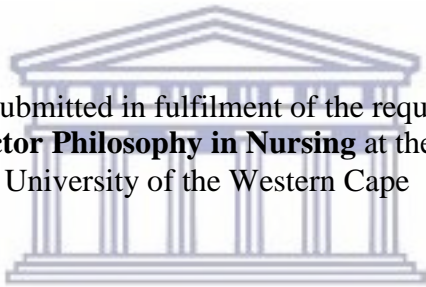




UNIVERSITY of the  
WESTERN CAPE

**UNIVERSITY OF THE WESTERN CAPE**  
**FACULTY OF COMMUNITY AND HEALTH SCIENCES**

**DEVELOPING AN EFFECTIVE CLASSROOM AND CLINICAL  
TEACHING STRATEGY IN MALAWI NURSING COLLEGES**



A thesis submitted in fulfilment of the requirements  
for the degree of **Doctor Philosophy in Nursing** at the School of Nursing,  
University of the Western Cape

**UNIVERSITY of the  
MBIRIMTENGERENJI NOEL DZIMNENANI  
WESTERN CAPE  
STUDENT NUMBER: 3282506**

**MARCH, 2018**

**SUPERVISOR: PROF FM DANIELS**

**CO-SUPERVISOR: DR PD MARTIN**

**Keywords:** Classroom, Clinical, Competence, Interaction, Nurse Tutor,  
Performance, Teaching Strategy

## DECLARATION

*I declare that “developing an effective classroom and clinical teaching strategy in Malawi nursing colleges” is my own work and that all sources I have used or quoted have been indicated and acknowledged by means of complete references.*



**Signature:** .....

**Date: November 2017** .....

UNIVERSITY of the  
WESTERN CAPE

**DATE:** .....

## DEDICATION

*My first degree was for you **Liny** and  
my second degree was for you **Leah**  
But this third degree is for you  
**mai Nalipale!** Your fasting for  
my torturous life is being  
controlled by Almighty God!!*



UNIVERSITY *of the*  
WESTERN CAPE

## ACKNOWLEDGEMENTS

God has guided me from the beginning of this PhD up to the end, His guidance to keep me strong both psychologically and physically, leaves me with this credential and outstanding testimony to proclaim His greatness.

The most precious words of appreciation or gratitude go to my supervisors: Professor F. Daniels and Dr P. Martin for their commitment, dedication, tranquillity and bravery towards the process of completion of this thesis. However, Professor Oluyinka Adejumo deserves an olive hand for his guidance in the proposal development and analysis of the data.

To the staff of the Nkhoma Nursing College through their Principal, Dr Dorothy Magai and Miss Grace Massah the Deputy Principal, carried out most of the fieldwork presented in this thesis. Their dedication and commitment to the work is appreciated. The college nurse tutors and students played an important role on data provision and management.

Many thanks also go to NEPI Malawi chapter, which through the government provided the scholarship whole duration of this PhD. Without their continuous support, the data collection and management could not have been done properly.

I also acknowledge the principal of Kamuzu College of Nursing, Professor Malata and the entire management for the continuous support towards this thesis. Their guidance particularly, that of the vice principal, Professor E. Mbweza Chirwa who contributed a lot on the local supervision of the thesis in Malawi I say a big thank you.

To Professor Adamson Muula from College of Medicine, I express gratitude for his gracious effort in reviewing the proposal manuscripts in readiness for COMREC approval. His continuous support to this researcher remains as a strong role model.

Development of the new teaching strategy would not have occurred without the key stakeholders contribution including the Ministry of Health through Deputy Director of Nursing; CHAM Secretariat through the Chief Executive; Nurses Council through the Director of Education; KCN through senior lecturer Mrs Chihana; all 10 Nursing College

principals, deans, nurse tutors and students from CHAM who not only participated. For that, I am thankful.

I acknowledge all my PhD classmates and lecturers of University of Western Cape for participating and offering numerous seminars that uplifted the thesis writing throughout the years. I am forever grateful for their commitment to the project and their continuous motivation.

I commend my parents and family for their unending support and enthusiasm towards numerous fasting and prayers for the success of this thesis.

To all the participants, who gave their time in the interviews, focus group discussions and meetings, I hope that the outcome of this research will assist in the teaching process progress.

**MAY GOD BLESS YOU ALL**



## **ABSTRACT**

### **INTRODUCTION**

Nursing is the largest healthcare profession in Malawi with more than 11,000 registered Nurses (RNs) and Nurse Technicians and Midwives (NTM) practicing in hospitals and other settings like nursing colleges nationwide. Nursing tutors in all the nursing colleges use numerous types of teaching aids in student preparation. There are numerous teaching strategies that suit pedagogical learning, however not all can yield the desired outcome and are properly applied in both classroom and clinical areas. Therefore, identifying the new teaching strategies for nurse tutors is very critical in nursing education hence this study concentrates on teaching competence, interaction and performance on the use of the strategies.

Nurse tutors must encourage teaching and learning discovery through deliberate interactive teaching actions. However, some outcome actions, competences and performance or interactive behaviour of the nurse tutor are much to be desired in most nursing colleges in Malawi. Nurses need to possess classroom and clinical teaching competences to perform the role of a tutor properly.

### **PURPOSE**

The main purpose of this research was to develop an effective teaching strategy for the nurse tutors in Malawi. This was done after a comprehensive needs assessment of the four attributes: nurse tutor interaction, nurse tutor competences, nurse tutor performance and teaching methods.

### **METHODS**

The study made use of an exploratory descriptive design, which focused on concurrent mixed methods. There were five phases in this study. The first phase focused on the needs assessment based on the four main attributes of nurse tutor interaction, nurse tutor

competences, nurse tutor performance and teaching methods. This was referred to as analysis phase based on the ADDIE model. The analysis phase was divided into initial analysis and the strategy analysis. The research sample for needs assessment included 129 students and 82 nurse tutors using two structured questionnaires, 40 in-depth interviews and 10 focus groups.

The results show 56 variables for the teaching strategy under five ranked Likert scale and the Cronbach`s Alpha was 0.964 without standardisation and 0.963 after standardisation. There were over 30 variables for the challenges of student nurse tutor interactions and 56 variables on teaching strategies with 42 variables on nurse tutor competences under five ranked Likert scale. The Cronbach`s Alpha was 0.909 without standardisation and 0.862 after standardisation.

Descriptive and inferential statistics of Spearman Correlation Co-efficiency and Binary Logistic regression models were used quantitatively. This was done for predictive variable of nurse tutor work experience and student study experience to compare with different dependent variables of teaching strategy attributes, teaching competences, nurse tutor interactions and nurse tutor performances, which also included student assessment methods from the nursing assessment attributes.

