratories and practicum rooms

Projected media - These are the teaching and learning aids that are projected through light and sound. They include overhead projectors, television, video cassettes

photocopying machines thermo fax and duplicating machines, computer, CDs and internet

Psychological counselling – refers to the skilled and principled use of relationships characterized by application of psychological theories and communication skills in assisting a client to work through their concerns. The task of counselling is to give the ‘client’ an opportunity to explore and discover ways of living more satisfyingly and resourcefully.

Trainer/lecturer – Are synonymous in this study and refer to a person who has undergone training and acquired skills to instil knowledge, attitude and skills.

Training/teaching/training- These terms are synonymously used to refer to the process aimed at making proficient through specialized instruction and practice. Through training, knowledge, skills and attitudes are acquired over a period of time.

Use – Synonymous with utilization and usability: refers to the act of employing, application, using or putting into service

1.10 Summary of the chapter

Chapter one study has provided preliminaries of this study. The various aspects of the chapter have been adequately discussed and presented.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature related to inter-disciplinary training of counsellors and the use of selected media resources in counsellor training institutions in Kenya. The literature reviewed is divided into two main sections and several sub-sections of general literature and related literature. Areas highlighted on general literature deal with historical background, extent of implementation and barriers encountered in the implementation of inter-disciplinary training programme for counsellors. Literature on selected media resources used in training counsellors is also discussed. Related literature review deals with an analysis of previous research findings and documented materials on inter-disciplinary training and education and selected media resources used in training. Finally a summary of literature review is highlighted.

2.2.1 Background of inter-disciplinary education

The term inter-disciplinary is applied within education and training pedagogies to describe studies that use methods and insights of several established disciplines or traditional fields of study (Augsburg, 2005). It is most often used in educational circles when researchers from two or more disciplines pool their approaches and modify them so that they are better suited to the problem at hand, including the case of the team-taught course where students are required to understand a given subject in terms of multiple traditional disciplines. However this definition does not show how inter-disciplinary education and training should be organized and implemented. It is not clear from this

definition how different stakeholders agree to use their methods and insights, nor does it identify the different disciplines that pool their approaches for proper teaching and learning outcomes. In order to address this gap, this study recommends that efforts be focused on developing teaching processes which develop interdisciplinary competencies for current and future psychological health professionals to work in collaborative practices.

Borrowing from these conceptualizations inter-disciplinary education could be defined as ‘ a mode of curriculum design and instruction in which individual faculty or teams identify, evaluate, and integrate information, data, techniques, tools, perspectives, concepts, and or theories from two or more disciplines or bodies of knowledge to advance students’ capacity to understand issues, address problems, appraise explanations, and create new approaches and solutions that extend beyond the scope of a single discipline or area of instruction.

Going one step further, Boix Mansilla (2005) defines inter-disciplinary understanding as “the capacity to integrate knowledge and modes of thinking in two or more disciplines to produce a cognitive advancement thus, explaining a phenomenon, solving a problem, creating a product, raising a new question- in ways that would have been unlikely through single disciplinary means. The integration of disciplinary perspectives is a means to purpose, not an end in itself. One of the major challenges facing disciplinarily practice is the carving of professional territories distributed in a complex system and with boundaries as tightly sealed as possible. In contrast, members of inter-disciplinary teams

open these territorial boundaries to provide more flexibility in the sharing of professional responsibilities.

Although inter-disciplinary and interdisciplinarity are frequently viewed as twentieth century terms, the concept has historical antecedents, most notably Greek philosophy. Klein (2006) attests that roots of the concepts lie in a number of ideas that resonate through modern discourse—the ideas of a unified science, general knowledge, synthesis and the integration of knowledge. Greek historians and dramatists took elements from other realms of knowledge (such as medicine or philosophy) to further understand their own material. Once again according to Klein's findings, there seems to be no clear guidelines on implementation of inter-disciplinary programme and how the elements from different disciplines were integrated. Furthermore, there is no indication in that study that highlights the extent of success and/or barriers encountered in the process of integrating knowledge. This study sought to address the gap by establishing the barriers encountered in the implementation of the interdisciplinary training programme.

In order to understand how inter-disciplinary is conceived and received there is need to have a good understanding of the nature of academic disciplines and their influence on faculty life in learning institutions. Although academic disciplines have not been around for long, they have become so entrenched that one seeking to give the dark side of them must tread a difficult path because they have attained enormous influence over organization and production of knowledge. On the other hand, Back (1992) an ardent proponent of inter-disciplinary education has strongly criticised this stance by arguing

that education, specifically science is changing and have been changing to accommodate reality. He gives seven indicators that it no longer, if ever did, make sense to separate science from dynamics of society. This argument is also advanced by staunch critics of single discipline approach to education who elucidate that not only decisions on education involve scientific arguments but also political, economic, industrial, policy and international lobbying, negotiations and diplomacy (Oweyegha-Afunanduula, 2004). It is therefore clear from the foregoing argument that the belief in superiority of science in its purity is misplaced and mistaken especially in the world of knowledge that currently seeks to deliberately identify the relationship between disciplines.

Going one step further, Mansilla (2005) elaborates on the complexity of the 21st century which demands that we all work towards integrating education to produce a cognitive advancement in ways that would have been unlikely through single disciplinary means. People who are not products of an integrated curriculum are unlikely to fit and survive in an ever increasingly integrated world under the influence of globalization. It is important that training institutions adopt a policy that responds to this reality by accepting and adopting the principles of education for sustainability development. Counsellor training institutions specifically should prepare counsellors for a more complex, interconnected, and interdependent world. However, despite propagating for institutions to adapt interdisciplinary approach, Mansilla fails to acknowledge the difficulties that are likely to arise in convincing faculty from various disciplines to embrace this approach and procedures for resolving complaints raised. Furthermore key principles required in

guiding training institution in designing inter-disciplinary programmes and activities are not cited.

Although inter-disciplinary implies togetherness of the disciplines, the paradigm does not necessarily imply leaving the disciplines behind as there are several advantages associated with disciplines such as permitting schools to investigate with systematic attention to the progressive mastery of closely related concepts and patterns of reasoning. Certainly the emphasis on discipline-field curriculum in most learning institutions rests largely on the rationale that cites its instructional effectiveness, inherent conceptual cohesion, and socially sanctioned community whereas inter-disciplinary simply means a marching from disconnected to connected teaching, learning and research, guided by the knowledge that “everything is connected to every other thing”.

Inter-disciplinary programmes sometimes arise from a shared conviction that the traditional disciplines are unable or unwilling to address an important problem. For example, social sciences disciplines such as anthropology and sociology paid little attention to the social analysis of technology throughout the twentieth century, as result many social scientists with interest in technology have joined science and technology studied programmes, which are typically staffed by scholars drawn from numerous disciplines.

At another level inter-disciplinary is seen as a remedy to the harmful effects of excessive specialization. On some views, however, interdisciplinarity is entirely indebted to those

who specialize in one field-that is, without specialists; interdisciplinarians would have no information and no leading experts to consult. To this end Davies and Delvin (2007) conclude that when inter-disciplinary collaboration or research results in new solutions to problems, much information is given back to the various disciplines involved. Therefore; both disciplinarians and interdisciplinarians may be seen in complimentary relation to one another.

2.2.2 Inter-disciplinary Approach to Teaching and Learning

According to Barton and Smith (2000) inter-disciplinary teaching provides a meaningful way in which students can use knowledge learnt in one context as a knowledge base in other contexts in and out school. Insights on the elements for inter-disciplinary education include competencies, attitudes, teaching methodologies, learning practice settings, and faculty development. The disciplines may be related through central theme, issue, problem, process, topic or experience (Jacobs, 1989). Inter-disciplinary teaching is often viewed as a way to address some of the recurring problems in education such as fragmentation and isolated skill instruction. It is seen as a way to support goals such as transfer of learning, teaching students to think and reason, and providing a curriculum more relevant to students.

Interdisciplinary approach to teaching requires planning that looks at the foundational objectives of a number of curriculum areas as connecting curriculum in the inter-disciplinary approach is believed to be an efficient way to help teachers deal with knowledge. The purpose of this approach is to dissolve the boundaries of areas of study and encourage learning across the curriculum. Educators need to develop a plan where

they can see the natural areas for integration and develop thematic units. Student learning outcomes should include a well-rounded education where critical thinking and transfer of knowledge is evident with the school and the outside world. It is believed that such an approach is likely to enhance learning.

Based on discussions from a combined meeting of the major national subject-matter organizations, the National Council for Teachers of English (1995) explain that educational experiences are more authentic and of greater value to students when the curricula reflect real life, which is multi-faceted rather than being compartmentalized into neat subject-matter packages. NCTE highlights the benefits of inter-disciplinary teaching and promotes the natural and logical connections that cut across content areas which can be organized around themes, problems, or projects rather than along traditional subject-matter boundaries.

Interdisciplinary educational experiences provide an opportunity for a more relevant, less fragmented, and stimulating experience for students. When properly designed and when criteria for excellence are met, then students break with the traditional view of knowledge and begin to actively foster a range of perspectives that will serve them in the larger world.

According to the report of the World Summit for Sustainable Development that took place in Johannesburg, South Africa in 2002, education among others, was recognized as a key instrument for bringing about changes in values and attitudes, skills, behaviour and lifestyles consistent with sustainable development .These sentiments are echoed in the

sessional Paper No. 10 of 2005 which further notes gaps in that not all concerns related to quality education and training are addressed by training institutions. In view of this, the study seeks to determine extent of implementation of inter-disciplinary training approach as a means of attaining quality training and education of counsellors. Policy Paper on Education for Sustainable Development (ESD) stress that education and training both formal and non formal are key processes by which human beings, and societies can reach their full potential. Education is key to sustainable development therefore educating people for sustainable development should provide the skills, perspectives, values and knowledge to live sustainability. This could be achieved through integrating concepts and analytical tools from a variety of disciplines oriented to include changes needed to promote sustainable development (Republic of Kenya, 2008).

Even though Education is humanity's best hope and most effective means in the quest to achieve sustainable development, the paper notes the gaps in the quality of education in that much of the current education falls short of what is required to impart skills, knowledge and values that recognize the importance of sustainable Development. One of the National goals of Education in Kenya emphasizes that Education should provide opportunities for the fullest development of individual talents and personality, and, should help children to develop their potential, interests and abilities. However findings from previous studies and literature reviewed reveals a number of gaps in terms of developing student capacities to integrate or synthesize disciplinary knowledge and modes of thinking, thus, the need to carry out this study (AACU, 2005, Paul and Peterson, 2001).

2.2.3 Use of Instructional Media Resources.

Successful introduction and the use of ICT in education and training institutions will play a critical role in disseminating skills to a wider society, thus creating a positive impact in economy (Government of Kenya, 2005). A report by Kenya Education Sector Support Programme (KESSP) and the Ministry of Education Science and Technology indicate that the Government of Kenya appreciates and recognizes that an ICT literate workforce is the foundation on which Kenya can acquire the status of a knowledgeable workforce (MOEST, 2006). It is against this background that the government intends to make education the natural platform for equipping the nation with ICT skills in order to create a dynamic sustainable economic growth. The government has therefore formulated a national ICT policy, a strategic plan for ICT (e- government) thus paving the way for widespread of ICT in government offices. It is from this policy background that the education and training sector requires to play a major role in the implementation of the proposed ICT policy. Although these policies are identified in many educational and training institutions, reviewed literature reveals a number of challenges related to their use in training.

The use of teaching and learning resources has grown with rapid change in technology all over the world. Research has consistently shown that a diverse group of students will retain more of the information presented if it is presented through diverse media. In addition, multiple channels of delivery are believed to improve the chance of successful communication.

The current support for and promotion of learning technologies in classrooms are believed to bring admirable outcomes and the effective use of technology is known to promote creativity and social support among the teachers and learners hence making learning more productive (Kothari, 2004). The chalkboard should no longer serve as the only mode of illustration. Tapes, records, filmstrips, slides and other materials should be used to facilitate learning. He further suggests that as more and more media become available, teachers should make it increasingly possible for students to use all their senses. Thus audio visual materials serve as rich resources of illustration and sensory experience. Instructional media not only provide necessary concrete experiences, but also help learners integrate prior experiences which facilitate learning and acquisition, retention and usability of abstract symbols. It is therefore evident from the ongoing discussion that the use of teaching and learning resources motivates learners to further learning even outside the classroom, hence making them have interest in learning and improving the quality of that learning. This study hopes to identify the major categories of media resources available and used in the teaching and learning process by students.

David (1994) explains that media education provides teachers with strategies for dealing a new with aspects of the media in their own teaching. He gives an example of films, television programmes and photographs among others. In addition media education also offers the possibility of a more transactional pedagogy through a framework and classroom practice that seeks to encourage learners understanding and sense, quite directly. Patel (1993) in support of the preceding views highlights that every micro-teaching programme uses certain instructional instruments selected from the various

categories of media that are suitable. That in order to produce changes in the teachers' teaching behaviours some particular instances of a category of instructional resources will be required. He gives an example of using a film in which the relevant skills are modelled. The use of media resources in teaching, therefore, cannot be underscored in enhancing the teaching and learning process.

Media resources including human resource, materials, equipment and aids have great effect in the process of teaching and learning. In some cases they offer a substitute for direct experiences which are difficult to provide in certain settings. The use of television, radios are good examples of media that can be used as substitute for direct experiences.

Romiszowski (1988) has observed that from the 1970s, there has been a change in the role of some teachers which was ushered in by the programmed instruction movement and then strengthened by such trends as learner-directed-learning, resource-based learning and other experiential learning technologies. He further explains that the emphasis was placed on the 'learner learning' rather than the 'teacher-teaching'. The new role of the teacher was a 'manager of learning resources'.

Mutema et al (2006) reveal that innovative teaching/learning methods and strategies shift the burden of learning from the teacher to the learner. They are methods which depart from the traditional teacher dominated to active student centre learning. The students take responsibility of their own learning through guidance and facilitation of the teachers. The innovative teaching/learning methods such as problem-based learning (PBL) and small group tutorials (SGTs) put emphasis on active learning by students rather than teaching

which is normally undertaken by teachers. These methods are gaining prominence in the background of rapid societal changes, demands, needs and technological advances through the application of scientific approaches using computer technology.

Romisziwski (1998) notes that there has been a further role that is affecting an ever growing proportion of the teaching profession. This change has been ushered in by the microprocessor, in its many disguises, most notably the microcomputer but also in many special purpose communication devices such as teletext, facsimile document transmission, multi-image projector control systems, teleconferencing systems, CD-ROM and CD-I, to name only a few. This 'new information technology holds incredible potential for transforming the nature of educational and training systems. No longer do teacher and learner have to be present in the same place at the same time in order for the instructional process to occur. Many of the restrictions that earlier individualized system of instruction suffered may now be overcome. Distance education need no longer be an impersonal process with little or no human interaction and long delays in feedback. Furthermore, the costs of these new technologies are relatively accessible and rapidly falling, whereas the costs of conventional educational methods are high and rising. At the same time, the world is passing through a phase of expansion in the need for new educational and training provision, at least partly due to the rapid changes in the educational systems. The current support for and promotion of learning technologies in classrooms will bring admirable learning outcomes and also show that innovation and the effective use of technology promote creativity and social support among the teachers and the learner hence making learning more productive (Kangethe and Nafukho (2002) . In

support of the above views, Mutema et al (2006) stresses that the use of media resources provide new opportunities for teaching and learning, including, offering opportunity for more student centred teaching, opportunity to reach more learners, greater opportunity for teacher to teacher, and student to student communication and collaboration thereby creating enthusiasm for learning amongst students. He also argues that apart from the availability of learning resources, the relevance and usability of such resources are very critical in teaching and learning situations.

2.2.4 Meaning and types of Instructional Media Resources

This sub-section gives a broad definition of media resources and highlights the various types and categories of these resources used in educational and training institutions

2.2.4.1 Meaning of instructional media resources

The term instructional media resources have been referred to in different ways in education technology. Bishop (1985) refers to teaching and learning resources as all the things teachers are likely to find useful in their teaching. These could be collections of books reference materials, multi-copies of resource items, kits of newspaper articles, photographs, maps, diagrams, historical documents, statistical tables, journals, poetry, tape recordings, slides and anything that might prove of value to teachers. Instructional resource could also be referred to as anything which may be an object of study or stimulus for the learner including books, periodicals, newspapers, press cuttings, pictures, diagrams maps, charts, photocopies and microfilms, film loops, worksheets, records, audio tapes, radio and television programmes, video tapes and film record combinations, and, related others. However in this study instructional media resources will be used to

mean all the materials and physical means an instructor might use to implement instruction and facilitate students' achievement of instructional objectives. This may include traditional materials such as chalkboards, handouts, charts, slides, overheads, real objects, and videotape or film, as well newer materials and methods such as computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing. Other resources are physical facilities such as libraries, skills laboratories and practicum rooms.

2.2.4.2 Types of media resources

Instructional resources can be categorized into non-projected and projected materials.

2.2.4.3 Non-Projected media

Non-projected media are the most commonly used in teaching. They are called non-projected because they include teaching resources that are not projected or passed through light and sound. These include chalkboard, models, flipcharts, posters, books, manuals, leaflets, and handouts, students learning guides, periodicals and specimens.

2.2.4.4 Projected Media

Projected media refer to teaching and learning resources that are projected through light and sound. They include overhead projectors, 16mm film projectors, televisions, video cassettes, photocopying machines, thermo fax and duplicating machines, computer and internet. The use of instructional media makes teaching easier for the teacher. It also makes learning clear and easier for the students by stimulating them and making the environment more conducive to learning. In professional training there is constant development in new knowledge and technology and the emerging needs of the society

require creativity, critical and analytical thinking and innovation in order to respond to the societal needs. In this context, there is also need to constantly develop and design appropriate instructional media that can facilitate the process of teaching and learning. This is more so in professional disciplines including education in which there is an explosion of amount of knowledge and technology that is required in order to solve the existing and emerging educational issues.

2.2.4.5 Real or three dimensional Materials

Real materials refer to human resources including lecturers, Heads of department, physical facilities such as libraries, skills laboratories, practicum rooms and lecture rooms.

2.2.4.6 Computer Technology

Information technology has accelerated the movement of learning opportunities to all learners of all cultures and nationalities. Information is widely recognized as a vital source in economic, social and political development. The skills of Information Technology (IT) are more than ever in great demand in all sectors including education, government, business and commerce.

According to Kothari (2004), computer is certainly one of the most versatile and ingenious development of the modern technological age. No longer are they just big boxes with flashing lights whose sole purpose is to do arithmetic at high speed but they make use of studies in philosophy, psychology, mathematics and linguistics to produce output that mimics the human mind.

Generally, there are several advantages of computer mediated communication in a variety of academic settings. Mutema (1992) recommends the use of computer assisted teaching, assessment and computer managed education for innovative education. He further observes that the integration of information technology in teaching and learning bring new opportunities and challenges for curriculum design and training. In this way, there is need for continued professional development in Information Technology in order for the teaching staff to be relevant in the twenty first century (Mooney *et al*, 1997).

Computer-Assisted Learning involves application of computer technology in learning and in recent years, it has become compulsory in teaching/learning situations in institutions of higher education and especially in developed countries. Recent rises in student numbers coupled with decline in resources, have led universities to investigate new ways of assessing students. A particular growth area is the use of computer-assisted assessment (CAA) for the diagnostic, formative and summative evaluation of undergraduates. Although CAA is predominantly used in computing sciences and mathematics, there is evidence of increased take up in social sciences and humanities.

A special report by Agina (Daily Nation, 4th October, 2010) indicates that the new IT-oriented approach to teaching has brought new life to the classroom. Through the capabilities of the system, students are able to view the slides set for a particular lecture. This mode of teaching, the report further says, is convenient as students are able to pay maximum attention during the lecture, which consequently aids in improving the students' performance as they are able to retain more and ask questions based on the lecture.

2.2.4.7 Access to Media Resources

According to a study carried out by the Ministry of Education Science and Technology with respect to the great concern and about the digital divide, it was noted that access to ICT facilities are currently one of the major challenges in Africa. Kenya was no exception. While the ratio of one computer to 15 students is the norm in most developed countries, the ratio in Africa stands at one computer to 50 students. The study also revealed that, the ratio for university and colleges is one computer to 45 students (Ministry of Education Science and Technology, 2006).

2.2.4.8 Competency Considerations

The Ministry of Education policy on Information Communication and Technology is to integrate ICT education and training systems in order to prepare the learners and staff of today for the Kenyan economy of tomorrow and therefore enhance the nation's ICT skills. Secondly, success in the use of ICT requires sufficient and a competent human resource that is well developed and equipped in the education and training sector.

Competency in the use of teaching and learning materials is of great importance. In order to handle apparatus efficiently there must be some knowledge and regard to basic theory. One should be suitably informed when handling a piece of mechanical equipment in an economical way. It is not practical to rely on someone else in order to achieve effective results under varying teaching conditions. It is critical that the teacher prepares himself by being adequately trained in the use instructional media. Brusca (1995) contends that although more and more media technology continues to enter learning institutions and classrooms, unfortunately not enough teachers are receiving adequate training to

successfully use these available tools and technology-based educational materials and resources. There is need therefore, to establish the competency levels of both learners and lecturers in using media technology in teaching and learning of counselling in Kenyan public universities and training institutions.

Adams (<http://www.montana.edu>) supports these views by stating that the more experience a teacher has using instructional media, the easier it will be to apply it as a teaching aid. The lecturer should therefore operate and handle teaching and learning resources completely so as to win confidence and trust from his learners. (Amri 1993, Myers & Halphin, 2002) observe that training programmes rarely assess competency of learners and trainers in using media resources and yet they are critical to learning and delivery of service as well as being a major predictor for future computer use in the classroom. Other superficial studies could not highlight this thus, a major reason for carrying out this study. This study attempts to establish the competency of students and teachers in the use of media resources

2.2.5 Barriers encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with psychological needs.

As with any approach to education, there are often pitfalls associated with each approach. Never more than at the present time has there been need for educational institutions are able to focus the insights of various disciplines on the problems and issues which beset our collective existence. Underlying such calls for inter-disciplinary component to liberal education is the recognition that inter-disciplinary studies encourage breath of vision and

develops the skills of integration and synthesis so frequently demanded by the problems of a culture in the midst of a profound transition.

Despite this awareness, many institutions of higher education view the inter-disciplinary programme with scepticism if not hostility. Many typically suspect that what substance it does have merely duplicates the offerings of disciplinary departments. It is believed that much of this discrepancy in perspective can safely be attributed to noble motives such as protection of turf. The sense and nonsense of academic specialization have recently been discussed by Oweyegha-Afunanduula, (2004) who asserts that the specializations actually emerged in the nineteenth and early twentieth centuries but have become so entrenched that one seeking to give the dark side of them must tread a difficult path. They have attained enormous influence over the organization and production of knowledge. He concludes that it no longer, if ever did; make sense to separate science from dynamics of society as doing so misdirects the education process and breeds confusion and inertia rather than the ultimate: wisdom, which is necessary for survival in our own environment. This argument is also advanced by Jacobs (1989) who says that there is a notion that because teachers often feel “territorial” about their content areas, they are sometimes threatened when another discipline offers a differing viewpoint from their own. In the light of these views it can rightly be argued that disciplines can no longer afford to grow in isolation, especially when for the society that has many challenging emerging issues which require urgent intervention. The gap that exists is lack of support for inter-disciplinary training perpetuated by fear of units falling short of teaching in-depth content to student and superficial coverage of topics. This study sought to

determine barriers to effective implementation of inter-disciplinary training of counsellors.

Minore and Boon (2002) note that there are no mechanisms to ensure that information is exchanged with paraprofessionals and suggest that this may be a reflection of the lack of confidence professionals have in the knowledge, skills and judgement of their paraprofessional colleagues. Moreover, most individual faculties may not be open to new concepts of teaching for inter-disciplinary education as they have significant impact on current programmes in which their education and training curricula are fairly entrenched. As a result, they are not willing to provide the resources and funding to develop teaching programmes for inter-disciplinary education. There is also concern that integrated teaching discounts the value of deep subject-specific knowledge which is essential for specialization in areas medicine, law and engineering.

Critics of interdisciplinary approach also argue that thematic units can fall short of teaching in-depth content to students and that this superficial coverage of a topic can give students the wrong idea about school, perhaps missing the idea of curriculum integration in the first place (Barton & Smith, 2000). On the other hand it is worth noting that interdisciplinary training is encouraged from the fact that many scientific problems are refractory to solution by the methods of a single discipline and therefore require a broadening and a deepening in methodology through incorporation of concepts and methods from several disciplines simultaneously. However caution is given against any attempt to create an interdisciplinary 'jack of all trades' who will be master of none,

instead the aim should be thorough mastery of one discipline, perhaps two disciplines plus sufficient knowledge and skills of parallel disciplines to work effectively with experts (Federico, 2000).

The most common complaint regarding inter-disciplinary programmes has been the lack of synthesis. Students are provided with multiple disciplinary perspectives but are not given effective guidance in resolving the conflicts and achieving a coherent view of the subject. Though some defenders of inter-disciplinary education concede the difficulty they emphasize that cultivating inter-disciplinary as a habit of mind is both possible and essential to the education of informed and engaged citizens and leaders capable of analyzing, evaluating, and synthesizing information from multiple sources in order to render reasoned decisions. In order to address these problems, Jacob (1989) suggests that teachers must have carefully conceived design features (a scope and sequence, a cognitive taxonomy to encourage thinking skills, behavioural indicators of attitudinal change, and a solid evaluation scheme); and they must use both discipline-field-based and inter-disciplinary experiences for students in the curriculum. Interdisciplinary education should be part of a larger movement in educational institutions to maximise efficiency of training by moving from an environment of competition to one of collaboration because the complex health needs of society exceed the capability of any single discipline. The curriculum becomes more relevant when there are connections between subjects rather than strict isolation. This study sought to determine barriers to implementation of inter-disciplinary training of counsellors in training institutions.

2.2.6 Conceptual Framework

In this study, interdisciplinary training programme for counsellors was guided by the Context-Input-Process-Product (CIPP) evaluation model. The conceptual framework was informed by the range of variables entrenched in this study. The independent variables of the study were: interdisciplinary training programme and instructional media resources while performance of students and counselling outcomes were the dependent variables of the study. This approach, developed in the late 1960s, seeks to improve and achieve accountability in educational programming through a “learning-by-doing” approach. Its core concepts are context, input, process, and product evaluation, with the intention of not to *prove*, but rather *improve*, the program itself (Stufflebeam, 2003). The model presents four types of evaluation concerns as shown in figure 1. 1

Context evaluation stage of the CIPP Model creates the big picture of where both the program and evaluation fit (Mertens & Wilson, 2012). This stage assists in decision-making related to planning, and enables the evaluator to identify the needs and assets of the programme. In this study, context evaluation identified the political climate that could influence the success of the programme thus, focused on the entire environment and situation surrounding the programme under implementation which included vision, mission, goals, strategies, objectives, policies, and organization structure, student and staff characteristics. To achieve this, the researcher compiled and assessed background information, and interviewed programme leaders and key stakeholders of the training and counselling programmes.

Input evaluation examines critically all the resources that have been provided for the implementation of the programme. In this stage, information was collected regarding the mission, goals, non-projected and projected instructional media, teaching staff, physical facilities and psychological care environment. Its purpose was to assess the programme's strategy, merit and work plan against research, the responsiveness of the program to client needs with the intent to choose an appropriate strategy to implement to resolve the program problem.

Process evaluation investigates the quality of the program's implementation. In this stage, program activities are monitored, documented and assessed by the evaluator. Primary objectives of this stage are to provide feedback regarding the extent to which planned activities are carried out, guide staff on how to modify and improve the program plan, and assess the degree to which participants can carry out their roles (Stufflebeam, 2003). The study evaluated how the interdisciplinary programme was being carried out within the training and teaching and counselling institutions. These included: teaching and counselling factors such as types of inter-disciplinary programmes offered, period covered, collaborating institutions, teaching competencies, teaching strategies, and context of learning, use of media resources and institutional support.

Product evaluation assesses the positive and negative effects the programme had on its target audience; it assesses both the intended and unintended outcomes. Both short-term and long-term outcomes are judged. During this stage, judgments of stakeholders and relevant experts are analyzed, viewing outcomes that impact the group, subgroups, and individual. Applying a combination of methodological techniques assure all outcomes are noted and assist in verifying evaluation findings. At the outcome level, it was critical to

look at the constraining factors in the implementation of the interdisciplinary training programme in order to shed more light on the challenges within the institutions that may have impinged on outcome of counselling practice. It focused on whether the interdisciplinary educational process and use of instructional media resources improved learners' outcomes and psychological care respectively. The product or outcome evaluation looked at the achievement of competencies which included learners' and professional competencies, indicators of effectiveness, reform and change, therapeutic outcomes and quality of health care provided.

Figure 1. 2: Components of Stufflebeam's (2003) CIPP Model



2.2.6 Summary of the Chapter

This chapter has reviewed literature in relation to the objectives of this study regarding the extent of implementation of interdisciplinary training specifically focusing on the use of instructional media resources in training of counsellors. In summary the review of related literature has ascertained that an inter-disciplinary approach to training counsellors can greatly enhance both student performance and counselling outcomes. What does not seem to come out clearly is implementation process of the interdisciplinary programme. Indeed this is a major gap which this study sought to determine. Secondly literature reviewed has revealed that there are various media resources available in learning institutions but it is not clear whether the lecturers, trainers, students are competent in using them to strengthen the training programme for counsellors. This study also sought to determine levels of competency trainers, students and counsellors in the use of selected media resources. Finally, the literature review has also established that certain barriers stand in the way of effective implementation of the programme. In conclusion, conceptual framework of the variables has been described in detail.

CHAPTER THREE

RESEARCH METHODOLOGY AND DESIGN

3.1 Introduction

This chapter presents a description of the procedure that was followed in conducting the study. The chapter describes the design of the study, location of the study, the target population, the sample and sampling procedure, research instruments, data collection methods and data analysis procedures. The chapter concludes with ethical considerations for this study.

3.2 Research Design.

The role of a study design is to provide a framework for planning and conducting a study so as to try to address the central research questions (Orodho, 2003). This study aimed at generating information to describe the situation as it is in public universities and counsellor training institutions in relation to inter-disciplinary training and the media resources used in training counsellors. A descriptive cross-sectional survey design was adopted whereby data was collected in order to answer questions concerning variables of this study. The study employed a mixed methods approach which permits the collection of both qualitative and quantitative data in the same study, giving the researcher the choice to determine the extent to which one approach will be used over the other, depending on the purpose of the study (Joffrion (2010). In the case of this study quantitative data was obtained to achieve demographic information which elicited responses on age, sex, academic, professional and work experience. Quantitative approaches were used to obtain data from objectives concerned with the extent of

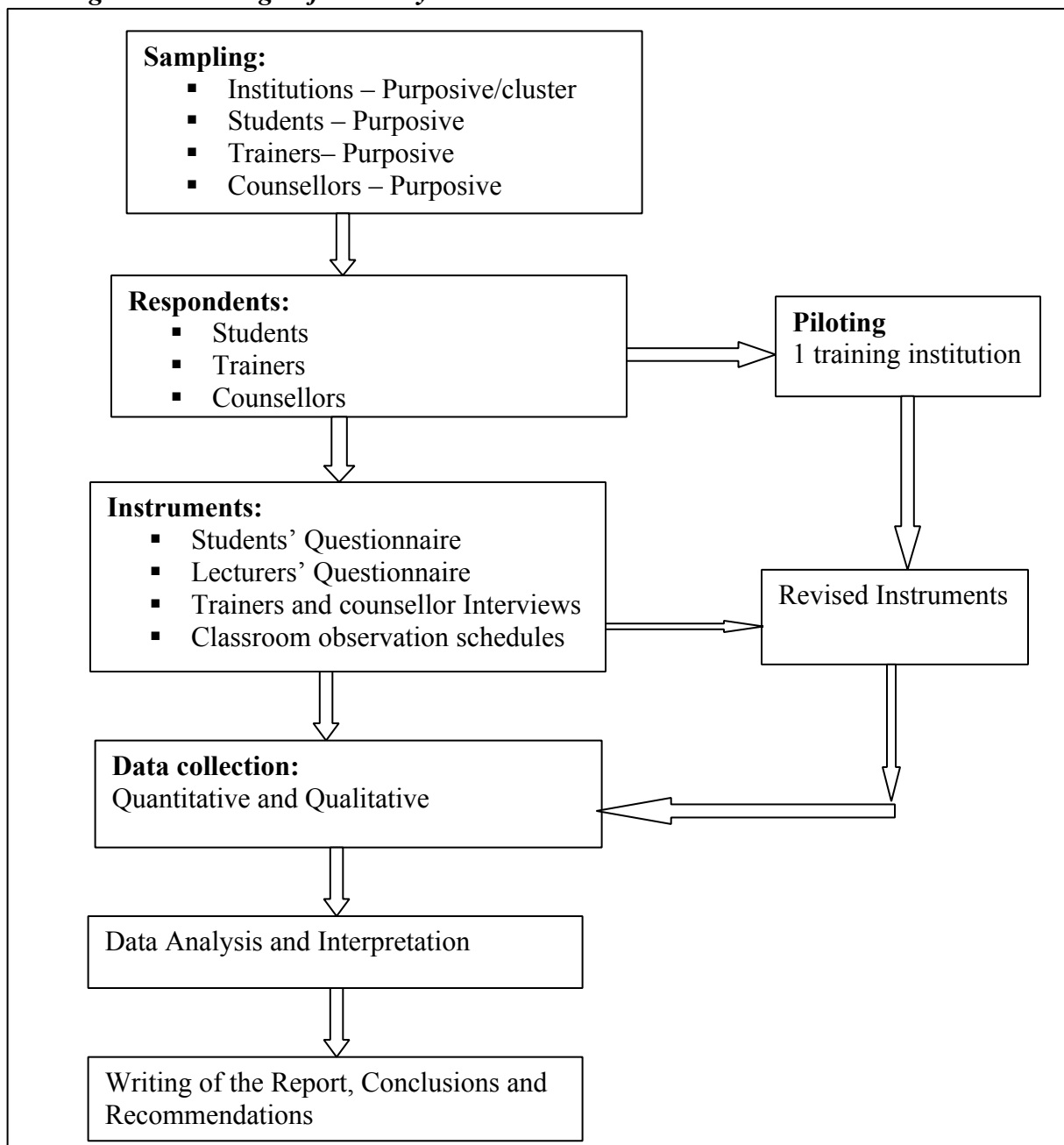
implementation of interdisciplinary training approach, instructional media resources used, the relationship between interdisciplinary training and performance of students and, the relationship between the instructional media resources used and student performance (objectives 1, 2, 3 and 4). To meet these objectives, the self administered questionnaire and an observation checklist was used to obtain data from respondents. Responses were analysed quantitatively and generated data which was presented in tables, bar and pie chart, clearly indicating responses in percentages.