Based on the national needs assessment, in the second phase, third phase and fourth phase of the study, intervention and control experimental design was employed at two nursing colleges. This was towards developing an effective Nkhoma teaching strategy based on the ADDIE Model.

## **RESULTS**

The thesis results show that direct teaching strategies like lecture method is very common although nurse tutors prefer to combine with other interactive instructions in Malawi Nursing Colleges. There is statistical spearman correlation on the use of role-play and group

discussion methods with p- values of  $0.053 \geq p = 0.05$  and as the p-value was  $0.009 < p = 0.05$  respectively. However, the ability to facilitate skills and making of dramatic lessons is still very limited among nurse tutors in Malawi nursing colleges. This compromises quality of learning among nursing students in the colleges.

The thesis reveals some of the nurse tutor challenges of teaching interaction in Malawi colleges of nursing. Rudeness and aggression among nurse tutors is becoming so common due to the pressure of work despite the nurse tutor experience. It was found that nurse tutors are not reflective in teaching process in Malawi nursing colleges. Moreover, nurse tutors are not compassionate to students' welfare in Malawi nursing colleges as the P- value was  $0.854 \geq p = 0.05$ .

It is clear that there is reduced level of nurse tutor achievement in most competences in nursing education both in classroom and at the clinical area. Nurse tutor even fail to ask proper questions during teaching ( $p \geq 0.079$ ). Despite the experience of the nurse tutors in teaching students for a long time there is still very poor competence of punctuality ( $p \geq 0.840$ ). Nurse tutor do not manage to mobilise the teaching and learning resources for the students in Malawi nursing colleges ( $p \geq 0.080$ ).

Both nurse tutors and students are not impressed with nurse tutors cognitive, affective and psychomotor performance during teaching. There is inadequate clinical orientation to students as the odds ratio in the binary logistic regression was [OR  $\leq 0.302$ ; 95%CI (0.096  $\pm$  2.955);  $p \geq 0.042$ ] and inadequate funding from college administration which produced an odds ratio of [OR  $\leq 1.013$ ; 95%CI (0.271  $\pm$  3.793);  $p \geq 0.985$ ] as a result it creates much pressure on teaching.

Following the analysis phase, the design phase involved consultation analysis of the data from key informants in the country in nursing. This was followed by development phase



where attributes of interaction competences, performance and the teaching strategies emerged and formed the basis for the development of the new teaching strategy.

Based on these facts a new Nkhoma Teaching Strategy has been developed and tested in Malawi. A total of 89% of the nurse tutors were satisfied with the use of the new teaching strategy after undergoing training and practical sessions for 10 months under experimental design during the evaluation phase of the study. Comparing the new teaching strategy intervention Nursing College with a control Nursing College, the student final examination results clearly showed that the new Nkhoma teaching strategy is very effective in both classroom and clinical area as the grade were very different.

## **CONCLUSION**



It is evident that nurse tutors in Malawi nursing colleges commonly use direct teaching strategies. If the lecture teaching strategy is combined with other teaching strategies the outcome yields effective learning in nursing students in Malawi. Different challenges of teaching interaction among nurse tutors and students impinge effective teaching and learning process. There is need to design teaching strategies that foster increased interaction among nurse tutors and students in Malawi nursing colleges to promote quality nursing. Use of patients if ethically followed remains the most effective and efficient teaching aid in developing countries. Increased knowledge will sharpen attitudes and practices that inform competent practice. If their management motivates nurse tutors, they will be readily available to teach and strive for high competence level achievement both in class and at the clinical area. This study has therefore shown that an effective cognitive, affective and psychomotor nurse tutor performance requires an adequate funding in the nursing colleges in Malawi. Nurse tutor performance is not dependent on tutors alone but the type of students and the administrative accountability.

Therefore, there was a strong need to develop an effective teaching strategy that can have different attributes from the varieties of the teaching instruction if classroom and clinical nursing was to be improved in Malawi. The new Nkhoma teaching strategy will not only help to realize the much needed behaviour of nurses but also improve the reputation of the nursing profession in the country.

### **RECOMMENDATION**

The nursing colleges through the nurses' council must update and redefined the curriculum and instructional methods employed in the country. There must be evidence of the new teaching strategy for all colleges, which is effective and appropriate for classroom and clinical teaching.



## **ABBREVIATIONS:**

<b>ADDIE</b>	Analysis, Design, Development, Implementation, and Evaluation
<b>BEME</b>	Best Evidence Medical Education
<b>BTEC</b>	Batimore Treaty Ethical Code
<b>CHAM</b>	Christian Hospitals Association of Malawi.
<b>COMREC</b>	College of Medicine Ethical Committee
<b>CPD</b>	Continuing Professional Development
<b>ISD</b>	Instructional System Design
<b>ID</b>	Instruction Design
<b>ICT</b>	Information Communication and Technology
<b>MCHS</b>	Malawi Colleges of Health Sciences
<b>MoLGRD</b>	Ministry of Local Government and Rural Development
<b>MDHS</b>	Malawi Demographic Health Survey
<b>NMT</b>	Nurse Midwives Technician
<b>NCM</b>	Nurses Council of Malawi
<b>NGOs</b>	Non-Governmental Organizations
<b>OECD</b>	Overseas Educational and Curriculum Development
<b>OSCE</b>	Observed Structured Clinical examinations
<b>PEPFAR</b>	Presidential and Emergency Plan for AIDS Relief
<b>SAT</b>	System Approach to Training
<b>TALIS</b>	Teaching and Learning International Survey
<b>UNIMA</b>	University of Malawi
<b>UNITaR</b>	United Nations International for Training and Research
<b>VAM</b>	Value Added Models