Qualitative approaches were employed to obtain data to achieve the objective regarding barriers to interdisciplinary training approach (objective 5). This was achieved through semi structured interviews and open ended questionnaires. Responses were coded into categorical variables. The researcher then established the relationships among these categories whereby themes were analysed using the statistical package for social sciences (SPSS) version 17 for analysis.

The flow chart (figure 3.1) illustrates how the researcher carried out the study. This involved the sampling procedure which assisted to identify the institutions and respondents of the study namely: trainers, students and counsellors. In order to validate the instruments for the study, piloting was carried out in one counsellor training institution and one referral hospital, in the department of psychological counselling. After obtaining feedback, data collection instruments namely questionnaires, interview schedule and interview guides were revised.

The revised instruments were then used to collect both quantitative and qualitative data from the study population. The quantitative and qualitative data collected was coded, analysed and interpreted according to the descriptions provided by the researcher. The researcher then compiled a report which had conclusions and recommendations.

Figure 3. 1: Design of the study



Source: Adopted from Cohan and Manion (1994)

3.3 Geographical Location of the Study

This study was conducted in four institutions offering psychological counselling training programmes and one institution offering psychological counselling services to clients. These were: Moi University, Kenyatta University, Kenya Association of Professional Counsellors, Tec Institute of Management (Eldoret) and Moi Teaching and Referral Hospital (Department of psychological counselling). Below is a description of the study locations.

3.3.1 Moi University

Moi University is located 35 kilometres from Eldoret town, 310 kilometres Northwest of Nairobi, the capital city of Kenya. It was established as the second university in Kenya by an Act of Parliament, The Moi University Act of 1984. At the time this study was being carried out, the university was operating three campuses namely: Main campus, Town campus and Eldoret West Campus. This study was carried out at the Main campus. The total student enrolment was at 22,364 out of whom 19,429 were undergraduates drawn from all over Kenya. There was a total of over 3,662 staff at all levels of which 934 were academic staff. The University has modern teaching facilities that support academic programmes such as Margaret Thatcher Library, Moi Teaching and Referral Hospital among others.

3.3.2 Kenyatta University

Kenyatta University is situated in Kahawa about 23 kilometres from the city of Nairobi on the Nairobi-Thika dual carriage on 1,100 acres of land. The university status was

achieved on August 23, 1985, when the Kenyatta University act received Presidential ascent making the institution a fully fledged University, inaugurated on Dec 17, 1985. Kenyatta University is the second largest public university in the country (after University of Nairobi). The university has open-learning, e-learning/school based, part-time and full-time teaching. As at 2009, the university had a population of about 24,000 students.

These institutions were deemed relevant for this study for two major reasons. First, Moi University was established as the second university in Kenya by an Act of Parliament, The Moi University Act of 1984 while Kenyatta University act received Presidential ascent making the institution a fully fledged University, inaugurated on Dec 17, 1985. Kenyatta University is also the second largest public university in the country (after University of Nairobi). The two institutions carry a population that is varied enough to be a true representation of the situation in the entire country. Secondly, these institutions have a long history of offering psychological counselling programmes both at undergraduate and postgraduate levels. As such they were likely to provide a true representation of the status of interdisciplinary training programme and the instructional media resources used in training counsellors. The study population from Kenyatta and Moi University consisted of a total of 80 undergraduate fourth year students, 52 Masters Students, 44 lecturers and 2 Heads of Department of Counselling Psychology.

3.3.3 Moi Teaching and Referral Hospital

Moi Teaching and Referral Hospital is the second National Referral Hospital in Kenya. It was started in 1917 as a cottage hospital with a bed capacity of 60 to cater for the African health needs. The Hospital is located along Nandi Road in Eldoret town, Uasin Gishu County, 350 kilometres Northwest of Nairobi. As a referral hospital, the hospital has since grown and is now a fully-fledged referral facility with 800-bed capacity. The hospital receives patients from the entire Western Kenya region, parts of Eastern Uganda and Southern Sudan, and also serves as a teaching and research institution in collaboration with Moi University. Some of the programmes offered include higher diploma in psychological counselling, Voluntary Counselling and Testing (VCT) - survivors' treatment and psychological care in the region, psychological counselling to Internally Displaced Persons (IDPs), and rape management care, and, Palliative care, among others. MTRH was appropriate site as a location for this study because, first, it is the second largest referral hospital in Kenya and the largest in the North Rift Region. Secondly, the choice of counsellors offering psychological counselling services at MTRH was based on the fact that majority of counsellors have been exposed to similar training experiences as those of counsellor training institutions under focus. A total of 17 counsellors offering psychological counselling care at MTRH formed the population for this study.

3.3.4 TEC Institute of Management (Eldoret)

Tec Institute of Management (Eldoret) is registered by the Ministry of Education and also a accredited member of Kenya Counselling and Psychological Association. It is located

on 3rd Floor, Southern Wing, Kiptagich House (also housing Central Bank), along Uganda Road. Courses offered at TEC include: Higher Diploma in Counselling Psychology, Higher Diploma in Marriage and Family Therapy, Certificate in Counselling Psychology and other counselling related short courses and services.

3.3.5.1 Kenya Association of Professional Counsellors

Kenya Association of Professional Counsellors was registered in 1990 as a Non Governmental Organization. It has three major functions namely: Membership association, counselling services and academic training courses.

KAPC provides professional services to private individuals, businesses and international organizations with a vision of being the leading organization in professional counselling and adolescent behaviour change through the provision of training, information, research and membership activities in Sub-Saharan Africa.. KAPC is located in Parklands 2nd Avenue, off Limuru Road, Nairobi. The institution has branches in Mombasa, Kisumu and Eldoret. TEC and KAPC were appropriate choice as a location for this study largely because they are known to be among pioneer institutions for training counsellors at diploma level. Secondly, they are both registered by the Ministry of Education Science and Technology, and accredited by Kenya Counselling and Psychological Association; a body responsible for moderating and approving all counselling training curricula to ensure that counselling students are exposed to similar experiences as possible. For that reason, the counselling curricula from these institutions would reflect the experiences that all counsellors trained in Kenya undergo, albeit with very minimal differences. The

population From Tec and KAPC consisted of 52 diploma students and 20 trainers in the psychological counselling programme.

3.3 Study Population

A study population refers to the universe of units from which a sample is to be selected, consisting of the set of all measurements in which the investigator is interested (Gurmu, 2011). To achieve this objective, the study population included: Heads of Department, lecturers, trainers, fourth year undergraduate and Masters Students in counselling programmes at Kenyatta and Moi University, diploma students and trainers from KAPC and Tec Institute of Management and, counsellors working at MTRH School of Nursing, department of psychological counselling. The study population in this study therefore constituted 2 Heads of Department, 44 lecturers, 80 undergraduate 4th year students, 52 postgraduate students, 20 trainers, 52 diploma students and 17 counsellors working at Moi Teaching and Referral Hospital, School of Nursing. The study targeted the entire lecturer, student and counselling population to obtain data on interdisciplinary training and media resources used in training counsellors. The entire population was used because they were directly involved in the teaching, learning and counselling programmes respectively.

3.5 Sample and Sampling Techniques

According to Kothari (2004), sampling involves selecting some elements of a population, having similar features to the underlying population, as a representative of the total population so as to make certain observations of elements and make conclusions

regarding the entire population. Sampling therefore uses a subset of the population to represent the whole population.

Purposive sampling is a non-probability technique involving the selection of a particular sample on purpose. The researcher uses special knowledge or expertise about a specific group to select subjects who represent this population (Berg, 2004). Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose. Purposive sampling was used to identify the institutions involved in the study since this technique allowed the researcher to use the cases that had the required information with respect to the objectives of this study. All the respondents thus, Heads of Department , lecturers, trainers, diploma, undergraduate masters students and counsellors in the counselling psychology programmes in the sampled institutions were handpicked because they possessed the required characteristics, that is, being involved in the psychological training and counselling programme. The Joints Admissions Board guidelines (currently Kenya Universities and Colleges Central Placement Service) and a list of accredited institutions by Kenya Counselling and Psychological Association were used as a sampling frame to identify the cases which formed the units of observation in this study. The training and counselling institutions involved in the study were selected because they have offered training and counselling services over a long period of time. Heads of Department, lecturers, trainers, students from the selected training institutions and the counsellors automatically became participants in this study as they were central and believed to be conversant with the training approaches and media resources used in training counsellors in those institutions.

Because of the small numbers involved in the psychological training and counselling programme at different levels. The researcher involved the entire population thus 2 Heads of Department, 44 lecturers, 52 diploma students, 80 undergraduate 4th year students, 52 postgraduate students, 20 trainers and 17 counsellors working at Moi Teaching and Referral Hospital in the department of psychological counselling. Yamane (1967) sampling formulae procedures was used provide a more simplified and appropriate formula to calculate sample sizes (see appendix VI).

$$n = \frac{N}{1 + N(e)^2}$$

n = sample size

N= Population size

e =level of precision or sampling error which is ± 5

The above formula developed a table appendix xx which assisted the researcher to draw a sampling frame, table 3.1. The sampling frame defines the list of all members used as a basis for sampling.

Table 3. 1: Sampling frame

Population	Total	Sample Size
Heads of department	2	2
Lecturers	50	44
Trainers	20	20
Diploma students	60	52
Undergraduate fourth students	100	80
Post graduate students	60	52
Psychological counsellors	17	17
	309	267

3.6 Data Collection Instruments

Questionnaire, an interview schedule and observation guides were used to gather information from the participants. Research instruments were developed to generate data for purposes of answering the research questions.

3.6.1 Self-Administered Questionnaires

Self-administered questionnaire was used to gather information from lecturers, trainers, students and counsellors. Each questionnaire was developed to address a specific objective and research question. The questionnaire comprised both open-ended and structured questions. These two types of questions were used to enable the respondents to objectively select one or more fixed items in the questionnaire and to express their opinion freely in writing on inter-disciplinary training of counsellors and use of selected media resources. The questionnaire was also preferred because it gives the respondents an element of privacy as they express themselves (Bless and Achola, 1990, Burns and Bush, 2010). The questionnaire for students was divided into two parts; part A comprised questions on demographic information while part B consisted of questions on use of various instructional media resources. Additionally, lecturers and trainers questionnaire consisted of part A, B and C where part A was made up of questions on gender, work experience and academic qualification while part B and C contained both closed and open-ended items seeking information on interdisciplinary training approach and use of instructional media resources respectively.

The counsellors' questionnaire was made up of closed-ended items on demographic information and open-ended items on the extent of implementation of interdisciplinary counselling approach to counselling practise. The Likert type scale was used to rate responses on inter-disciplinary training and the use of media resources in training counsellors.

3.6.2 Interview Schedule

Face-to face interviews were conducted with the key informants of training and counselling institutions on the extent of implementation of inter-disciplinary approach in training and counselling. A semi-structured interview schedule with both structured and open-ended questions was conducted with a total of 5 interviewees comprising of Heads of Department and co-ordinators of psychological counselling programmes in the sampled institutions. Interview schedule in section A elicited responses on demographic information relating to gender, experience and academic and professional qualifications. Questions in section B sought information on types of interdisciplinary training programmes available in those institutions, the extent of networking and sharing of best practices in training and counselling practise, competencies for interdisciplinary practise, optimum learning conditions, relationship between inter-disciplinary training and learner outcomes, barriers and strategies to overcome the barriers. Section C of the interview guide elicited responses on the major types of teaching and learning resources and whether there was a relationship between teaching and learning resources and student performance. The interview technique was selected because of its central advantage as it gave an opportunity for an in-depth data and ensured high response rate. In addition an

interview schedule also encouraged a natural situation since the researcher came face to face with the respondent (Bell, 1993). The respondents were able to express their views and ideas freely while the researcher probed for adequate elaboration of issues especially since the concept of interdisciplinary teaching was relatively new in the sampled institutions. The interviewer used the note taking method to record responses during the interview. The responses were recorded exactly as the respondent expressed by talking and gestures. Information from interviews was used to support data collected using questionnaire and observation checklists.

3.6.3 Observation Schedule

An observation checklist was utilized by the researcher to record the learning resources used in training. A list of instructional media resources was developed and each item checked off as it occurred. Items on the checklist included practicum rooms and computer laboratories. Others were: computers and software, the number of computers connected to the internet, CD ROMS, VCDs, DVDs, different types of projectors and video cameras. Data from observation checklist was cross checked with responses from interviews and questionnaires.

3.7 Piloting

The main purpose of piloting was to test reliability and validity of research instruments by ensuring that items in the instrument were stated clearly and had the same meaning to all respondents. Piloting was conducted at Eden Training and Therapy Centre (Nairobi) and PCEA Kikuyu Referral Hospital. The pilot sample included 5 students, 3 trainers and

5 counsellors. Respondents on which the pilot study was conducted did not form part of the study population. The researcher was able to assess the clarity of questions and the time taken to administer the instrument. Confusing and sensitive items were identified and modified and others omitted. Information obtained during piloting allowed for the preparation of the final data collection tool.

3.7.1 Validity

Lee (2010) has defined validity as the extent to which a test measures the construct or variables which it purports to measure. Both construct and content validity techniques were used to validate data generated from the study.

3.7.1.1 Construct Validity

Construct validity measures the degree to which data obtained from an instrument meaningfully and accurately reflects or represents a theoretical concept. Construct validity in this study was assessed by using at least two different instruments which measured the same concept. Both questionnaire and observation checklist were used to determine the media resources used in training of counsellors. In addition an interview guide and questionnaire were used to determine the interdisciplinary programmes in counsellor training institutions. A validity coefficient was computed by correlating measurements from the two instruments.

3.7.1.2 Content Validity

Content validity refers to 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. In this study all possible items which were required to measure the concepts were specified when designing the instrument that yielded content-valid data. Content validity of research instruments in this study was established by specifying all possible indicators related to the concept of interdisciplinary training approach and the instructional media resources used for training counsellors. Repeated advice was sought from professionals and experts in the area of in media education and inter-disciplinary training that assisted in assessing the concepts the instruments intended to measure and determine whether the items accurately represented the concepts of the study (Nkapa, 1997).

3.7.2 Reliability

A pilot study was carried out in a counsellor training institution and a referral hospital within Nairobi and Kikuyu County respectively. Reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions. This is the level of consistency or the stability of the instrument (Bell 2000). Cronbach alpha was used to calculate the reliability of the instruments. Cronbach's alpha is a statistic generally used as a measure of internal consistency or reliability of a psychometric instrument. Alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous (that is, questions with two possible answers) and/or multi-point formatted questionnaires or scales. Some professionals insist

on a reliability score of 0.70 or higher in order to use a psychometric instrument. A coefficient value of 0.80 was found.

3.8 Data Collection Procedures

After getting permit from the relevant authorities, data collection commenced. Initial visits were made to the training institutions and the health facility in order to explain the purpose of the study and make appointments. Questionnaires were distributed to respondents. Thereafter the researcher conducted open-ended interviews using the interview schedule, while allowing for views from respondents. As a result, the researcher was able to generate in-depth discussions from the participants. Their responses were recorded through note taking method.

3.9 Data Analysis Procedures

Data collected using questionnaires, interview schedules and observation checklists were coded and analysed using both qualitative and quantitative methods. Responses from interviews and open ended questionnaires constituted the bulk of qualitative data. Data analysis was achieved through initial coding and identification of patterns. The patterns that were related were grouped together into themes which were reported and interpreted. The researcher then established the relationships among these categories. Quantitative data was analysed by first measuring numerical values from which descriptions were made. The main purpose of using descriptive statistics was to enable the researcher to meaningfully describe a distribution of scores or measurements using a few indices or statistics. Data analysis technique consisted of calculation of mean scores, percentages

and frequencies using the statistical package for social sciences (SPSS) version 17 for analysis. Finally, research questions with the degree of relationship between two variables were analysed using inferential statistics; Pearson Product Moment Correlation. The results were presented using tables, bar chart and pie chart.