## TABLE OF CONTENTS

UNIVERSITY OF THE WESTERN CAPE .....	i
DECLARATION .....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENTS.....	iv
ABSTRACT .....	vi
ABBREVIATIONS:.....	xi
TABLE OF CONTENTS .....	xii
LIST OF FIGURES.....	xvii
LIST OF TABLES.....	xix
OPERATIONAL DEFINITIONS OF KEY CONCEPTS .....	xxi
CHAPTER ONE.....	1
BACKGROUND TO THE STUDY.....	1
1.1 INTRODUCTION.....	1
1.2 NURSING EDUCATION IN MALAWI .....	4
1.3 THE NURSE TUTOR AND TEACHING STRATEGIES .....	5
1.4 CLINICAL INSTRUCTION AND CLINICAL NURSING EDUCATION.....	10
1.5 COMPETENCE AMONG NURSE TUTORS .....	10
1.6 INTERACTION AMONG NURSE TUTORS AND STUDENTS.....	11
1.7 PROBLEM STATEMENT .....	13
1.8 AIM OF THE STUDY.....	14
1.9 OBJECTIVES OF THE STUDY.....	14
1.10 RESEARCH QUESTIONS .....	14
1.11 SIGNIFICANCE OF THE STUDY.....	14
1.12 PERSONAL PARADIGM IN NURSING EDUCATION .....	16
1.12.1 NURSING EDUCATION .....	16
1.12.3 A LEARNER/ STUDENT NURSE.....	18
1.12.4 TEACHING STRATEGIES .....	19
1.12.5 NURSE TUTOR INTERACTION .....	20
1.12.6 NURSE TUTOR COMPETENCE .....	20
1.12.7 NURSE TUTOR PERFORMANCE .....	21
1.13 SUMMARY .....	22
1.14 OUTLINE OF THE THESIS.....	22
CHAPTER TWO .....	24
CONCEPTUAL FRAMEWORK.....	24
2.0 INTRODUCTION.....	24
2.1 ADDIE INSTRUCTIONAL DESIGN MODEL .....	24
2.2.1 ANALYSIS PHASE.....	26
2.2.2 DESIGN PHASE.....	28
2.2.3 DEVELOPMENT PHASE.....	30
2.2.4 IMPLEMENTATION PHASE .....	32
2.2.5 EVALUATION PHASE .....	35

2.7 SUMMARY .....	37
<b>LITERATURE REVIEW .....</b>	<b>38</b>
3.0 INTRODUCTION .....	38
3.1 TEACHING STRATEGIES IN NURSING .....	38
3.3 NURSE TUTOR-STUDENT INTERACTIONS .....	47
3.4 COMPETENCE OF NURSE TUTORS .....	53
3.5 PERFORMANCE OF NURSE TUTORS .....	58
3.6 MALAWI GOVERNMENT RESPONSE ON NURSING EDUCATION .....	63
3.7 CHAM NURSING COLLEGES .....	64
3.8 CONCEPT OF CLINICAL NURSING EDUCATION .....	67
3.9 SUMMARY .....	68
<b>CHAPTER FOUR.....</b>	<b>70</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>70</b>
<b>4.0 INTRODUCTION .....</b>	<b>70</b>
4.2 RESEARCH SETTING .....	71
4.3 PHASE ONE: ANALYSIS.....	71
4.3.1 QUANTITATIVE METHODS.....	72
4.3.1.1 RESEARCH DESIGN .....	72
4.3.1.2 STUDY POPULATION .....	72
4.3.1.3 SAMPLING AND SAMPLE SIZE.....	72
4.3.1.4 DATA COLLECTION METHODS.....	75
Instrument development .....	75
TUTOR QUESTIONNAIRE .....	76
STUDENT QUESTIONNAIRE .....	76
4.3.1.5 VALIDITY .....	77
4.3.1.6 RELIABILITY .....	78
4.3.1.7 CONTROL OF CONFOUNDING VARIABLES IN QUANTITATIVE DATA .....	79
4.3.1.8 PRE-TESTING/ PILOTING .....	82
4.3.1.9 DATA COLLECTION PROCESS.....	83
4.3.1.10 QUANTITATIVE DATA ANALYSIS .....	83
4.3.2. QUALITATIVE METHODS .....	88
4.3.2.1 RESEARCH DESIGN .....	88
4.3.2.2 STUDY POPULATION .....	88
4.3.2.4 INCLUSION AND EXCLUSION CRITERIA .....	89
4.3.2.5 INSTRUMENT OF IN-DEPTH INTERVIEW .....	90
4.3.2.6 DATA COLLECTION PROCESS.....	90
In-depth interviews.....	90
4.3.2.7 QUALITATIVE DATA ANALYSIS .....	92
4.3.2.8 RIGOUR FOR QUALITATIVE METHODS .....	96
4.3.2.9 ETHICS.....	97
<b>4.4 PHASE TWO: DESIGNING .....</b>	<b>98</b>
4.4.1 RESEARCH METHODS.....	98
4.4.2 SAMPLING .....	99
4.4.3 RELIABILITY ASSESSMENT .....	99
<b>4.5 PHASE THREE: -DEVELOPMENT .....</b>	<b>99</b>
4.5.1 SAMPLING .....	100
<b>4.6 PHASE FOUR: IMPLEMENTATION.....</b>	<b>101</b>
4.6.1 SAMPLING AND INSTRUMENTS .....	101
<b>4.7 PHASE FIVE: EVALUATION .....</b>	<b>102</b>

4.7.1 EVALUATION METHODS .....	102
4.8 POSSIBLE CONSTRAINTS OF THE STUDY .....	103
4.9 SUMMARY .....	103
DATA ANALYSIS AND PRESENTATION OF RESULTS.....	104
5.0 INTRODUCTION .....	104
5.1 DISTRIBUTION OF TUTORS' AND STUDENTS' ON THE USE OF EACHING STRATEGIES .....	105
5.1.1 DISTRIBUTION OF NURSE TUTORS'S WORK EXPERIENCE AND DEMOGRAPHIC DATA.....	119
5.1.2 DISTRIBUTION OF NURSE TUTORS' AND STUDENTS' ON USE OF TEACHING AIDS.....	122
5.1.3 DISTRIBUTION OF STUDENTS' STUDY EXPERIENCE AND TUTORS' WORK EXPERIENCE.....	129
5.1.4 DISTRIBUTION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TEACHING AIDS.....	133
5.2.0 DISTRIBUTION OF STUDENTS' AND TUTORS' INTERACTION .....	136
WHEN TEACHING.....	136
5.2.1 DISTRIBUTION OF TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TUTORS' AND STUDENTS' INTERACTION.....	150
5.3.1 DISTRIBUTION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TUTORS' COMPETENCES.....	175
5.4.0: DISTRIBUTION OF NURSE TUTORS' PERFORMANCE WHEN .....	182
TEACHING .....	182
5.4.1 DISTRIBUTION OF THE NURSE TUTORS AND STUDENTS ON TUTORS' ... PERFORMANCE IN DIFFERENT COLLEGES .....	189
5.4.2 DISTRIBUTION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE-ON NURSE TUTORS' TEACHING PERFORMANCE .....	211
5.4.3 ASSOCIATION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TUTORS' PERFORMANCE .....	240
5.5.0 DISCUSSION.....	258
5.5.1 UTILISATION OF TEACHING STRATEGY IN MALAWI.....	259
5.5.2 CHALLENGES RELATED TO UTILISATION OF TEACHING AIDS.....	265
5.5.3 NURSE TUTORS' COMPETENCES IN TEACHING.....	272
5.5.4 NURSE TUTORS' CHALLENGES OF STUDENT INTERACTION.....	278
5.5.5 NURSE TUTORS' AND STUDENTS' PERFORMANCE.....	288
5.6 SUMMARY.....	293
CHAPTER SIX.....	295
6.0 INTRODUCTION .....	295
6.1 PURPOSE OF THE NEW TEACHING STRATEGY.....	296
6.1.0 THE ANALYSIS PHASE OF THE ADDIE MODEL ON EFFECTIVE.....	298
TEACHING STRATEGY DEVELOPMENT .....	298