3.10 Ethical Considerations

Mugenda and Mugenda (2003) consider that a code of ethical practice makes researchers aware of their obligations to their subjects and also to those problem areas where there is a general consensus about what is acceptable and what is not. Since researchers are people genuinely concerned about other peoples' quality of life, they must be people of integrity who will not undertake research for personal gain or research that will have negative effect on others. In this research approval from Institutional Research and Ethics Committee (IREC) and permission from relevant authorities was obtained before collection of data commenced. Respondents were protected by keeping the information given confidential and their identity kept anonymous. Furthermore, the real purpose of the research was disclosed to respondents in order to conform to the principle of voluntary consent. Finally, information collected during research was reported as accurately as possible.

3.12 Summary of the Chapter

This chapter has highlighted Research Design and Methodology. The study location describes the sites where this study was carried out. Other areas covered in this chapter include: the study population, sample size and sampling procedures, data collection instruments and measures to ensure validity and reliability of data collection tools. The chapter concludes with data analysis procedures and ethical considerations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION.

4.0. Overview

This chapter presents the results of the study which is based on the collected, analyzed and interpreted data. The results are presented according to the themes of the study. The themes are: the extent of implementation of interdisciplinary training programmes, instructional media used in training, the relationship between interdisciplinary training and student performance, the relationship between media resources and student performance, and, finally the barriers encountered in implementation of interdisciplinary programme. Data is presented in subsections using tables, pie and bar charts. Each table presented responses in percentages or proportional percentages.

4.1.1 Background Information of the Respondents.

The reporting of the results opens with a demographic description of respondents who were involved in the study. This was ascertained by looking at the following variables: sex of respondents, qualifications of trainers and practicing counsellors and, lecturers and practising counsellors' years of experience. Background information was sought in order to lay a foundation on which interpretation of the study is based. Different categories of sex were represented from all groups from whom information was sought. Respondents in this study involved 116 students composed of 38 (32.8%) males and 78 (67.2%) females. Lecturers who participated in this study were 6 (37.2%) males and 10 (62.5%) females whereas practising counsellors had 3 (33.3) males and 6 (66.7%) females. An implication of this is that the majority of students, lecturers and counsellors involved in

the counselling programme were female. The demographic results on sex are presented in

Table 4.1

Table 4. 1

Sex of Respondents

Sex	Students		Lecturers		Practising counsellors	
	Freq	%	Freq	%	Freq	%
Male	38	32.8	6	37.5	3	33.3
Female	78	67.2	10	62.5	6	66.7
Total	116	100.0	16	100.0	9	100.0

4.1.2 Qualifications of trainers and practicing counsellors

With regard to the highest level of training the study established the following: diploma (18.8%), degree holders were (37.5%) followed by masters qualifications at (25%) and (18.8%) with PhD as their highest level of training. Results obtained from counsellors' academic qualifications revealed (11.1%) had diploma, (77.8%) degree and (11.1%) masters as their highest level of training. There was no counsellor with a PhD qualification. Table 4.2 presents the levels of academic and professional qualifications of lecturers/trainers and counsellors

Table 4. 2:

Level of Academic and Professional Qualifications

	Dipolma		B.A/B.Ed/B.Sc		M.A/M.Ed/M.Sc		Ph.d		Total	
	freq	%	freq	%	Freq	%	freq	%	freq	%
Lecturers /Trainers	3	18.8	6	37.5	4	25	3	18.8	16	100
Practising counsellors	1	11.1	7	77.8	1	11.1	0	0.0	9	100

As far as the experience in years was concerned, only 1 (6.3%) had served for 10 years, 2 (12.5%) for 8 years, 1 (6.3%) had served for 7 years while those who had served for 6 years in their stations were only 2 (12.5%). The rest of the staff had served for less than 5 years in their current stations. The report also indicated that majority of practising counsellors, 6 (66.7%) had served in their current station for approximately a period of two years while 2 (22.2%) had worked in their current station for an average of three years. Only 1 (11.1%) had 10 years working experience. Demographic results on years of experience are presented in Table 4.3.

Table 4. 3:

Lecturers and Practising Counsellors' Years of Experience

Working length (Years)	Lecturers		Practising counsellors	
	Frequency	%	Frequency	%
1.00	2	12.5	0	0
2.00	0	0	6	66.7
3.00	3	18.8	2	22.2
4.00	4	25.0	0	0
5.00	1	6.3	0	0
6.00	2	12.5	0	0
7.00	1	6.3	0	0
8.00	2	12.5	0	0
10.00	1	6.3	1	11.1
Total	16	100.0	9	100.0

4.1.2 Inter-disciplinary approach in training and counselling practice.

Research objective 1 in this study was concerned with establishing the extent of implementation of the inter-disciplinary approach in training and practice of counsellors caring for persons with emotional and psychological needs. To achieve this objective, participants were asked to state whether they were aware of any interdisciplinary programmes in their respective institutions. All the lecturers reported being fully aware of inter-disciplinary training programmes with the majority 7 (77.8) counsellors giving the same report. Counsellors who reported not being aware of the programmes were 2 (22.2%) as indicated in Table 4.4.

Table 4. 4:

Awareness of the Programmes

Are there inter-disciplinary counselling programmes				
Lecturers			Practising counsellor	
Respo nses	Frequency	Percent	Frequency	Percent
Yes	16	100.0	7	77.8
No	0	0	2	22.2
Total	16	100.0	9	100.0

Respondents were further prompted to provide interdisciplinary programmes in their respective institutions. Their responses were scored and the results are presented in Table 4.5.

Table 4. 5:*Lecturers Multiple Response for Inter-Disciplinary Programmes Frequencies*

Inter-disciplinary	Responses		Percent			
	N	Percent	N	Percent	Percent	
Continuous quality	14	20.3%	87.5%	8	29.6%	88.9%
Curriculum development	10	14.5%	62.5%	0	0	0
Staff development	12	17.4%	75.0%	7	25.9%	77.8%
Research project	13	18.8%	81.3%	5	18.5%	55.6%
Client case conference	6	8.7%	37.5%	3	11.1%	33.3%
Counselling skills	13	18.8%	81.3%	4	14.8%	44.4%
Others (specify)	1	1.4%	6.3%	0	0	0
Total	69	100.0%	431.3%	27	100.0%	300.0%

Respondents were further asked to state the extent to which they incorporated inter-disciplinary approach. From their responses, 6 (66.7%) counsellors confirmed often incorporating inter-disciplinary approach in counselling practice while 1 (11.1%) indicated a response of very often with 2 (22.2%) respondents reporting not at all being involved in any of the inter-disciplinary programmes. Their responses were scored and the results are presented in Table 4.6.

Table 4. 6:*Practising Counsellors Extent of Incorporating Inter-Disciplinary Approach*

Response	Frequency	Percent
Not at all	2	22.2
Often	6	66.7
Very often	1	11.1
Total	9	100.0

Counsellors' responses on interdisciplinary programmes were recorded and presented in Table 4.7.

Table 4. 7:

Multiple Responses on the Inter-Disciplinary Programmes Frequencies

Inter-disciplinary programmes	Responses		Percent of Cases
	N	Percent	
• continuous quality development	8	29.6%	88.9%
• Staff development	7	25.9%	77.8%
• Research project	5	18.5%	55.6%
• Client centred case conference	3	11.1%	33.3%
• Development of counselling skills	4	14.8%	44.4%
Total	27	100.0%	300.0%

It was important to find out the benefits of inter-disciplinary approach in training and counselling practice. Both lecturers and counsellors were asked to state their responses. Almost all the respondents (93.8%) stated that inter-disciplinary counselling approach enhances psychological care. Respondents further explained ways in which the programme enriches practice. Among the responses stated was the fact that all disciplines of care have their own strengths and limitations and therefore a combination of disciplines complement each other thus providing a more comprehensive care to their clients. Similarly 3 (18.8%) participants explained that inter-disciplinary counselling improves the quality of service through applying a more and holistic approach to care, hence addresses needs of clients from diverse backgrounds. There were (6.3%) who showed that an inter-disciplinary approach provides opportunities for interaction and

collaboration with professionals from other disciplines hence makes one more knowledgeable. Collaboration with related disciplines eventually translates to personal development, enriched practice and better therapeutic results. A summary of responses on benefits of interdisciplinary counselling programme were scored and the results are presented in Table 4.8.

Table 4. 8:

Benefits of inter-disciplinary counselling programme (Lecturers)

Counsellors responses	Frequency	%
Clients come from different backgrounds	3	18.8
Disciplines and counselling approaches have strengths and weaknesses	3	18.8
it enhances holistic approach	2	12.5
Easy to make referrals	2	12.5
Provides adequate knowledge to help clients	1	6.3
Multiple practice is rich	1	6.3
The counsellor approaches a client from a multidisciplinary perspective	2	12.5
Broadens clients perspective	1	6.3
Enriches counsellors practice	1	6.3
Total	16	100.0

The researcher went a step further to establish the types interdisciplinary programmes offered at different levels of training namely: diploma, undergraduate and masters level. A summary of responses from participants were scored and the results are presented in Table 4.9, Table 4.10 and Table 4.11 respectively.

Table 4. 9:*Diploma Frequencies Multiple Responses*

Programmes	Responses		Percent of Cases
	N	Percent	
Diploma programmes			
Continuous quality improvement	3	23.1%	100.0%
Curriculum development	3	23.1%	100.0%
Staff development	2	15.4%	66.7%
Research project	2	15.4%	66.7%
Client case conference	1	7.7%	33.3%
Development of counselling skills	2	15.4%	66.7%
Total	13	100.0%	433.3%

Table 4. 10:*BA/BED Frequencies Multiple Responses*

Programmes	Responses		Percent of Cases
	N	Percent	
Continuous quality improvement	5	20.0%	83.3%
Curriculum development	3	12.0%	50.0%
Staff development	4	16.0%	66.7%
Research project	5	20.0%	83.3%
Client case conference	2	8.0%	33.3%
Development of counselling skills	6	24.0%	100.0%
Total	25	100.0%	416.7%

Table 4. 11:*Masters Level Frequencies Multiple Responses*

Programmes	Responses		Percent of Cases
	N	Percent	
Continuous quality improvement	3	23.1%	75.0%
Curriculum development	1	7.7%	25.0%
Staff development	3	23.1%	75.0%
Research project	3	23.1%	75.0%
Development of counselling skills	3	23.1%	75.0%
Total	13	100.0%	325.0%

Table 4. 12 :*Postgraduate Frequencies Multiple Responses*

	Responses		Percent of Cases
	N	Percent	
Continuous quality improvement	3	17.6%	100.0%
Curriculum development	3	17.6%	100.0%
Staff development	3	17.6%	100.0%
Research project	3	17.6%	100.0%
Client case conference	3	17.6%	100.0%
Development of counselling skills	2	11.8%	66.7%
Total	17	100.0%	566.7%

Interdisciplinary programmes carried out by counsellors were also recorded in Table 4.13

Table 4. 13 :*Practising counsellors Interdisciplinary programs Frequencies Multiple responses*

Interdisciplinary programs	Responses		Percent of Cases
	N	Percent	
Continuous quality development	2	28.6%	66.7%
Staff development	2	28.6%	66.7%
Research project	1	14.3%	33.3%
Client centred case conference	1	14.3%	33.3%
Development of counselling skills	1	14.3%	33.3%
Total	7	100.0%	233.3%

4.4.2 Lecturer's satisfaction with the extent of networking and sharing of best practice with other institutions.

Findings from lecturers' satisfaction with the extent of networking and sharing of best practice with other institutions recorded majority (43.8%) as being fairly satisfied, (37.5%) satisfied and only (18.8%) stating highly satisfied with the level of networking and interaction with related institutions. The results were recorded in Table 4.14.

Table 4. 14:*Satisfaction with the extent of networking and sharing of best practice*

	Frequency	Percent
Fairly satisfied	7	43.8
Satisfied	6	37.5
Highly satisfied	3	18.8
Total	16	100.0

4.4.3 Professional disciplines of the collaborating Institutions

The researcher analysed the professional disciplines of the collaborating institutions as per the levels. At the diploma level the professional disciplines of the collaborating institutions are recorded in table 4.15.

Table 4. 15:

Diploma Professional Disciplines Frequencies Multiple Responses

	Responses		Percent of Cases
	N	Percent	
Social work	1	12.5%	33.3%
Community based organizations	2	25.0%	66.7%
Medicine	2	25.0%	66.7%
Education	2	25.0%	66.7%
Nutrition	1	12.5%	33.3%
Total	8	100.0%	266.7%

Results on the description of the interdisciplinary programmes at diploma level are provided and recorded in Table 4.16

Table 4. 16:

Diploma Program Description Frequencies Multiple Responses

	Responses		Percent of Cases
	N	Percent	
Scheduled lecture	1	20.0%	100.0%
A workshop	1	20.0%	100.0%
Client centred case conference	1	20.0%	100.0%
Development of counselling skills	1	20.0%	100.0%
Practicum	1	20.0%	100.0%
Total	5	100.0%	500.0%

Responses from participants on the undergraduate professional disciplines of the collaborating institutions were analysed and recorded in Table 4.17

Table 4. 17:*Undergraduate Professional Disciplines Frequencies Multiple Responses*

Professional disciplines	Responses		Percent of Cases
	N	Percent	
Social work	6	25.0%	100.0%
Community based organizations	4	16.7%	66.7%
Medicine	3	12.5%	50.0%
Psychiatry	1	4.2%	16.7%
Education	6	25.0%	100.0%
Nutrition	2	8.3%	33.3%
Legal Bodies	2	8.3%	33.3%
Total	24	100.0%	400.0%

The results recorded indicate that social work, education (25%) and community based organizations (16.7%) are professional disciplines preferred for collaboration by undergraduate training programmes institutions.

A further analysis of the description of the programme in order to know what it included at undergraduate level showed multiple responses provided as recorded in Table 4.18

Table 4. 18:
Undergraduate program description frequencies multiple responses

	Responses		Percent of Cases
	N	Percent	
Scheduled lecture	1	5.9%	16.7%
A full course	2	11.8%	33.3%
Weekly tutorials	1	5.9%	16.7%
A workshop	2	11.8%	33.3%
Client centred case conference	2	11.8%	33.3%
Development of counselling skills	4	23.5%	66.7%
Practicum	5	29.4%	83.3%
Total	17	100.0%	283.3%

Practicum (29%) was key in the undergraduate professional disciplines programme. This was attributed to the fact that effective counselling practice requires skills and techniques which are largely acquired during practicum sessions. The Masters professional disciplines of the collaborating institutions were analysed and recorded in Table 4.19

Table 4. 19:
Master professional disciplines Frequencies multiple responses

Professional disciplines	Responses		Percent of Cases
	N	Percent	
Social work	2	20.0%	50.0%
Community based organizations	3	30.0%	75.0%
Medicine	1	10.0%	25.0%
Psychiatry	1	10.0%	25.0%
Education	3	30.0%	75.0%
Total	10	100.0%	250.0%

Community based organizations and education (30%) were rated highly as professional disciplines of the collaborating institutions at the masters level. The results are almost similar to findings at both the diploma and under-graduate level but slightly different in types of the programmes offered. Whereas practicum was rated highly at the first two levels, masters level recorded workshops as more useful among interdisciplinary programmes as recorded in Table 4.20

Table 4. 20:

Masters Professional disciplines Frequencies multiple responses

	Responses		Percent of Cases
	N	Percent	
Scheduled lecture	1	14.3%	25.0%
A full course	1	14.3%	25.0%
A workshop	3	42.9%	75.0%
Client centred case conference	1	14.3%	25.0%
Practicum	1	14.3%	25.0%
Total	7	100.0%	175.0%

Responses from (Phd) holders on professional disciplines of the collaborating institutions were analysed and recorded in Table 4.21.

Table 4. 21:

PhD professional disciplines Frequencies multiple response

Professional disciplines	Responses		Percent of Cases
	N	Percent	
Social work	2	20.0%	66.7%
Community based bodies organizations	2	20.0%	66.7%

Medicine	1	10.0%	33.3%
Psychiatry	2	20.0%	66.7%
Education	3	30.0%	100.0%
Total	10	100.0%	333.3%

The above results show that education (30%) is rated as the highest professional disciplines for collaboration mainly by teaching staff with PhDs. The argument provided alludes to the fact that at this level one is required to engage in educational research to generate knowledge required at different levels of training.

A further analysis of the description of the programme revealed that both scheduled lecture and practicum (28.6%) were the most preferred modes of collaboration. The multiple responses provided were recorded in Table 4.22

Table 4. 22:

PhD Professional disciplines Frequencies multiple responses

Professional disciplines	Responses		Percent of Cases
	N	Percent	
Scheduled lecture	2	28.6%	66.7%
Weekly tutorials	1	14.3%	33.3%
Client centred case conference	1	14.3%	33.3%
Development of counselling skills	1	14.3%	33.3%
Practicum	2	28.6%	66.7%
Total	7	100.0%	233.3%

The study provided an analysis of description of programmes for counsellors. Medicine, psychiatry and nutrition (30%) were recorded by counsellors as the key programmes with whom they interacted. Counsellors' responses could be based on the fact that this study was carried out at Moi Teaching and Referral Hospital department of psychological

counselling whereby it was necessary and also convenient to work closely with the cited programmes to enhance psychological counselling outcomes. The multiple responses provided were recorded in Table 23.

Table 4. 23:

Practising counsellors Program description Frequencies multiple responses

Program description	Responses		Percent of Cases
	N	Percent	
Medicine	3	30.0%	100.0%
Psychiatry	3	30.0%	100.0%
Education	1	10.0%	33.3%
Nutrition	3	30.0%	100.0%
Total	10	100.0%	333.3%

4.5 The second objective of this study was to identify the major types of teaching and learning resources used in training of counsellors in the counsellor training programmes.

The media resources available in the counsellor training institutions in Kenya were found to play an important role as revealed by findings of this study. The study focused on the use of projected and non-projected media in training counsellors in the counsellor training programmes and the extent to which they enhanced learning. Students were asked to state the types of projected media used in their institutions for training. Respondents were given on a series of seven items depicting various projected media used in instruction and were asked to respond on a four-point Likert scale with items ranging from ‘highly effective’ to ‘not at all’.

The data in table 4.24 reveals that a significantly higher proportion of respondents viewed internet search 81 (69.8%) and computers 75 (64.7%) as highly effective in enhancing teaching and learning. Responses also indicate that the older generation of technology such as the overhead projector still plays a role in training. The findings were tabulated in Table 4.24.

Table 4. 24:

Students Frequencies for Media Resources in Enhancing Learning

Options	Computers		LCD projector		slides projector		video projector		internet search		overhead projector		others	
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
Not at all	1	0.9	8	6.8	11	9.5	10	8.6	1	0.9	17	14.6	30	25.9
Fairly effective	9	7.8	26	22.4	24	20.7	21	18.1	8	6.9	21	18.1	37	31.9
Effective	31	26.7	42	36.2	49	42.2	41	35.3	26	22.4	49	42.2	26	22.4
Highly effective	75	64.7	40	34.5	32	27.6	44	37.9	81	69.8	29	25.0	23	19.8
Total	116	100.0	116	100.0	116	100.0	116	100.0	116	100.0	116	100.0	116	100.0

The results on media resources on enhancing learning was translated into means and recorded in table 4.11 below.

Table 4. 25:

Students Mean for Media Resources in Enhancing Learning

Media resources	Mean
Computers	3.55
LCD projectors	2.97
Slides projector	2.88
Video projector	3.03
Internet search	3.61
Overhead projector	2.75
Others	2.34

Participants were given seven variables depicting various projected media resources used for instruction and were asked to respond on a four point scale ranging from ‘always available’ to ‘not available’. Findings recorded reveal that internet services for learning are more available than other media such as projectors and video tapes. The results were recorded in Table 4.26 showing availability in % and mean as recorded in Table 4.27 respectively.

Table 4. 26:

Lecturer’s Degree of Availability Frequencies for Projected Media Resources for Teaching and Learning

	Overhead projector		LCD projectors		Slides projector		Video projector equipment		Video Tapes		Internet search		Others	
	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%	Fre	%
Not available	8	50.0	5	31.3	8	50.0	6	37.5	6	37.5	3	18.8	3	18.8
Fairly available	3	18.8	5	31.3	3	18.8	2	12.5	2	12.5	7	43.8	7	43.8
available	0	0	1	6.3	0	0	3	18.8	2	12.5	2	12.5	3	18.8
always available	5	31.3	5	31.3	5	31.3	5	31.3	6	37.5	4	25.0	3	18.8
Total	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0

Table 4. 27:

Lecturers Mean on the Degree of Availability of Media Resources for Teaching and Learning

Media resources	Mean
Overhead projector	2.13
LCD projectors	2.38
Slides projector	2.13
Video projector equipment	2.44
Video tapes	2.50
Internet search	2.44
Others	1.00

4.5.3 Non Projected Media

Non projected media resources are commonly used for instruction to enhance teaching and learning in educational institutional. Students' views on use of non projected media in enhancing learning were sought and results tabulated. The use of reference books scored (56.9%), models (41.4%) and printed visual (42.2%) as useful in enhancing learning within counsellor training institutions. It is clear from these results that among other learning resources, reference books are highly rated as non-projected media in enhancing learning. This information was tabulated using % and recorded in Table 4.28

Table 4. 28:

Students Mean for Non-Projected Media Resources in Enhancing Learning

	Not at all		Fairly effective		Effective		Highly effective		Total	%
	Freq	%	Freq	%	Freq	%	Freq	%		
Real objects	5	4.3	10	8.6	30	25.9	30	25.9	116	100.0
Models	6	5.1	18	15.5	44	37.9	48	41.4	116	100.0
Reference books	0	0.0	10	8.6	40	34.5	66	56.9	116	100.0
Printed visuals	1	.9	18	15.5	48	41.4	49	42.2	116	100.0
Chalkboard	7	6.0	33	28.4	50	43.1	26	22.4	116	100.0
Whiteboard	10	8.6	17	14.7	59	50.9	30	25.9	116	100.0
Butcher papers	17	14.7	33	28.4	47	40.5	19	16.4	116	100.0
Audiotapes	14	12.1	25	21.6	55	47.4	22	19.0	116	100.0
Other	57	49.1	18	15.5	27	23.3	14	12.1	116	100.0

Similarly, lecturer/trainers views on the availability of non-projected media resources were captured. Results on the use of textbooks were closely related to those of students as the majority of lecturers cited printed textbook or journals (68.8%) as always available followed by whiteboard (50%) and blackboard and chalk (43.8). A fairly good number of

respondents (37.5 %) stated that butcher papers were still important in instructional process. The results are presented in % on Table 4.29 and mean as presented in Table 4.30 respectively.

Table 4. 29:*Lecturers Views on Availability Frequencies for Non-Projected Media for Instruction*

	Real objects		Models		Printed book journals		text or Printed visuals(charts)		blackboard and chalk		Whiteboard and pen		Audiotapes		Butcher papers		others	
	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%	Fr	%
Not available	1	6.3	1	6.3	1	6.3	1	6.3	1	6.3	0	.0	0	0	2	12.5	6	37.5
Fairly available	6	37.5	8	50.0	2	12.5	6	37.5	7	43.8	7	43.8	7	43.8	6	37.5	5	31.3
available	7	43.8	7	43.8	2	12.5	5	31.3	1	6.3	1	6.3	3	18.8	2	12.5	2	12.5
always available	2	12.5	0	.0	11	68.8	4	25.0	7	43.8	8	50.0	6	37.5	6	37.5	3	18.8
Total	16	100.	16	100.	16	100.	16	100.0	16	100.	16	100.	16	100.	16	100.	16	100.

Table 4. 30:*Lecturers Views on Degrees of Availability Mean for Non-Projected Media for Instruction*

Non-projected media resources	Mean
Real objects	2.63
models	2.38
printed text book or journals	3.44
printed visuals charts	2.75
blackboard and chalk	2.88
whiteboard and pen	3.06
audio tapes	2.94
butcher paper	2.75
Others	1.13

Students were asked to state their views on the use of projected media. Various types of projected media resources were listed. The responses were recorded on a five point Likert

scale ranging from ‘excellent’ to ‘poor’. The results were analysed and tabulated as shown on table 4.31. According to the findings, internet computer (modern technology) followed by LCD projectors (older technology) are increasingly gaining popularity as media for instruction in institutions of higher learning. Findings from lecturers on the same yield almost similar results especially on the use of internet services for learning. Lecturers’ findings are recorded in Table 4.32

Table 4. 31:

Students Mean Score on the Use of Projected Media to Support Learning

Variable	Overhead projector	L.C.D Projector	Slides projector	Video projector	Internet computers	overall mean
Student participation	2.40	2.66	2.42	2.91	3.03	2.68
Relevance to student needs	2.36	2.74	2.57	3.02	4.15	2.97
Simplicity of operation	2.33	2.56	2.40	2.91	4.29	2.90
Technical operation	2.15	2.62	2.34	2.83	4.03	2.79
Appropriateness	2.42	2.80	2.77	2.99	3.92	2.98
Effectiveness	2.80	2.97	2.97	3.18	4.11	3.21
Learner comprehension	2.50	3.03	2.65	3.11	4.10	3.08
Adequacy	2.32	2.60	2.57	2.97	4.09	2.91
Accessibility	2.05	2.42	2.30	3.09	3.78	2.73
Availability	1.96	2.33	2.28	3.03	3.68	2.66
Overall mean	2.33	2.67	2.53	3.00	3.92	

Table 4. 32:*Lecturer response Mean score on the use of projected media to support learning*

	Overhead projector	L.C.D Projector	Video projector	Internet computers	overall mean
• Frequency of use	2.88	3.31	3.00	4.19	3.34
• Relevance to objectives	3.06	3.38	3.31	3.81	3.39
• Simplicity	2.94	2.88	2.94	4.25	3.25
• Accessibility	2.56	3.00	3.06	3.94	3.14
• Acceptability	3.25	3.06	3.19	3.75	3.34
• Effectiveness	2.81	3.19	2.94	3.88	3.20
• Affordability	3.25	3.19	3.06	4.00	3.38
• Maintenance	2.25	3.06	2.88	3.75	2.98
• Quality	2.44	3.06	2.88	3.63	3.00
• Adequacy	3.19	3.19	3.19	3.75	3.33
• sophistication level	3.06	3.19	2.94	3.50	3.17
• customization to needs	2.81	3.13	3.13	3.63	3.17
• coordination	2.88	3.31	3.31	3.63	3.28

In order to determine the non- projected media used, various items were given in the response set. These were: real objects, models, chalkboard, whiteboard, butcher papers, audio papers, printed visuals and reference books and the responses were recorded on a five point Likert Scale ranging from one= Poor, 2=Low, 3=Medium, 4=High and 5= Excellent. According to the results, reference books were rated highly with a mean score of 4.21 and accessibility recording a mean of 4.10 on a scale of 5 with a large number citing simplicity of operation as a reason for use. Whiteboard as medium of instruction rated between 3.08 to 3.85 and almost an equal number of respondents (3.32 to 3.78) indicated that real objects (3.32 to 3.78) as non- projected media played an important role

in supporting learning. It is evident from these results that students still depend heavily on textbooks to gain in due to availability and simplicity in usage. These results are tabulated in Table 4.33

Table 4. 33:

Students Mean score on the use of non-projected media to support learning

Variable	Non -Projected media resources				Butcher papers	Audio tapes	Printed visuals	Reference book
	Real objects	Models	Chalkboard	Whiteboard				
Student participation	3.51	3.35	2.96	3.08	3.45	2.72	2.69	3.09
Relevance to student needs	3.46	3.43	2.72	3.22	3.45	2.62	2.65	3.09
Simplicity of operation	3.45	3.41	2.68	3.09	3.28	3.00	3.19	4.14
Technical operation	3.36	3.40	2.99	3.36	2.79	2.74	3.34	3.81
Appropriateness	3.49	3.76	2.98	3.24	3.10	2.74	3.06	3.83
Effectiveness	3.59	3.67	2.91	3.64	2.91	2.74	3.28	3.62
Learner comprehension	3.78	3.41	2.84	3.63	2.78	2.84	3.21	3.59
Adequacy	3.71	3.57	2.99	3.85	2.72	2.86	3.14	3.67
Accessibility	3.32	3.25	2.83	3.43	2.91	2.78	3.16	4.10
Availability	3.31	2.89	2.98	3.45	2.62	2.74	3.09	3.72
Overall mean	3.50	3.41	2.89	3.40	3.00	2.78	3.08	3.67

Lecturers' views on the use of non-projected media to support learning were almost similar to findings reported by students especially on the use of reference books, real objects and models which recorded a mean score of above 3. These results reveal that both the students and lecturers reflect almost the same feelings on use of non-projected media resources, mostly preferring the textbooks and the newer types of non-projected media such as the whiteboard to support learning. The results are presented in Table 4.34.

Table 4. 34:*Lecturers Mean Score on the Use of Non-Projected Media to Support Learning*

Variable	Non projected media resources							
	Real objects	Models	Chalkboard	Whiteboard	Audio tapes	Butcher papers	Printed visuals	Reference books
Frequency of use	3.25	3.50	2.75	2.69	2.94	2.31	2.06	3.69
Relevance to objectives	3.50	3.00	2.44	2.69	3.31	2.00	2.63	3.75
Simplicity	3.81	3.13	2.69	2.75	2.94	1.69	2.56	3.69
Accessibility	3.31	3.06	2.81	2.94	3.00	1.50	2.50	3.50
Acceptability	3.44	3.25	2.63	3.13	3.13	1.63	2.50	3.88
Effectiveness	3.38	3.06	2.63	3.19	2.94	1.81	2.50	3.50
Affordability	3.13	3.19	4.06	4.38	3.13	1.56	2.50	2.81
Maintenance	3.25	3.06	4.00	4.31	2.88	1.50	2.75	3.13
Quality	2.75	3.00	3.94	4.38	2.94	1.75	2.50	3.50
Adequacy	2.88	3.13	3.94	4.31	3.00	1.44	2.44	3.38
sophistication level	3.19	3.25	3.50	4.31	2.69	1.69	2.50	3.31
coordination	2.94	3.25	3.93	4.31	2.69	1.63	2.69	3.31

Students were asked to rate their satisfaction levels on different media resources in supporting learning. The results of the study were recorded in Table 4.23. According to the findings learning environment was rated highest with a mean of 3.36 followed by lecturers recording a mean of 3.22 out of 4.

Table 4. 35:
Students Mean Score on Satisfaction of Media Resources in Supporting Learning.

Resources	Mean
Lecture rooms	3.12
Tutorial rooms	2.85
Projection screens	2.34
Seats	2.77
Lecturers	3.22
Technicians	2.91
Librarians	2.98
Learning environment	3.36
Skills laboratory	2.78
Others _	2.09

4.5.4. Students challenges encountered when learning through use of instructional media resources

Kothari (20004) found that instructional media resources bring admirable outcomes and promote creativity and social support among the teachers and learners hence make learning more productive. Despite the usefulness of these media resources both students and lecturers are faced with several challenges regarding their use during teaching and learning process. Various challenges faced by students in the use of projected media resources were analysed and the results recorded in table 4.22. From the results (56%) reported that they could not be able to read from far when these media resources were used in the classroom. Secondly, (29.4%) cited dependence on electricity as a serious challenge as the projected media could not be used when the institution experienced blackouts. This situation was caused by a lack of substitute power from generators during

such moments. Scarcity or/and unavailability of media resources (especially in universities at the undergraduate level) was also cited by (2.6%) participants as a perennial problem. Issues of credibility, level of grasping, operating, technical knowledge on operating were among other challenges cited by respondents as recorded in Table 4.36

Table 4. 36:

Students Challenges Encountered In the Use of Projected Media in Learning

Challenges	Frequency	%
cannot read from far	65	56.0
Electricity dependence	34	29.3
availability of media	5	4.3
one has to be sharp in grasping the contents	4	3.4
internalization does not take place instantly	3	2.6
scarcity availability and scarcity issues	3	2.6
Font word should be enlarged to provide well visualised	1	.9
lack of technical knowledge on how to operate due to 1		.9
absence of such materials being used in the learning environment		
Total	116	100.0

The students also provided challenges faced when using non-projected media. From table 4.25 responses indicated that (35.3%) were unable to get the books they needed due to high demand while (33.6 %) cited inadequacy of the non-projected as one of the major challenges faced when learning. These results can be attributed to the fact that the world is passing through a phase of expansion in the need for new educational and training provisions. It is in this context that universities specifically counsellor training institutions are currently experiencing high student enrolment yet instructional and

learning resources are not expanding at the same pace therefore, leading to inadequacy of these resources. One of the respondents stated,

“... this does not expose one to the increasing needs that are emerging in the society such that the knowledge is very limited to what the lecturer knows alone and with very few numbers of reference materials learning is not very enhanced.”

As revealed earlier in this study, availability and adequacy of instructional resources play a crucial role in the enhancement of quality teaching and learning. Though various resources are available and used, 41 (35.3%) participants cited that they were inadequate compared to the number of students who needed to use them. A summary of various challenges encountered by students in the use of non-projected media was recorded and results provided in Table 4.37.