6.2.0	THE DESIGNING PHASE OF NKHOMA TEACHING STRATEGY.....	306
6.2.1	CONTENT FRAMEWORK OF THE DESIGNING PHASE.....	307
6.2.2	AUTHENTICATION PROCESS OF NKHOMA TEACHING STRATEGY .....	308
6.2.3:	BASELINE INDICATORS ON NKHOMA TEACHING STRATEGY.....	312
6.3.0	DEVELOPMENT PHASE OF NKHOMA TEACHING STRATEGY USING THE ADDIE MODEL.....	319
6.3.1	DEVELOPMENT FRAMEWORK OF NKHOMA TEACHING STRATEGY .....	321
6.3.2	NURSE TUTOR ATTRIBUTES TRAINING.....	326
6.3.3	STUDENT ASSESSMENT PREPARATION .....	331
6.3.4:	EVALUATION PREPARATION .....	334
6.4.0	THE EVALUATION PHASE OF THE ADDIE MODEL IN NKHOMA TEACHING STRATEGY .....	341
6.4.1	ANALYSIS OF STUDENTS CONTEXT .....	342
6.4.2	ANALYSIS OF NURSE TUTOR CONTEXT AT NKHOMA NURSING .....	349
	COLLEGE.....	349
6.5	SUMMARY.....	359
	CHAPTER SEVEN .....	360
	CONCLUSION, LIMITATIONS AND RECOMMENDATIONS .....	360
7.0	INTRODUCTION .....	360
7.1	CONCLUSION.....	360
7.2	LIMITATION OF THE STUDY .....	362
7.3	RECOMMENDATIONS.....	363
7.3.1	ADDRESSING THE COLLEGE TEACHING NEEDS (EDUCATION) .....	363
7.3.2	COMPETENCE FOR NURSING PRACTICE .....	368
7.3.3	STUDENT AND NURSE TUTOR INTERACTION.....	372
7.3.4	PERFORMANCE PROMOTION .....	374
7.5	DISSEMINATION OF RESULTS.....	376
7.6	SUMMARY.....	377
8.	REFERENCES.....	378
APPENDIX 1:	INFORMED CONSENT ON QUESTIONNAIRE.....	403
APPENDIX 2:	TUTOR QUESTIONNAIRE .....	405
APPENDIX 3:	INFORMED CONSENT ON STUDENT QUESTIONNAIRE .....	417
APPENDIX 4:	STUDENT QUESTIONNAIRE .....	418
APPENDIX 5:	INFORMED CONSENT ON TUTORS IN-DEPTH INTERVIEW .....	430
APPENDIX 6:	IN-DEPTH INTERVIEW GUIDE – TUTOR/ADMIN.....	431
APPENDIX 7:	INFORMED CONSENT FOR FOCUS GROUP DISCUSSION .....	433
APPENDIX 8:	FOCUS GROUP GUIDE – STUDENT .....	434
APPENDIX 9:	NKHOMA TEACHING STRATEGY .....	435
APPENDIX 10:	APPROVAL LETTER UWC.....	440
APPENDIX 11:	LETTER OF INTRODUCTION TO ETHICAL COMMITTEE .....	441
APPENDIX 12:	NKHOMA COLLEGE APPROVAL LETTER .....	442
APPENDIX 13:	APPROVAL LETTER FROM COMREC.....	443

**APPENDIX 14: ST. JOHNS PERMISSION LETTER..... 444**  
**APPENDIX 15: APPROVAL LETTER FROM CHAM SECRETARIATE ..... 445**  
**APPENDIX 16: LETTER PROOF OF EDITING ..... 446**



UNIVERSITY *of the*  
WESTERN CAPE



## LIST OF FIGURES

Figure 2.1	Original conceptual framework of the ADDIE model.....	24
Figure 2.3	The steps in the programme development of the teaching strategy.....	35
Figure 3.1	The distribution of the teaching strategies in their categories.....	44
Figure 2.2	Framework on programme development on effective teaching strategy.....	44
Figure 4.1	Sampling map of the nursing colleges.....	71
Figure 4.5	Control of confounding in the study.....	78
Figure 5.1	Distribution of students and tutors participation in the study.....	146
Figure 5.2	Distribution of tutors on role-play.....	147
Figure 5.3	Distribution of nurse tutors on direct teaching instructions.....	152
Figure 5.4	Distribution of nurse tutors and use of lecture method.....	154
Figure 5.5	Distribution of tutors on brainstorming.....	155
Figure 5.6	Distribution pf tutors on use of posters.....	158
Figure 5.7	Distribution of students on use of internet.....	162
Figure 5.8	Distribution of students on use of patients.....	163
Figure 5.9	Distribution of students on tutors' talkativeness.....	178
Figure 5.10	Distribution of students on tutors' cheerfulness.....	181
Figure 5.11	Distribution of students on tutors' punctuality.....	183
Figure 5.12	Second year students doing group discussion from class work.....	188
Figure 5.13	Nurse tutors deliberations on challenges of student tutor interaction.....	196
Figure 5.14	Student deliberations of challenges of student tutor interaction.....	197
Figure 5.15	Distribution of tutors' feelings on students seating plan.....	198
Figure 5.16	Distribution of nurse tutors on students' class positions.....	199
Figure 5.17	Distribution of tutors of adequate college funding.....	200
Figure 5.18	Distribution of students in multiple box plots on competences.....	200
Figure 5.19	Distribution of students on tutor's provision of opportunities .....	205
Figure 5:20	Distribution of students on tutors commitment .....	207
Figure 5.21	Distribution of students on tutors' sense of care:.....	223
Figure 5.22	Distribution of students on tutors' clinical interest.....	224
Figure 5.23	Distribution of students on tutors' procedure demonstration.....	225
Figure 5.24	Distribution of students on tutors' clinical confidentiality.....	226
Figure 5.25	Distribution of students on tutors' practical modelling.....	227
Figure 5.26	Distribution of students on tutors' gender sensitivity.....	228

Figure 5.27	Distribution of tutors of use of portfolio.....	228
Figure 5.28	Group of students waiting for laboratory skill acquisition.....	287
Figure 5.29	A group of students waiting for laboratory orientation.....	290
Figure 6.1	The ADDIE model process in development of the teaching strategy.....	311
Figure 6.2	The analysis phase.....	312
Figure 6.3	The designing phase.....	319
Figure 6.4	Nkhoma teaching strategy and the year one modules.....	329
Figure 6.5	Nkhoma teaching strategy and sociology module.....	330
Figure 6.6	Development phase of the ADDIE model.....	331
Figure 6.7	Development framework of Nkhoma teaching strategy.....	333
Figure 6.8	The implementation phase .....	346
Figure 6.9	Process of evaluation phase.....	351



## LIST OF TABLES

Table 4.4	Sample size determination.....	86
Table 4.1	Application of the ADDIE model on effective teaching strategy.....	99
Table 4.2	Sampling frame for the nurse tutor and student teaching strategy .....	108
Table 4.3	Priori code structure.....	123
Table 5.1	Distribution of students on tutors' use of teaching strategies.....	143
Table 5.2	Distribution of tutors on teaching strategies .....	149
Table 5.3	Distribution of tutors work- experience and demographic data .....	157
Table 5.4	Distribution of nursing students on the use of teaching aids .....	159
Table 5.5	Distribution of tutors' work experience & students' study experience.....	168
Table 5.6	Distribution of tutors' work- experience & students study experience.....	172
Table 5.7	Distribution of students and tutors interaction in different colleges.....	177
Table 5.8	Distribution of tutors' work- experience & students' study experience .....	189
Table 5.9	Distribution of nurse tutor competences during teaching .....	203
Table 5.10	Distribution of the nurse tutors competency .....	211
Table 5.11	Distribution of tutors' work- experience & students' experience .....	217
Table 5.12	Distribution of the nurse tutors and students on tutor performance....	232
Table 5.13	Distribution of the nurse tutors and students on performance.....	237
Table 5.14	Distribution of the nurse tutors and students on performance.....	247
Table 5.15	Distribution of tutors work- experience & student study experience .....	256
Table 5.16	Distribution of tutors work- experience & student study experience .....	263
Table 5.17	Distribution of tutors work- experience & student study experience .....	272
Table 5.18	Distribution of work- experience and tutors-student assessment .....	282
Table 5.19	Association of tutors work experience, students study experience .....	293
Table 6.1	Levels of the characteristic after needs assessment .....	314
Table 6.2	Authentication process of the new teaching strategy .....	322
Table 6.3	Baseline indicators: .....	324
Table 6.4	Nkhoma examination grading using blooms taxonomy .....	328
Table 6.5	Nurse tutor training activities of new teaching strategy .....	336
Table 6.6	Student performance in year one for module outcomes.....	354
Table 6.7	Tutor competency attributes evaluation.....	359
Table: 6.8	Teaching and learning aids evaluation.....	360
Table 6.9	Tutor –student interaction attributes evaluations.....	362
Table 6.10	Tutor performance attributes evaluation .....	363

Table 6.11	Clinical students' needs attributes evaluation .....	364
Table 6.12	Assessing nursing skills attributes evaluation .....	365



## OPERATIONAL DEFINITIONS OF KEY CONCEPTS

**Classroom:** This is a physical or virtual contemporary teaching and learning environment. In this study a classroom refers to a space at the education institution or clinical setting where students meet educators for the purpose of teaching and learning.

**Clinical area:** This is formal healthcare environment where comprehensive student teaching and learning is done. The clinical area for this study refers to all areas identified for clinical learning and the transfer of theory to practice and includes clinics, hospitals, schools and patient homes, amongst other.

**Competence:** Competence is an expected level of performance that results from an integration of knowledge, skills, attitudes and values. Skills include psychomotor, communication, interpersonal, and diagnostic skills. It requires the capacity to act effectively and requires listening, integrity, self-knowledge of strengths and weaknesses, positive self-regard, emotional intelligence, and openness to feedback. Judgment includes critical thinking, problem solving, ethical reasoning, and decision-making (ANA, 2007). Competence in this study means the achievement of the expected learning outcomes for knowledge, skills, attitudes and values.

**Effective teaching strategy:** These are methods of teaching that involve student active learning; is student centred, problem based and are well versed by both the teacher and the learner in a formal classroom or clinical situation (Lasley, 2003). In this study, effective teaching strategy refers to a strategy which allows the student to be an active and self-directed learner.

**Interactions:** The concept of interaction is a core element of the seven principles of good practice in nursing education. These practices include: encouraging faculty/students contact; developing reciprocity and cooperation; engaging in active learning; providing quick feedback; emphasizing the amount of time dedicated to a task; communicating high expectations; and respecting diversity (Thurmond, 2007). In this study, interaction refers to an effective relationship between faculty and student, which supports student success.

**Nurse tutors:** Refers to all professional nurses who have an additional qualification as nurse tutor registered by the Nursing Council and are able to teach using different teaching strategies (Brink, 2007). In this study, nurse tutors have Bachelors of Science in Nursing degree and are responsible for ensuring the delivery of nursing programmes.

**Performance:** Performance is the outcome of an activity that a nurse tutor does during teaching. This can be in class or at the clinical area. In this study, performance refers to the student's demonstration of what they have learnt.

**Teaching strategy:** A generalized plan for a lesson, which includes structure, desired learner behaviour in term of goals of instruction and outline of tactics necessary to implement the strategy in a classroom or clinical area (Strasser, 2004). In this study, teaching strategy refers to the strategy or methods used by the tutor to facilitate teaching and learning.



# **CHAPTER ONE**

## **BACKGROUND TO THE STUDY**

### **1 INTRODUCTION OF THE CHAPTER**

This chapter presents a clear background of the nursing education and the teaching strategies of the nurse tutors in Malawi and the challenges experienced by the nurse tutors. Presentations have been made to the Christian Health Association in Malawi on how they manage some of the nursing colleges in the country. The four main attributes of the study, namely nurse tutor interaction, nurse tutor competences, nurse tutor performance and teaching methods have been expounded to elaborate on the needs of nurse tutors and challenges experienced in Malawi.