Table 4. 37:

Students Challenges Encountered in the Use of Non-Projected Media in Learning

Challenges	Frequency	Percent
cannot get the book you want due to high demand	41	35.3
not sufficient	39	33.6
does not cover a lot in a lesson includes hand notes which take a long time to cover the subject	24	20.7
techniques on how to use them	4	3.4
lecturers do not highlight main points and students do more study	2	1.7
takes times to find materials	5	4.3
this does not expose one to the increasing needs that are emerging in the society such that knowledge is very limited to what the lecturer knows alone and with the few numbers of reference materials learning is not very enhanced	1	.9
Total	116	100.0

Students were also asked to report on the challenges encountered in the use of facilities in learning. The findings were tabulated in table 4.25. A large percentage (46.6%) indicated that the time given to access necessary information was less due to the large numbers that require using the same facility. In addition (44%) students reported incurring a lot of expenses on photocopy services which were said to be very costly. Other respondents stated that the rate at which the institutions adopt new technology was quite slow in comparison to the explosion and the appreciation for their use especially in the twenty first century. A summary of challenges encountered when using learning facilities was recorded in Table 4.38

Table 4. 38:

Students challenges encountered in the use of facilities in learning

Challenges	Frequency	Percent
sometimes noisy due to o the use of generator when there are no lights	35	30.2
the time given is less to us to gain knowledge for them	54	46.6
getting access to information due to overpopulation	20	17.2
students are more than the facilities	5	4.3
technical issues with media resources	1	.9
inadequate facilities pose a big challenge especially for counsellors as they are unable to have enough time to practise and learn new ways of counselling that could be effective for them	1	.9
Total	116	100.0

This study also established that lecturers had a number of challenges encountered in the use of media resources during instructional process. Most lecturers (56.3%) indicated that

some media resources fail due to poor maintenance or unavailability of power (56.3%). The findings also revealed that electronic media services are rarely available in learning institutions (25%). Findings on challenges faced by lecturers were closely related to those of students. Lecturers' challenges in using media resources were reported on Table 4.39

Table 4. 39:

Lecturer's challenges encountered when using media resources for teaching and learning

Challenges	Freq	%t
these services are rarely available in the institution	4	25.0
sometimes they fail to poor maintenance or unavailability of power	9	56.3
sometimes they can break down unexpectedly, some latest equipment are highly modified making them complex	1	6.3
lack of internet network , power or unavailability of media electronic services	1	6.3
when you require the use of the service it is not readily available due to demand	1	6.3
Total	16	100.

On challenges affecting adequacy, the majority of lecturers (43.8%) related inadequacy of the media resources in counsellor training institutions to insufficient funding, followed by (20%) who stated that due to heavy workload and other administrative duties most lecturers lacked sufficient time to fully get involved in the use of media resources for instruction. A summary of challenges faced was recorded and presented as in Table 4.40.

Table 4. 40:*Challenges affecting adequacy*

Challenges	Freq	%
finance could be the main course of inadequacy	7	43.8
Most involvement by lecturers	4	25.0
lack of internet network , power or unavailability of media electronic services	2	12.5
this machine /electronic machines i.e. projectors are expensive to acquire , hire and maintain them	2	12.5
when operating the machine the first time, not adequately serviced and maintained ,some staff use it for long hours	1	6.3
Total	16	100.0

Responses on challenges faced on utilization of media resources indicated that (50%) of lecturers were dissatisfied with the quality of some media resources which was said to be old, some broke down often and others were generally in poor working condition prompted by improper maintenance and poor storage facilities. As a result, a good number of lecturers chose not to use them for instruction. In addition (8.8%) reported that some media resources exhibit high levels of complexity when using them and especially when one is not acquainted to them. The technicians who ought to assist them were few and sometimes unavailable.

4.5.5. Competency in operating media resources

This study also sought to determine the competency of the students and lecturers on the ability to operate media resources and responses were recorded on a four point Likert Scale ranging from very competent with a score of 4 to poorly competent with a score of

1. It is clear from Table 4.41 that both the lecturers and students were competent in internet search with a mean score of 3.56 and 3.34 respectively. Competency on operating LCD projector seems to be a challenge among both groups as they recorded a mean of 2.94 and 2.00 respectively. The majority of lecturers (56.3 %) indicated that they had been trained on the use of media resources whereas 43.8 % had not been trained at all as indicated in figure 4.1.

Figure 4. 1: Lecturers Training in the use of media resources

Lecturers also indicated the length of the training. It is worth noting that only 37.5% of lecturers had trained for one year and 18.8 had trained for two years. The rest had no training at all (43.8%). Those trained in the use of media resources indicated that only 18.8% had a diploma and 37.5% had a pass certificate whereas 43.8% had no grade at all as indicated in figure 4.2

Figure 4. 2: Grade attained in use of media resources training

It can be concluded by this study that regardless of more and more media resources being available in training institutions, most trainers have not received adequate training to successfully use them for instruction. In order to handle these resources efficiently, there must be some knowledge and regard to basic theory for delivery of service and continued development in information technology as reported by Brusca (1995).

The study also sought to establish whether the lecturers were aware of the policies that regulate use of media in counsellor training institutions. Policies relating to regulation on borrowing books, cameras and projectors were cited by (87.5%) participants as being in existence in their training institutions. Findings on policies are presented in Table 4.41.

Table 4. 41:*Policies regulating use of media resources in instruction*

Policies	Frequency	%
regulation on borrowing books,cameras,projectors	14	87.5
duplicating or doing copy write or any 1 form of piracy is illegal		6.3
misuse of the resource, maintenance and 1 custody		6.3
Total	16	100.0

4.5 The third objective of the study sought to establish the relationship between the inter-disciplinary training programme and student performance

The study was interested in finding out whether there was a relationship between the inter-disciplinary training programme and student performance. To ascertain this, the following null hypothesis was forwarded: There is no significance relationship between the inter-disciplinary training programme and student performance. A Pearson product-moment correlation coefficient was computed to assess the relationship between the inter-disciplinary training programme and student performance. The computation established a negative correlation between the two variables, $r = -.225$, $n=116$, $p >0.05$. Therefore the null hypothesis was retained. It was then concluded that the inter-disciplinary training programme does not influence the performance of students in counselling programmes. The results are presented in Table 4.42

Table 4. 42:

Relationship between inter-disciplinary training programme and student Performance

		inter-disciplinary training programme	Student performance
Media resources	Pearson	1	-.225
	Correlation		
	Sig. (2-tailed)		.076
	N		116

However a further analysis of programme revealed that interdisciplinary programme enhance psychological care as a result of interacting with professionals from different but related disciplines.

4.6. The fourth objective was establish the relationship between the instructional media resources and the performance of students

The study was interested in determining the relationship between the media resources and the performance of students. To ascertain this, the following null hypothesis was forwarded: There is a relationship between media resources and the performance of students. A Pearson product-moment correlation coefficient was computed to assess the relationship between instructional media resources and the performance of students. There was a low correlation between the two variables, $r = .026$, $n=116$, $p < 0.05$. The null hypothesis was thus rejected. The results of the analysis revealed that instructional media

resources do influence the performance of students. The findings for the correlations are presented in Table 4.43

Table 4. 43:

Relationship between teaching and learning resources and the Performance of Students

		teaching and learning resources	Student performance
Media resources	Pearson Correlation	1	.026
	Sig. (2-tailed)		.025
	N		116

4.7 Barriers to inter-disciplinary training programme

Research question number 5 sought to identify the barriers to implementation of interdisciplinary programme in training counsellors. This research question was posed as follows: What barriers are encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with emotional and psychological needs? To answer this question, trainers and counsellors were asked to state the barriers encountered.

Responses from open ended questions and interviews were coded and categorised for emerging patterns. The following themes featured prominently as the key barriers namely: discipline related and workplace barriers. Responses on discipline related barriers were cited as the major hindrance to interdisciplinary training. These included: institutions competing against each, professionals feeling differently and viewing their counterparts from other disciplines with suspicion. As a matter of fact this was the most prominent theme amongst the barriers. Work-related constraints were cited by

participants as lack of uniformity in curriculum for training counsellors, unclear policy guidelines, and lack of instructional and human resource among others .A summary of lecturers' and counsellors responses on barriers are presented in Table 4.44 and in Table 4.45 respectively.

Table 4. 44:

Lecturers' Responses on Barriers to Inter-Disciplinary Practice

Barriers	Freq	%
lack of proper understanding of inter-disciplinary education	1	6.3
Competition from different disciplines/professions feel differently Disciplines feel threatened. There is no uniformity in curriculum	4	25.0
rigidity to one's discipline	1	6.3
unclear guidelines (boundaries)	1	6.3
changing curriculums	1	6.3
Institutional rigidity, varied ethics	1	6.3
inadequate /lack of reference materials i.e. books , research materials	1	6.3
financial implications	1	6.3
The belief that one's training is adequate	1	6.3
attitude ,time	1	6.3
lack of coordination among disciplines, lack of leadership ,lack of well-established referral systems	1	6.3
lack of awareness and willingness of collaboration and networking , lack of adequate trained personnel	1	6.3
Total	16	100.0

Table 4. 45:*Practising Counsellors' Responses on Barriers to Inter-Disciplinary Practice*

Barriers to inter- disciplinary	Frequenc	
	y	%
institutions competing against each other	1	11.1
time constraints, workload, lack of structures and finances	3	33.3
lack of understanding of psychosocial issues	2	22.2
lack of support, no policies, discipline boundaries	1	11.1
lack of awareness, poor policies, lack of coordination	1	11.1
lack of time and human resources, discipline seniority	1	11.1
Total	9	100.0

Alongside the barriers, lecturers provided possible solutions that would promote the training of counsellors using an interdisciplinary approach. Their responses were recorded and themes presented in Table 4.48.

Table 4. 46:*Lecturers' Responses on the Possible Solutions to the Barriers*

Possible solutions	Frequenc	
	y	Percent
Regular seminars and workshops , government support	3	18.8
A common/ moderated curriculum	3	18.8
Guidance and support from Commission for Higher Education	1	6.3
Redrawing guidelines on guidance and counselling	3	18.8
Introduce units that are helpful	1	6.3
Advocacy by institution to include other fields	1	6.3
service institutions should adhere to common ethics , reduce on competition adapt to changes in trends	1	6.3
provide adequate reference materials for learning and research	1	6.3
explain to trainees the reason for inter-disciplinary approach	1	6.3

conferences /seminars to be held together, Sensitization by professional bodies to make members and disciplines feel a sense of belonging and responsible	1	6.3
Total	16	100.0

4.8 Summary of the Chapter

Data and information from lecturers, students and counsellors was analyzed, interpreted discussed and presented in tables, in pie and bar charts to provide clarity. It is evident from this study that inter-disciplinary training programmes available in training institutions only exist in form of short interactive sessions and lacks a meaningful structure that brings about positive in the lives of learners. The programme is also faced with many barriers that impede the implementation of the programme. It was also noted that instructional media resources play a crucial role in the training of counsellors in Kenya. Internet computer services and textbook were the most preferred media for learning. However, the use of these resources is also hampered by various challenges. The chapter concludes with possible solutions to barriers facing interdisciplinary training programme

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter has provided a discussion of the results of the study. The findings of the study have been interpreted and comparisons made with findings of other related studies. This has been followed by conclusions based on the findings and finally the researcher made recommendations for various stakeholders involved in the training and counselling practice.

5.1 Discussion of Results

The main objective of this study sought to establish the extent of implementation of interdisciplinary programmes in the sampled institutions.

Findings indicated that lecturers and counsellors were well aware of the inter-disciplinary training and counselling programmes in their respective institutions. The study concludes that most inter-disciplinary programmes were offered in form of practicum, scheduled lectures and workshops and were carried out within a period of between one day to three weeks. Response analysis on interdisciplinary programmes available in the sampled institutions revealed that collaboration of different programmes took place but only in the form of continuous quality improvement, research studies and development of counselling skills. Community based organizations, social work, medicine and education were cited as the programmes where different professionals collaborated on interdisciplinary programmes. Study findings also revealed that there was very little difference in programmes carried out at different levels of training namely: diploma,

undergraduate and masters level. A further analysis of the programmes recorded a lack of policies and structures to effectively implement the process. Even though institutions demonstrated some level of awareness of such programmes it was very clear from the findings that there was no commitment by various stakeholders to promote and strengthen interdisciplinary training in the sampled institutions. Additionally the institutions lacked organizational and systematic realignment to prioritize collaborative practise in appropriate settings and psychological care situations. Overall, the findings revealed that the form of interdisciplinary interaction in the training and counselling institutions lacked the pre-requests for running an inter-disciplinary programme that could bring about a meaningful change in the lives of learners and counselling practice. Jacobs (1989) recommend that for training to be effective, it must be focused on developing teaching processes which develop inter-disciplinary competencies for current and future psychological health professionals to work in collaborative practices.

The second objective sought to identify the major types of teaching and learning resources used in training of counsellors in the counsellor training programmes.

This study established that projected and non-projected media were available in counselling training institutions in varying degrees. The present study shows clearly that projected media namely: internet search and computers were accessible, frequently used and highly effective in enhancing teaching and learning in counselling institutions. It can therefore be concluded from this study that the use of modern educational technology and specifically computer technology is seen as one of the most effective ways of accessing information by learners, also enhancing and providing students with efficient and

effective preparation for the job market. The above results compare favourably with findings computed from students' findings on media resources in enhancing learning. The students have preference for the newer and emerging technologies like internet and computers which are believed to make learning more interesting and effective as learners can easily access information from various sources. These results lead to the second major finding of this study; computer technology is certainly one of the most versatile and ingenious development of the modern technological age and its benefits and popularity in enhancing instruction cannot be overemphasized. Indeed various studies acknowledge that the promotion of emerging technologies in instruction has been known to bring admirable outcomes, promote creativity and social support among the school teachers and learners hence, make learning more meaningful (Mutema, 1992, World Bank, 1984).

It was further established that non projected media also played a crucial role in supporting learning among the students especially reference books. This implies that most students use reference books for their studies in counselling training programmes. These findings clearly indicate that both lecturers and students have a lot of attachment in the use of reference books during the training programme. It is evident that textbooks are considered the most used non-projected instructional media through which learners can attain information at the various levels of learning probably due to inadequate projected media brought about by declining budgets facing higher learning and a shortage of qualified staff as revealed by the report on challenges associated with media use for instruction. Institutions should work towards developing strategies that address shortages of text books and other learning resources in their respective institutions.

The study also revealed a number of challenges faced by the both students and lecturers when using instructional media resources. Findings revealed that learners were not able to read information from some projected media resources especially when the medium was placed far from them. Information was either poorly projected or the trainers lacked the skills and competency in operating the medium. This follows the fact that trainers found most media complex and sophisticated in nature. These findings clearly show that even though some lecturers and trainers have received some form of training in handling media resources, majority of them are not yet competent in using them as evidenced by findings of this study. This was more so especially when using the LCD projector during teaching. Myer and Halpin, (2000) have cited incompetency in using projected media resources as a major reason for lecturers and students resorting to the use of non-projected media resources since handling those resources efficiently require some knowledge and regard to basic theory. They also argue that the more experience a teacher has using media resources; the easier it will be to use them for instruction. Even though most of the above challenges were also cited in a study carried out by the Ministry of Education Science and Technology, findings of this study reveal that adequate measures have not been taken by some training institutions to address those needs (Ministry of Education, 2006). Consequently Brusca (1995) recommend the need for inventory of media resources for tracking movement, addition and change in order to facilitate effective availability and utilization. Institutions should explore ways of cushioning students from noise during power blackouts. There is also need to provide in-service

courses for lecturers on their use so as to be able to handle simple technical hitches which may occur during teaching in operating them when teaching.

The study further established that dependence on electricity was a serious challenge faced by learners and trainers. These resources could not be used when electricity was not available. Furthermore, noise caused by the generator in the absence of electricity affected levels of concentration among students during learning activities. On the other hand, lecturers expressed concern at the slow rate at which institutions adopt and embrace new technology thereby contributing to delay, poor quality and maintenance, unavailability and a lack of sufficient funding within the training institutions. Overall, study concluded that a lack of clear policy guidelines on use of media resources was a great impediment on the training of counsellors in institutions of higher learning. According to these findings it seems that policies on use of media resources on training were not well developed and properly aligned to their use. The study recommended that the formulation of policies should be done more aggressively especially on media resource maintenance and management in order to facilitate their use effectively by both trainers and learners.

The third objective was to establish the relationship between interdisciplinary training and student performance

The research question 3 posed in this study stated; what is the relationship between instructional media resources and the performance of students?

The Pearson's product-moment correlation coefficient test on the relationship between the inter-disciplinary training programme and student performance revealed that there was a non-significant relationship ($r = -.225$, $n=116$, $p >0.05$) at alpha of 0.05 level of significance, confirming that interdisciplinary training had no significant influence on the performance of students in counselling training institutions. Results from open-ended questionnaires and interviews revealed that there was no relationship between the interdisciplinary training programme and the performance of students in counselling programmes. These findings could be based on arguments that training institutions lacked teaching processes required to develop collaborative competencies necessary for various disciplines to work together. Furthermore, barriers highlighted in the discussions on objective number 5 related to interdisciplinary rivalries were believed to be a major setback in the implementation and success of this programme.