### **1.1 INTRODUCTION**

Nursing is the largest healthcare profession in Malawi with more than 10,000 registered nurses (RNs) and nurse midwife technicians (NMTs) practicing in hospitals and other institutions nationwide (MOH, 2008). By 2020, the Ministry of Labour Statistics projects that more than 20,000 nurses will be needed to work in acute care hospitals, long-term care facilities, community health centres, nursing schools, and other areas (MOH, 2012). This implies that despite this number, many more qualified nurses will be needed. As such, it has become mandatory for the nursing schools around the country to ensure that more nurses are appropriately skilled, especially in programmes offered by nurse tutors in nursing colleges to meet the nation's growing demand for healthcare in Malawi.

Nursing education in Malawi dates to the colonial era where the European Christians represented by White Nuns opened nursing schools in the country. All the nursing colleges that were under the faith-based organizations grouped together for proper management of their hospitals and health related colleges. By 1980 the organization was called the Christian Health Association of Malawi (CHAM) and currently, apart from numerous hospitals under this Christian organization, there are at least 12 nursing colleges (NCM, 2012). For more than 30 years the government of Malawi has supported missionaries financially in running CHAM nursing colleges. However, due to limited funding, some nursing colleges have been closed, which has caused the learning process to be fragmented. CHAM colleges produce diploma technical nurses who can perform independently at primary health care level in the health

system of the country. This means that they are responsible for managing the clinical services in the health centres across the country (NCM, 2013).

In 1999, six CHAM institutions were closed because of a lack of nurse tutors, and the remaining institutions had to cope with the training of nurses. Data available for this period show that 240 nurses per year were being lost in the health sector through death, retirement, resignations and migration (CHAM Annual Report, 2009). This created a burden on nursing education at the different nursing colleges where students were unable to continue with their studies due to a critical shortage of tutors and material resources. As a result, the remaining tutors resorted to using nursing teaching strategies that accommodated large numbers of students. These teaching strategies, however, did not facilitate active learning.

From the mid-1960s, the Nurses and Midwives Council of Malawi has maintained that the training of nurse/midwives should prepare them to perform functions that, in developed countries, would normally be provided by physicians, for example, starting intravenous fluid and attending high-risk deliveries. This is because there is a severe shortage of physicians compared to midwives, which has resulted in the evolution of specialist nurse/midwife roles, especially in relation to the care of women and children (MOH, 2012). This trend intensified the need for the use of advanced teaching and learning strategies in the nursing schools to produce quality nurses who could manage the health centres in Malawi.

There are three types of nursing education colleges in Malawi that offer different nursing programmes. These include Christian based colleges, government and private colleges. A total of 70 percent of the nursing education in Malawi is controlled by the government. Government nursing colleges offer diploma and degree programmes. There are four universities that offer nursing programmes at a degree level. Most of the colleges in Malawi offer diploma programmes that produce nurse technicians who make up 70 percent of all nurses in the country (Nurses Council, 2012). Most of the nursing colleges are affiliated to and controlled by missionaries; however, the government subsidizes these services.

Christian Health Association of Malawi (CHAM) has at least 12 nursing colleges; an additional 5 colleges are Government funded and only one is a private nursing college. Most of the nurse tutors who teach in these colleges are trained at the University of Malawi and Kamuzu College of Nursing through a two-year nurse tutor mature programme.



The main objective of the Malawi nurse tutor and clinical instructor programme is to address staffing shortages in all the nursing colleges in the country, with the specific strategy to improve recruitment and retention of nurse tutors to achieve staffing targets in the CHAM nursing colleges (Nurses Council, 2006). However, the types and methods of teaching in this programme depend on human and material resource availability in nursing colleges.

The Malawian government's plan was to train generic registered nurses who would serve as tutors and clinical instructors in different hospitals and to train nurses for hospital technical patient services through post-basic training programmes (Caffrey, 2006). In Malawian nursing colleges, most nurse tutors lack not only resources and skills, but also knowledge on explicit interactive teaching strategies (Grigulis, 2010). The programme offered by Kamuzu College of Nursing (KCN) in Malawi, a constituent college of the University of Malawi, remains the most suitable for training nursing tutors in the country. Although the Nurses Council offers the curriculum to all the nursing colleges, the programme is college specific. In these colleges, the nurse tutor workforce is responsible for delivering the programme after completing the post-basic nursing education programme at Kamuzu College of Nursing. The qualified nurse tutors, with a minimum Degree in Nursing Education, are allocated to all nursing colleges in the country.

To fulfil Malawi's shared goal in the preparation of a robust nursing workforce, there was a need to acknowledge and show appreciation of the nation's full support of the academic progression of nursing students in all nursing colleges. As a result, all nursing tutors were aligned to the national Nursing Council and its association leaders' belief that every nursing student and qualified nurse deserves the opportunity to pursue quality academic and career growth.

The student preparation is mostly done using traditional teaching strategies, which are not adequate to produce well-rounded nurses (MOH, 2010). By design, nursing tutors are challenged to produce competent graduates using effective nursing teaching strategies.

Teaching strategies in nursing education are the means or approaches used to teach nursing care to students. The choice of teaching methods depends on "what is needed to teach (content), who are to be taught, and the level of competence expected" (Posey, 2006).

Content can be divided into the domains of knowledge, skills, attitudes and values. When teaching knowledge, a variety of methods can be used with the goal of developing the learner to actively engage in learning the material. When tutors are teaching skills, there is a need to be more practical and demonstrate or point out important aspects, supervise the student through the process of mastering the skill, or talk the student through the skill – a “hands on” approach. When teaching about attitudes and values, Posey (2006) points out that there is a need to use effective teaching methods to avoid maximum student anxiety that can lead to examination failure. At Malawi nursing colleges most nurse tutors lack not only resources and skills, but also knowledge on current explicit interactive teaching strategies. Some of the teaching strategies that nurse tutors use do not facilitate the development of attributes necessary for Malawian nurses to be ready to care for local patients in different health care environments (Grigulis, 2010).

## **1.2 NURSING EDUCATION IN MALAWI**

Nurse education is a post-secondary school professional programme, offered by universities or nursing technical colleges. Each country has a Nursing Council that controls and monitors the quality of education nurses receive, which is in line with the international nurses’ world body - the International Council of Nurses (ICN). In Malawi, the Nurses Council of Malawi is responsible for the education standards in the country.