However a further analysis of programme provided a completely different scenario from the findings above. The study revealed that interdisciplinary training and practice enrich and enhance psychological, as a result of interacting with professionals from different but related disciplines. These findings are supported by reviewed literature which reveals that because almost all disciplines of care have their own limitations, inter-disciplinary counselling is believed to enhance the quality of practice through promoting a holistic counselling approach. The results corroborate findings of previous studies showing that due to the increasing complexity of counselling care, there is need for counsellor training institutions to structure their curriculum in such a way that learners are trained not only to demonstrate accurate and current knowledge, but also have expertise to create effective

strategies and approaches to address the challenges facing humanity today (Brams and Johnson 1997).

This study recommends that though the relationship between interdisciplinary training and student performance was not significant, there is need for various stakeholders in higher education to sensitize educators to incorporate this strategy in training counsellors.

The fourth objective was to establish the relationship between the teaching and learning resources and the performance of students.

A Pearson product-moment correlation coefficient was computed to assess the relationship between the instructional media resources and the performance of students. The test revealed a close positive significant relationship between these independent variables and students performance at alpha of 0.05 level of significance ($r = .026$, $n=116$, $p < 0.05$). The null hypothesis was rejected. This study therefore concluded that there was a close relationship between the use of various instructional media resources and student performance.

The fifth objective was to establish barriers encountered in the implementation of the inter-disciplinary training programme for counsellors caring for persons with psychological needs.

This study dedicated much attention on establishing the barriers encountered in during implementation of the interdisciplinary training programme for counsellors. This purpose was achieved through administering a questionnaire with open-ended question and oral

interviews with trainers and counsellors involved in the programme. Findings showed that lecturers experienced discipline related and workplace related factors.

The major challenge cited in the category of discipline related barriers was fear of competition from different training institutions and professionals within those institutions. Some professionals felt highly territorial about their subjects and felt threatened as new views of their subjects are promoted. They also felt that their disciplines were superior to others and therefore working together was a way of watering them down since they perceived the training offered was adequate and the best for their learners. The results revealed that this was mainly the case between disciplines within the hard sciences and social sciences. A number of converging trends have led to a growing acceptance of inter-disciplinary education due to the fact that issues facing humanity today are changing rapidly and in some ways are more complex than in the past. Despite this awareness previous studies have revealed that most teachers feel their education and training is entrenched in specific disciplines so they are sometimes threatened when another discipline offers a differing viewpoint from their own (feeling territorial). As a result, most individual faculties may not be willing to provide the resources and funding to develop teaching programmes for inter-disciplinary education. This argument is mostly prevalent between social sciences and hard sciences such as medicine, law and engineering (Minore and Boon, 2002, Jacob, 1989). In light of the foregoing views it can rightly be argued that disciplines can no longer afford to grow in isolation, especially for the society that has many challenging and emerging issues which require urgent interventions. Faculty development must be provided to address motivation to participate in interdisciplinary practice. This includes opportunity for faculty to learn how to

facilitate interdisciplinary education sessions, learning and interdisciplinary skills. Agreeing with these findings, Hill (1998) formulates that health professionals come to the healthcare team with preconceived maps of their roles based on their learned culture, beliefs and cognitive approaches in their specific disciplines. They have poor understanding of the other person's roles or maps, which causes anxiety, conflict and ineffectiveness as a team. . Due to complexities of current psychological health care, there is need for specialized healthcare professionals to collaborate with members from many professions to address those issues by working together and communicating closely to optimize psychological care. This study concludes that unless effort is made to sensitize stakeholders on the benefits of interdisciplinary teaching, the approach will remain a foreign concept in our learning institutions

The study also established work place related barriers to interdisciplinary training and counselling practice. Due to competing interests, the trainers and counsellors lacked sufficient time to pay attention to integrating interdisciplinary approach in their programmes. Secondly, there was also lack of clear policies. These policies have much do with complying with the institutional guidelines as opposed to venturing into new concepts and ideas. They also faced challenges related to uniformity in curriculum which made it difficult to identify and harmonise themes for interdisciplinary training programmes. Finally, workload, lack of structures, finances and lack of understanding of psychosocial issues were established as workplace related barrier to inter-disciplinary practice. These findings corroborate similar challenges as highlighted in reviewed

literature. Solutions should be sought by various stakeholders and find possible ways of addressing them in order to pave way for collaborative practices in training institutions.

5.4. Recommendations

This study determined the extent of implementation of inter-disciplinary training of counsellors using selected media resources in counsellor training institutions in Kenya and identified findings which led to the following recommendations.

- a) In order to strengthen the inter-disciplinary training programme for counsellors, the Commission for University Education and other stakeholders in Education should set a policy guideline on how to facilitate interdisciplinary education in a successful manner. Efforts should be focused on developing teaching processes to develop collaborative competencies (knowledge, skills and attitudes) necessary for current and future health professionals to work in collaborative practices. Furthermore there is an urgent need for faculty development in this area.
- b) There is need for continuous training to equip the lecturers with the necessary skills and competencies in the use of media resources especially the newer modes of technology for teaching. There should be adequate funding of media resources used for training in order to address challenges related to adequacy, accessibility and maintenance.
- c) This study also recommends policy guidelines on media resources specifically geared toward adoption of newer modes of technology in institutions of higher learning.

5.5. Recommendations for Further Research

This study which was carried out to investigate the inter-disciplinary training of counsellors using selected media resources in counsellor training institutions in Kenya seems to be among the few studies carried out in Kenya. Additionally, a study of this nature can hardly be exhaustive. Therefore, it is necessary to conduct further studies in the following related areas:

- a) Currently there remains some doubt as to whether interdisciplinary education has a direct positive impact on the psychological health gain of service users and carers. Research is needed to evaluate outcomes (particularly client outcomes) of interdisciplinary models of education and practice. The research should link the effectiveness of educational processes for interdisciplinary education with successful outcomes of interdisciplinary education.
- b) Despite the plethora of literature on interdisciplinary education and teamwork, many questions are still unanswered. Which clients truly benefit from the care provided by an interdisciplinary team? A follow-up study on graduates of an interdisciplinary programme would help to establish the extent to which the presence or absence of this variable had on performance in their career.
- c) Research is needed to understand the complexities related to collaborative practice and how it can be taught or developed amongst health care providers.

REFERENCES

- AACU (2005). *Liberal Education Outcomes: A Preliminary Report on Student Achievement in College*. Washington, DC: Association of American Colleges and Universities.
- Augsburg. (2005) *Becoming Interdisciplinary: An Introduction to Inter-disciplinary Studies* (Kendall/Hunt)
- Agina, Aby (October 4th, 2010). Wired lecturers say bye to chalk dust. *The Daily Nation, Special Report* pp.1 col: 2
- Barton, K. C. & Smith, LA (2000) Themes or Motifs *Aiming for Coherence through Inter-disciplinary outcomes*. *The Reading Teacher*, 54(1), 54-63
- Bell, J. (19993). *Doing Your Research Project* (3rd ed.). Philadelphia: Open University Press.
- Berg, B.L. (2004). *Qualitative Research Methods for the Social Sciences*. Boston: Pearson.
- Bird, E. (2001). Disciplining the Interdisciplinary: radicalism and the academic curriculum. *British Journal of Sociology of Education*, 22 (4), 463-478.
- Bishop,G. (1985). *Curriculum Development, A textbook for Students*. London: Macmillan publishing company.
- Bless, C. and Acholla, P.W. (1990). *Fundamentals of Social Science Research Methods. An African Approach*. Lusaka: University of Zambia Press.
- Boix Mansilla, V. (2005). Assessing Students Work at Crossroads. *Change*, 37 (January/February), 14-21.

David, L. (1994). *The Media Studies book, guide for Teachers*. Cornwall: J Press Ltd, Padstow.

Davies, M. and Delvin, M. (2007). *Inter-disciplinary Higher Education: Implications for Teaching and Learning*. Center for the Study of Higher Education. The University of Melbourne. <http://www.cshe.unimelb.edu.au/pdfs/InterdisciplinaryHED.pdf>.

Eaves, S.H. (2010). Methodological Issues. In C.J. Sheperis, J.S. Young & M.H. Daniels Eds.). *Counselling Research: Qualitative, Quantitative and Mixed Methods*. New Jersey: Pearson Education Inc.

Federico Mayor (2000) A Committee working on ‘the Future of Interdisciplinary Research & Training @ 2000, National Academy of Sciences on <http://www.ncbi.nlm.nih.gov/books/NBK44877/>

Government of Kenya, (2005) *Ministry of Education KNEC Complete Syllabus & Examination Schedule for ICT-Nairobi*, Government Publishers.

Government of Kenya (2005) sessional Paper No. 1. A policy Framework for Education, Training and Research. Nairobi: Government Printers Gresham Riley “ Goals of a Liberal Education: Making the Actual and the Ideal Meet,” *Liberal Education* 4(1979): 436-44.

Gurmu, E. (2011, November 8th to 26th). *Quantitative Research*. Presented at the Organization for Social Science Research in Eastern and Southern Africa (OSSREA) Methodology Workshop, Moi University, Kenya.

Hill, A. *Multiprofessional teamwork in hospital palliative care teams*. *Int J Palliat Nurs* 1998; 4 (5): 214-21

Huber, M. T. And Hutchings, P. (1993) (unpublished) *Intergrative Learning: Mapping the Terrain. A background paper on intergrative learning within the context of*

liberaleducation.<http://www.carnegiefoundation.org/elibrary/docs/mapping-Terrain.pdf>.

Jacobs, H. (1989). *Interdisciplinary Curriculum: Design and Implementation*. Alexandria, VA: Association for Supervision and Curriculum Development,(p 4-5).

Joffrion, C. (2010). *Mixed Method Research Defined*. Retrieved from <http://www.cyntia-joffrion.biz/>.

Kang`ethe, S. and Nafukho, F.M. (2002). *Training of Trainers*. Eldoret: Moi University Press.

Kei, R.M. (2011). *Extent of Media Resource Use in Instruction in the School of Public Health of Moi University, Kenya*. Unpublished Thesis.

Kerlinger, F.N. and Lee, H.B. (2000). *Foundations of Behavioural Research* (4th Ed.). New York: Holt Rinehart, UNC .KESSP & MOEST (2006), *Kenya Education Sector Support Programme*.KESSP 2005-2011

Klein, J. T. (1990) *Interdisciplinarity*.Detroit, MI: Wayne State University Press

Klein, J. T. "Resources for Interdisciplinary Studies." *Change* (March/April-2005): 52-58

Kothari, C.R. (2004). *Research Methodology. Methods and Techniques* (2nd Edn). New Age India: International (P) Ltd.

Larson,E.L. (1995). The need for an interdisciplinary education for health professionals. *Nursing Outlook*, in press.

Meeth, L. R. (1978) Inter-disciplinary Studies: Integration of Knowledge and Experience." *Change*. 10, p.6-9

- Mertens, D. M. & Wilson A. (2012). *Program Evaluation Theory and Practice*. New York, NY: Guilford.
- Ministry of Education, (1985). *Seminar Policy in Guidance and Counselling*, Kenya, Kenyatta University
- Ministry Of Education Science and Technology. (2006). *National Information and Communication Technology (ICT) for Education and Training*. Nairobi: Government Printer.
- Minore B.Boone M. (2002) Realizing potential: improving interdisciplinary Professional / paraprofessional health care teams in Canada's northern aboriginal communities through education *Journal of Interprof Care*; 16(2):139-147.
- Mooney, G.A. and Bligh, J.G. (1997). "Information Technology in Medical Education: Current and Future Implications" *Post graduate Medical Journal*.73 (865): 701-4.
- Mugenda, O.M. and Mugenda, A.G. (1999). *Research Methods Quantitative and Qualitative Approaches*. Nairobi. Act Press.
- Mugenda,O.M.& Mugenda,A.(2003). *Research Methods Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- Mutema, A.M, Gregory, N. Kivanguli and Kangethe, S. (1992). *CurriculumDevelopment and Change. A systematic Approach* (KHLM Project). Nairobi: Ministry of Health. Kenya.
- Mutema, A.M, Ngatia, P.M, Kangethe, S. and Kivanguli, G.N.(2006). *Systemic Approach to CURRICULUM Development and Implementation in Health Professions*. AMREF: MoiUniversity Press.

- Myers, J.M. and Halpin, R. (2002). Teachers attitude and use of multimedia technology in the classroom: Constructivist-based professional development training for school districts. *Journal of Computing in Teacher Education*, 18 (4), 133-140.
- National Council for Teachers of English (1995). “ *Position Statement on Interdisciplinary Learning, Pre-K to Grade 4*” <http://www.ncte.org/positions/statement/interdisclearnprek>.
- Orodha, A. J. (2003). *Essentials of Educational and Social Sciences Research Method*. Nairobi: Masola Publishers.
- Oweyegha, A.F.C. (2004). *Interdisciplinary: the sense and nonsense of academic specialization*. In: Ruth Makama and Murindwa-Rutanga (Eds). 237-254.
- Patel, M.M. and Mukwa, C.W. (1993). *Design and use of Media in Education*, Nairobi: Lectern Publications
Organization for Economic Cooperation and Development.
- Reiser, R.A. and Dick, W. (1996). *Instructional Planning: A guide for teachers*. Boston: Allyn and Bacon.
- Republic of Kenya (2008). *Education for Sustainable Development-Implementation Strategy*. Nairobi: Government of Kenya
- Republic of Kenya. (1980). *The Education Act* (2nd ed.). Nairobi: The Government Printer.
- Republic of Kenya. (1988). *Report of the Presidential Working Party on Education and Manpower Training for the next decade and beyond (Kamunge Report)*. Nairobi: Government Printer.
- Romiszowski, A.J. (1988). *The Selection and Use of Instructional media*. London (U.K): Kogan Page Ltd.

- Russell, A.L (1985).” How media materials are used in University Instruction “*Australia Journal of Education Technology. 1* (1) pp 47 – 58. Brisbane.
- Rustum, R. (2000). *The Inter-disciplinary Imperatives: Interactive Research and Education, Still an Elusive Goal in Academia*. A Report on The International Conference on Interdisciplinarity Revisited: Materials Research as a Case Study. Lincoln, NE: Writer’s Club Press .
- Salter, L., Hearn, A. (1996). *Outside the Lines: Issues in Interdisciplinary Research*. Montreal, Canada: McGill-Queen’s Press.
- Shalline Misra, Daniel Stokols, Richard H. Harvey, Katherine H. Pine, Juliana Faqua, Said M. Shokaru, John M (2009). Whitely *American Journal of Preventive Medicine*, Vol. 36, (4) 358-365
- Stefanovic I. L. (1996) Inter-disciplinary and Wholeness: Lessons from eco-research on the Hamilton Harbour ecosystem Environments: *Journal of Inter-disciplinary Studies*,22(3),74-94
- Strauss, J. and Frost, R. D. (1999). Instructional Technology Selection
<http://unr.edu/homepage/jstrauss/merpaper.html>
- Stufflebeam, D. L. (2003). *The CIPP Model for Evaluation*. A paper presented at the Annual Conference of the Oregon. Retrieved from www.alnap.org/.../erd-3317-method.pdf.
- World Summit for Sustainable Development (2002) Adapted from draft International Implementation Scheme for the Decade of Education for Sustainable Development(January 2005).

APPENDICES

Appendix I: Students Questionnaire

The purpose of the questionnaire is to gather information about the use of media resources in training psychological counsellors. Your views will be kept confidential and used for academic purposes only. There are no direct benefits to the respondents but the Counselling Psychology Department may use the findings to improve the teaching methods and decision-making on policy matters. Please sign the consent form if you agree to participate in the study. Do not indicate your name or registration number.

1. Please provide information on the following:

(a) Department.....

(b) Year of study.....

(c). Sex: Male

Female

Please tick the option that best describes your feelings about the effectiveness of using the following media resources

2. To what extent do the following media resources enhance learning?

PROJECTED		Highly effective	Effective	Fairly effective	Not at all
a.	Computers				
b.	L.C.D. Projector				
c.	Slides Projector				
d.	Video Projector				
e.	Internet Search				
f.	Overhead Projector				
G	Others				
NON-PROJECTED		4	3	2	1
		Highly effective	Effective	Fairly effective	Not at all
a.	Real Objects				
b.	Models				
c.	Reference books				
d.	Printed Visuals				
e.	Chalkboard				
f.	Whiteboard				
g.	Butcher Papers				
h.	Audio Tapes				
I	Others				

3. (a). In the scale of 5, where 5=Excellent, 4=High, 3=Medium, 2=Low and 1=Poor, please score the use of projected media resources in order to support learning for each of the following variables.

PROJECTED MEDIA RESOURCES					
VARIABLE	Overhead Projector	L.C.D. Projector	Slides Projector	Video Projector	Internet Computers
Student participation					
Relevance to student needs					
Simplicity of operation					
Technical operation					
Appropriateness					
Effectiveness					
Learner comprehension					
Adequacy					
Accessibility					
Availability					

3. b). In the scale of 5, where 5=Excellent, 4=High, 3=Medium, 2=Low and 1=Poor, please score the use of non-projected media resources in order to support learning for each of the following variables.