Professional nursing education is based at the Kamuzu College of Nursing in Malawi. Kamuzu College of Nursing is one of the five colleges affiliated to the University of Malawi. It opened in 1979 and offered a diploma programme in nursing. In 1990 the bachelor’s degree programme commenced, to which nurses with a diploma were admitted; and in 1996, the generic bachelor’s degree in nursing commenced for students with no nursing background (Muula, Nyasula, & Msiska, 2004). In 2008, Kamuzu College of Nursing admitted the first class of nurses to be prepared at a graduate level. This made it the first college in Malawi to offer advanced practice master’s degrees in nursing. This college of nursing also admits students for the master’s degree in nursing education and in community health nursing. In 2014, a PhD programme was launched to prepare nurses in research and nursing management. This rapid expansion of advanced practice and nursing education degrees

helped in addressing the acute needs for healthcare professionals in Malawi (Bultemeier, 2012).

It is at this college where a mature entry degree in education is offered. This degree produces nurse educators who become graduates after undergoing an intensive two-year training period in nursing education. These nurse educators are sent to different nursing colleges in the country where they serve as nurse tutors.

### **1.3 THE NURSE TUTOR AND TEACHING STRATEGIES**

A nurse tutor is a classroom and clinical facilitator employed at a nursing college. However, Brink (2007) added that nurse tutors are all professional nurse educators who have the additional qualification and experience and are registered with the Nursing Council as tutors, regardless of whether they are involved in formal teaching.

Nurse tutors that promote critical thinking, engage students in an active and interactive learning process using effective strategies in teaching. An active learning process requires that nurse tutors and students be involved in the learning process as a team (Banning, 2005). If teaching and learning is not well-organized, by either the tutor or the students themselves, learning tends to be jeopardized. Moreover, if the learning needs and resources are not available, learning is negatively affected, especially the students' clinical learning practices. This is because nursing requires good classroom and clinical education and what nurse tutors and nursing students do in the clinical area is more important than what they are able to demonstrate in the classroom. In this regard, clinical learning activities provide real life experience and opportunities for transfer of knowledge to practice (Perry & Edwards, 2005; Swan, 2005; Posey, 2006).

To justify the enormous expenditure on classroom and clinical education in nursing, tutors must have clear, realistic performance outcomes both in the classroom and in the clinical learning environment. This is because the effectiveness of classroom and clinical teaching should be judged by the extent to which it produces the standardised outcomes and desired attributes of competence, interaction and performance. This is only achieved if the tutors follow teaching strategies that are student centred with all the teaching needs available.

Numerous teaching strategies exist, but not all yield the desired outcome or are properly applied by nurse tutors in both the classroom and clinical areas. Nurse tutors in Malawi nursing colleges commonly use the case study teaching and learning strategy. However, the effectiveness of this strategy is unknown and there is no scientifically proven evidence in this regard, in the context of the Malawi nursing colleges. Thus, the demeaning nursing image and failure rate of nursing students remain on the news-media front page in the country.

Whether the perceived inferior nursing status and high student failure rate is due to poor tutor planning, lack of experience, organizing or implementation of their classroom and clinical teaching has not been documented in Malawi literature. Caffrey et al (2004) points out that planning for classroom and clinical teaching by nurse tutors in Malawi should begin with identifying learning outcomes that are necessary for safe, competent and interactive nursing practice. These learning outcomes can be adequately rated only if the resources for teaching are adequate for tutors to use.

Teaching is a complex process intended to facilitate learning overtime and the goal of teaching is to lead students in discovering knowledge for themselves. It is the nurse tutors with experience who encourage this discovery through deliberate teaching actions. Some actions or behaviour of the nurse tutors leave much to be desired in most nursing colleges in Malawi. Moreover, some nurse tutors fail even to provide academic counselling to students due to poor personal and student counselling skills (NCM, 2012). There is therefore a need to explore the relationship between the teacher's experience and their competences.

Waterson et al (2006) maintain that poor performance of nursing students is due to an overloaded curriculum; however, emphasis is placed on nurse tutor coverage of the content, fragmented and artificial learning process, duplication among disciplines or subjects and the behavioural-objective model with its authoritarian nursing stance. This results in students demonstrating a lack of retention and integration of knowledge in classroom and the clinical area. Therefore, whether nurse tutors are competent in meeting the students' learning needs and the needs of the college, is not yet known in Malawi.

The concept of nurse tutors teaching goes beyond the formal classroom into the clinical area. Nursing education is therefore not linear; instead, each component, theory and practice, influence each other. It is a given fact that not every nursing student will enter the classroom

or clinical component with the same pre-requisite knowledge and skills. This will depend on the past classroom and clinical exposure and/or experience. The nurse tutor needs to know how to facilitate learning, particularly in the use of effective teaching strategies in the classroom and clinical area.

In an African study (Tomietto et al, 2012), it was emphasised that a nurse tutor guides students' clinical learning through a wide range of strategies to improve reflection on action such as briefing and debriefing on experiences, providing cooperation between the college and ward staff, planning with ward staff and ward manager the students' involvement in ward activities and assessing competency development.

However, in some nursing colleges in Malawi, nurse tutors and clinical instructors are not adequately prepared for their teaching roles; the extent of their interactions and competence during teaching both in class and in the clinical area does not tally with their years of experience. Chirwa (2007) concurs that some of the nurse tutors in Malawi have limited knowledge on how to guide nursing students during classroom and clinical learning.

Nurse tutors can refine their skills and develop their expertise through self-reflection and student interactive feedback. The ability of the nurse tutor to effectively use a teaching strategy and interact with students in both classroom and clinical area is important and requires formal nurse tutor education. However, personal negative attributes of the nurse tutor such as mood, temperament and depression also negatively influence the effective teaching (Brink, 2007). Conversely, positive attributes such as enthusiasm, sense of humour, willingness to admit limitations and mistakes honestly, patience and flexibility when working with students in the class and at the clinical area promote teaching excellence. Furthermore, the integrity of the tutor implies truthfulness with students and fairness in dealing with students. Tutors need to persevere in their efforts to improve their teaching competence. In this regard, Brinks (2007) points out that good tutors, like good scholars, strive to perfect their teaching skills and meet student needs and avoid stagnation in their approach to student instruction by adopting positive performance attributes.

Nurse tutors have access to a variety of courses and programme to improve their teaching knowledge and skills. Registered nurses with generic nursing degrees have access to scholarships to upgrade their qualifications in Malawi, where the Kamuzu College of Nursing

(KCN) has been training nurse tutors at degree level mature entry for more than 15 years. In this programme, experienced registered nurses are selected from different hospitals and complete a two-year Bachelor of Science degree in nursing education (mature entry) as described above. Some courses or modules in this programme focus on teaching strategies, curriculum development, curriculum administration and teaching practicum. This prepares them, in part, for deployment to the country's nursing colleges. KCN also developed a short course in teaching methodology under government sponsorship for assistant tutors and clinical instructors from CHAM institutions. Therefore, many of the clinical instructors, commonly called preceptors, are also redeployed into the nursing colleges (Caffrey, 2008).