NON-PROJECTED MEDIA RESOURCES									
VARIABLE		Real Objects	Models	Chalkboard	White board	Butcher Papers	Audio Papers	Printed Visuals	Reference Books
A	Student participation								
B	Relevance to student needs								
C	Simplicity of operation								
D	Technical operation								
E	Appropriateness								
F	Effectiveness								
G	Learner comprehension								
H	Adequacy								
I	Accessibility								
J	Availability								

4. To what extent are you satisfied with the following media resources in supporting learning?

RESOURCES		Highly Satisfactory	Satisfactory	Fairly Satisfactory	Not Satisfactory
a.	Lecture Rooms				
b.	Tutorial Rooms				
c.	Projection Screens				
d.	Seats				
e.	Lecturers				
f.	Technicians				
g.	Librarians				
h.	Learning Environment				
i.	School's Laboratory				
j.	Others				

5. What challenge do you encounter when learning through the use of media resources?

a) Projected

–media.....

.....

b) Non-projected media.....

.....

c) Facilities.....

.....

d) Others.....

.....

6. To what extent are you competent in operating the following media resources?

MEDIA		Very Competent	Competent	Fairly Competent	Poorly Competent
a.	Overhead Projector				
b.	L.C.D. Projector				
c.	Slides Projector				
d.	Video Projector				
e.	Internet Search				

Thank you for responding to this questionnaire. Please return it to Pamela Lunjalu (Cellphone: 0722387064) of the Department of Medical Education, School of Medicine.

Moi University

END.

Appendix II: Questionnaire for Lecturers / Trainers

The purpose for this questionnaire is to get information from Lecturers / Trainers on outcomes of inter-disciplinary training approach and selected media resources used in training of counsellors caring for persons with emotional and psychological needs.

Part A: Demographic information

Please provide information on the following:

Department.....

Gender: Male

 Female

Training institution.....

How long have you been working in this institution.....

Indicate your level of academic and professional qualification

PhD	MA/BED/MSc	BA/BED/BSc	DIPLOMA	Any Other
5	4	3	2	1

Part B: This section contains information on the inter-disciplinary training programmes for counsellors caring for persons caring for individuals with emotional and psychological needs.

Inter-disciplinary education /training is described as occasions when two or more professions learn from and about each other to improve collaboration and practice.

(a) Are there inter-disciplinary counselling programmes carried out in your current institution of training?

Yes

No

(b) If yes, please indicate the programme{s} by ticking all that apply

Continuous quality improvement

Curriculum development

Staff development

Research project

Client centred case conference

Development of counselling skills

Others please specify.....

How satisfied are you with the extent of networking and sharing of best practice with other institutions?

Not satisfied

Fairly satisfied

Satisfied

Highly satisfied

Please indicate the professional disciplines of the collaborating institutions (Tick all that apply)

Social work

Community based bodies/organizations

Medicine

Psychiatry

Education

Nutrition

Legal bodies

Professional bodies (Please specify).....

Any other (Please specify).....

Please describe the program. (Did it include)

Scheduled lecture

A full course

Weekly tutorials

A workshop

Client centred case conference

Development of counselling skills

Practicum

Others (specify).....

Please describe the possible outcomes of inter-disciplinary training approach in psychological counselling.....

.....

.....

.....

.....

.....

Please describe the personal attributes/competencies that promote inter-disciplinary counselling practice.....

.....

.....

.....

.....

(a) Does inter-disciplinary counselling approach enhance psychological care to clients with psychological and emotional needs?

Yes

No

If yes, please explain

.....
.....
.....
.....
.....
.....

Please provide specific details on the following:

Barriers to inter-disciplinary practice.....

.....
.....
.....
.....

Enablers of inter-disciplinary approach.....

.....
.....
.....
.....

Possible solutions to the barriers cited above.....

.....
.....
.....
.....

Part C: This section contains information on selected media resources used in training counsellors caring for persons with emotional and psychological needs.

1. Please indicate the degree of availability of the following media resources for teaching and learning in the Counselling Department.

PROJECTED		Always Available	Available	Fairly Available	Not Available
a.	Overhead Projector				
b.	L.C.D. Projector				
c.	Slides Projector				
d.	Video Projector Equipment				
e.	Video Tapes				
f.	Internet				
g.	Others				

NON-PROJECTED		Always Available	Available	Fairly Available	Not Available
a.	Real Object				
b.	Models				
c.	Printed Text (books/journals)				
d.	Printed Visuals (charts)				
e.	Blackboard and Chalk				
f.	Whiteboard and Pen				
g.	Audio Tapes				
h.	Butcher Pen				
i.	Others				

2. Please indicate the extent of adequacy for the following concerns of the use of media resources

EXTENT OF ADEQUACY					
CONCERNS		Very Adequate	Adequate	Fairly Adequate	Not Adequate
a.	Capacity of teaching facilities to meet the needs of students				
b.	Number of teaching equipment to student population				
c.	Internet Computers				
d.	Comfort of teaching environment				
e.	Size of teaching spaces				
f.	Proximity of teaching spaces to support others				
g.	Support of students with disabilities				
h.	Reference books				

3. a). In the scale of 5, where 5=Excellent, 4=High, 3=Medium, 2=Low and 1=Poor.

Please score the use of projected media resources for each of the following variables.

PROJECTED MEDIA RESOURCES				
VARIABLE	Overhead Projector	L.C.D. Projector	Video Projector	Internet Computer
Frequency of use				
Relevance to objectives				
Simplicity				
Accessibility				
Acceptability				
Effectiveness				
Affordability				
Maintenance				
Quality				
Adequacy				
Sophistication Level				
Customization to needs				
Co-ordination				

b). In the scale of 5, where 5=Excellent, 4=High, 3=Medium, 2=Low, 1=Poor, please score the use of non-projected media resources for each of the following variables.

NON-PROJECTED MEDIA RESOURCES								
VARIABLE	Real Objects	Models	Chalk Board	White board	Audio Tapes	Butcher Paper	Printed Visuals	Reference Books
Frequency of use								
Relevance of objectives								
Simplicity								
Accessibility								
Acceptability								
Effectiveness								
Affordability								
Maintenance								
Quality								
Adequacy								
Sophistication level								
Co-ordination								

4a). To what extent are you competent in operating the following media resources?

MEDIA	Very Competent	Competent	Fairly Competent	Not Competent
Overhead Projector				
L.C.D. Projector				
Slides Projector				
Video Projector				
Internet Search				

4. b). Are you trained in the use of media resources?

YES

NO

If yes, how long was the training?

Grade attained.....
Institution.....

5. Are there policies/regulations governing the use of media resources?

YES

NO

If specify..... yes,
.....
.....

6. What challenges do you encounter when using media services for teaching and learning?

a) Affecting status and availability.....
.....
.....
.....

b) Affecting adequacy.....
.....
.....
.....

c) On utilization.....
.....
.....
.....

d) Others.....
.....
.....

THANK YOU FOR YOUR PROMPT RESPONSE

END

Appendix III: Heads of Department Interview Guide

The purpose for this guide is to get information from Heads of Department (HODs) and trainers on levels of implementation of inter-disciplinary training of counsellors caring for persons with emotional and psychological needs.

Part A: Demographic information

Please provide information on the following:

- i. Gender.....
- ii. Department.....
- iii. How long have you been a trainer in this institution?
- iv. What is your highest academic and professional qualification?

Part B: This section contains information on the inter-disciplinary training programmes for trainers/lecturers of counsellors caring for persons caring for individuals with emotional and psychological needs.

1. What are the inter-disciplinary training programmes available in your institution for trainers and counsellors offering psychological support for clients?
2. To what extent is the networking and sharing of best practices, in training and practice with the other institutions such as health care facilities, educational (academic) institutions, professional and health care associations , and professional licensing bodies within Kenya and internationally?
3. What are the required competencies for trainers and students (i.e. knowledge, skills, personal attributes, others) required for inter-disciplinary training
4. What curriculum elements and teaching methodologies, would best maintain the requisite competencies?

5. What are the optimum learning conditions i.e. teaching factors, institutional support, educators) required to promote inter-disciplinary education?
6. Is there any relationship between inter-disciplinary training and learner outcomes?
7. What are the possible outcomes of inter-disciplinary training for trainers and students, psychological health service researchers, policy makers and others?
8. Describe the barriers which impede inter-disciplinary approach to training and practice at the following levels:
 - i. Policies
 - ii. Organizational management systems
 - iii. Professional characteristics
 - iv. Personal characteristics
 - v. Social influence
9. Identify strategies to overcome the barriers mentioned in the question above.

Part C: This section contains information on the use of selected media resources used in training of counsellors caring for individuals with psychological and emotional needs.

10. What are the major types of teaching and learning resources used in training of counsellors in the counsellor training programmes?.....

11. Is there a significant relationship between the teaching and learning resources and the performance of students?.....

Thank you for your co-operation

END

Appendix IV: Observation Check List

Availability of media resources and their adequacy. To be measured on a two point scale.

1 = Adequate

2 = Inadequate

RESOURCES	AVAILABILTY		ADEQUACY		COMMENTS
	YES	NO	1	2	
Audio Tapes					
CD ROMS					
Computer Labs					
Computers					
Internet					
LCDs					

Libraries					
Overhead Projectors					
Practicum Rooms					
Skills Labs					
Video Cameras					
Others					

END

Appendix V: Informed Consent Letter

MOI UNIVERSITY SCHOOL OF MEDICINE DEPARTMENT OF MEDICAL EDUCATION

TITLE: Inter-disciplinary training of counsellors using selected media resources.

RESEARCHER: Pamela M. Lunjalu (Doctor of Philosophy student in Medical Education); School of Medicine, Moi University, P.O. Box 4606, Eldoret, Kenya.

Purpose and background

The researcher intends to determine the extent of implementation of inter-disciplinary approach to training counsellors using selected media resources while critically looking at implementation process and barriers, available media resources, use and competency considerations.

Procedure

All the Heads of Department, lecturers, trainers, diploma students in the counsellor training programmes and psychological counsellors at Moi Teaching and Referral Hospital will form the study population. Piloting of the instruments will be done at one of the institutions offering counsellor training programmes but not included in the study. Data will be collected using interviewing schedule, questionnaire and observation guide. Data analysis will be done and thesis compiled in order to fulfil the requirement for the Doctor of Philosophy in Medical Education, Moi University.

Benefits

There will be no direct benefits for participating in the study. However, findings and the recommendations from the study will assist training institutions and policy-makers to formulate programmes that will enhance training of counsellors in Kenya and beyond.

Risks

There is no risk involved in choosing to participate in the study.

Confidentiality

All information will be considered private and confidential.

Right to participate

Your participation is entirely voluntary. If you consent to participate, kindly indicate so by signing this form.

For participant

I agree to participate in this study.


Appendix VI: Sample Size Table

			Confidence =	95.0 %	3.8414		Confidence =	99.0 %	6.6348
Population Size	Probability of Success	Degree of Accuracy/Margin of Error				Degree of Accuracy/Margin of Error			
		0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01
10		10	10	10	10	10	10	10	10
20		19	20	20	20	19	20	20	20
30		28	29	29	30	29	29	30	30
50		44	47	48	50	47	48	49	50
75		63	69	72	74	67	71	73	75
100		80	89	94	99	87	93	96	99
150		108	126	137	148	122	135	142	149
200		132	160	177	196	154	174	186	198
250		152	190	215	244	182	211	229	246
300		169	217	251	291	207	246	270	295
400		196	265	318	384	250	309	348	391
500		217	306	377	475	285	365	421	485
600		234	340	432	565	315	416	490	579
700		248	370	481	653	341	462	554	672
800		260	396	526	739	363	503	615	763
900		269	419	568	823	382	541	672	854
1,000		278	440	606	906	399	575	727	943
1,200		291	474	674	1067	427	636	827	1119
1,500		306	515	759	1297	460	712	959	1376
2,000		322	563	869	1655	498	808	1141	1785
2,500		333	597	952	1984	522	879	1288	2173

						4			
3,500		346	641	1068	2565	55 8	977	1510	2890
5,000		357	678	1176	3288	58 6	1066	1734	3842
7,500		365	710	1275	4211	61 0	1147	1960	5165
10,000		370	727	1332	4899	62 2	1193	2098	6239
25,000		378	760	1448	6939	64 6	1285	2399	9972
50,000		381	772	1491	8056	65 5	1318	2520	12455
75,000		382	776	1506	8514	65 8	1330	2563	13583
100,000		383	778	1513	8762	65 9	1336	2585	14227
250,000		384	782	1527	9248	66 2	1347	2626	15555
500,000		384	783	1532	9423	66 3	1350	2640	16055
1,000,000		384	783	1534	9512	66 3	1352	2647	16317
2,500,000		384	784	1536	9567	66 3	1353	2651	16478
10,000,000		384	784	1536	9594	66 3	1354	2653	16560
100,000,000		384	784	1537	9603	66 3	1354	2654	16584
264,000,000		384	784	1537	9603	66 3	1354	2654	16586

Appendix VII: Research authorisation

REPUBLIC OF KENYA



NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telephone: 254-020-2213471, 2241349
254-020-310571, 2213123, 2219420
Fax: 254-020-318245, 318249
When replying please quote
secretary@ncst.go.ke

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RCD/14/012/956** Date: **4th July, 2012**

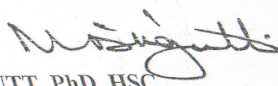
Pamela Musira Lunjalu
Moi University
P.O BOX 3900
ELDORET

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on
"Interdisciplinary training of counsellors using selected media
resources in counsellor training institutions in Kenya" I am pleased
to inform you that you have been authorized to undertake research
in Nairobi and Rift Valley Provinces for a period ending 30th June, 2013.

You are advised to report to the District Commissioners and
District Education Officers of Nairobi and Eldoret Counties
embarking on the research project.

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


DR.M.K.RUGUTT, PhD, HSC
DEPUTY COUNCIL SECRETARY

Copy to:

The District Commissioners
The District Education Officers
Nairobi County
Eldoret County

ded to the Promotion of Science and
ment."

"The National Council for Science and Technology is Committed
Technology for National Development"

Appendix VIII: Institutional Research and Ethics Committee Formal Approval



KENYATTA UNIVERSITY
 INSTITUTE FOR RESEARCH SCIENCE & TECHNOLOGY
 Nigeria 3 Ext. 57357
 Email: Director-crd@ku.ac.ke
 INTERNAL MEMO

FROM: Director, Institute for Research, Science & Technology

TO: Pamela Musira Lunjalu
 Moi University
 P.O BOX 3900
ELDORET

REF: KU/IRST/DVC-ACD/1

DATE: 3rd September, 2012

**SUBJECT: REQUEST TO CONDUCT RESEARCH-MS. PAMELA MUSI
 LUNJALU**

RA

to conduct
 appropriate
 Kenya.

ed to submit a
 , please submit

The above subject refers.

The Deputy Vice-Chancellor (Academic) has approved your application research as a student of Moi University. Please ensure that you get government research permit, which is a requirement for all researchers in

As advised by the Deputy Vice-Chancellor (Academic), you are require copy of your report/thesis to Kenyatta University Library. In addition your research abstract to the Institute containing the following:

- Your name
- Registration number
- School
- Year of Completion
- Title of the Project.

Thank you.

[Handwritten signature]

For: Prof. Wangari Mwai,
 Director,
Institute for Research, Science & Technology

Deputy Vice-Chancellor (Academic)

Encl.

Appendix IX: Request to conduct research



KENYATTA UNIVERSITY
 INSTITUTE FOR RESEARCH SCIENCE & TECHNOLOGY
 Nigeria 3 Ext. 57357
 Email: Director-crd@ku.ac.ke
 INTERNAL MEMO

FROM: Director, Institute for Research, Science & Technology

TO: Pamela Musira Lunjalu
 Moi University
 P.O BOX 3900
ELDORET

REF: KU/IRST/DVC-ACD/1

DATE: 3rd September, 2012

**SUBJECT: REQUEST TO CONDUCT RESEARCH-MS. PAMELA MUSI
 LUNJALU**

RA

to conduct
 appropriate
 Kenya.

ed to submit a
 , please submit

The above subject refers.

The Deputy Vice-Chancellor (Academic) has approved your application research as a student of Moi University. Please ensure that you get government research permit, which is a requirement for all researchers in

As advised by the Deputy Vice-Chancellor (Academic), you are require copy of your report/thesis to Kenyatta University Library. In addition your research abstract to the Institute containing the following:

- Your name
- Registration number
- School
- Year of Completion
- Title of the Project.

Thank you.

[Signature]

Dr. Prof. Wangari Mwai,
 Director,
Institute for Research, Science & Technology

Deputy Vice-Chancellor (Academic)

Encl.