Despite formal training in nursing education at Kamuzu College of Nursing many nurse training institutions in Malawi cannot achieve the 1:15 tutor-to-student ratio as stipulated by the World Health Organization (WHO). Nurses in Malawi have ratios from 1:20 to 1:50 or more. Even the best ratios raise doubts, however, because they are based on total numbers of staff (WHO, 2013). The reality is that tutors often have 50 to 200 students in their class at a time, which challenges effective teaching and the use of student centred teaching strategies. Many tutors remain frustrated, which makes it difficult to retain them in the employ of the college. In addition to the difficulties of achieving an adequate tutor-to-student ratio, there is also a major constraint in all nursing colleges to achieving the recommended nurse instructor/preceptor-to-student ratio of 1:15. Most of the training institutions in Malawi are far from that ratio, ranging from the most optimistic estimate of 1:27 to 1:215 or more (Nurses Council, 2009).

There is also an inadequate supply of clinical instructors, which has a negative impact on the quality of clinical teaching. Many tutors undertake the role of clinical instructor in addition to their classroom teaching roles, which increases their workload and affects the quality of their classroom teaching. Most of the tutors in Malawi do not attend courses to update their teaching skills, with the result that their competence in teaching is placed at risk (Chirwa, 2007). The current Nurses Council refresher programme only focus on the newly employed nurse tutors, leaving the older nurse tutors with outdated skills, thereby providing education of limited quality.

Many of the CHAM nursing institutions rely on government-seconded tutors to meet staffing needs. Currently, 65 percent of tutors are government seconded and occupy many of the

principal tutor positions from the government (Caffrey, 2006). Because these tutors often remain only for the two-year bonding period, relying on them makes CHAM nursing training institutions more vulnerable to staffing shortages. Moreover, most of these nurse tutors have no accommodation and commute from their respective homes. This has potential to affect their competence and performance in the classroom and clinical area.

Institutions of higher learning across the nation are responding to political, economic, social and technological pressures. There is increased pressure to be more responsive to nursing students' and tutors' needs as well as concern about how well students are prepared by tutors, through the effective use of teaching strategies, to assume future societal roles. Tutors are feeling the pressure to lecture less, to make the learning environment more interactive, to achieve expected performance, to integrate technology into the learning experience, and to use collaborative effective learning strategies when appropriate.

There is limited evidence in nursing education literature that addresses the effective transfer of classroom knowledge to the clinical setting or evidence of the use of active learning strategies in the Malawian context. The absence of these studies provides little incentive for nursing tutors to expand their expertise and meet the students' interactive needs. There is also limited evidence where nursing education administrators provide the extra resources needed for active learning strategies, or for nursing students to trust that active cooperative learning will lead to success in their classroom and clinical performance as found in California nursing colleges (Hokes, 2005).

There are many new teaching methods or strategies that guide nursing tutors to teach the critical thinking skills necessary for the transfer and use of classroom-acquired knowledge in the clinical setting. Yet many nursing educators continue to use teacher-centred educational approaches, citing an array of barriers to the voiced preference for student-centred education (Hokes, 2005).

Using holistic, active cooperative learning strategies (faculty role-modelling, student interactive and group learning, and group testing) within a didactic class, Hokes (2005) found differences in the average clinical grade when compared to the average clinical grade for students who had been taught using a lecture approach. Students who were taught using the lecture method did not pass very well in the clinical skills. Therefore, what Hokes discovered

in American high school education, is very important to expound in Malawi nursing colleges, where the nurse tutors' competence and interactive attributes were very poor.

#### **1.4 CLINICAL INSTRUCTION AND CLINICAL NURSING EDUCATION**

The philosophy of clinical instruction globally provides a framework that gives structure and coherence to a curriculum. However, these belief systems are meaningless if contradicted by limited nurse tutor competence and performance in the classroom and at the clinical area. Gaberson (2007) explained that philosophy is a set of beliefs about, for example, the purposes of clinical nursing education and the responsibilities of teachers and learners in nursing clinical settings. It was further stated that it is a "belief system about human beings and their place in the world". In this study, where competences of clinical instructors were the main objective, it was further noted that the belief system in nursing education does not prescribe specific actions but gives meaning and direction to practice and provides a basis for determining if one's behaviour is consistent with one's beliefs.

#### **1.5 COMPETENCE AMONG NURSE TUTORS**

Classroom and clinical competence means performance of required duties at an acceptable level in the profession. 'Competence' is an expected level of performance that results from an integration of knowledge, skills, abilities, and judgment in nursing education. The integration of knowledge, skills, abilities, and judgment occurs in formal, informal, and reflective learning and teaching experiences (ANA, 2007). ANA (2007) adds that competence in nursing education could be evaluated by using objective and subjective data in combination with tools appropriate to the specific situations. This may involve knowledge base and actual performance of nurse tutors. Various tools and methods are used to evaluate competence, such as: direct observation, patient records, portfolio, demonstrations, skills laboratory, performance evaluation, peer review, credentialing, privileging, simulation exercises, computer simulated and virtual reality testing, targeted continuing education with outcomes measurement, employer skills validation and practice evaluations. This issue of nursing competence rests within the greater issue of how the tutor is prepared for the professional role of teaching. This is inextricably tied to the underlying educational philosophy of adult education and self-directed experiential learning which now prevails in nurse education (Bradshaw, 2007).



A nurse tutor facilitates classroom and clinical student learning in a nursing college. Brink (2007) added that nurse tutors are all professional nurses who have an additional qualification as nurse tutor and are registered with the Nursing Council. This, however, does not mean that the nurse tutor is engaged in formal teaching or that they have maintained competence as a tutor. Competent nurse tutors promote critical thinking and engage students in an active learning process using effective strategies in teaching. An active learning process requires nurse tutors and students to be involved in the learning process as a team (Banning, 2005). It is necessary to investigate to what extent the nurse tutors classroom and clinical teaching competencies which are required in modern, more student-centred higher education teaching contexts are effective.

## **1.6 INTERACTION AMONG NURSE TUTORS AND STUDENTS**

Teaching in nursing education is the complex process intended to facilitate learning, while the goal of teaching is to lead students in discovering knowledge for themselves globally. It is the nurse tutors who encourage this teaching and learning discovery through deliberate interactive teaching actions. Some outcome actions or interactive behaviour of the nurse tutor leave much to be desired in most nursing colleges in Malawi.

Waterson et al (2006:) maintain that poor performance of nursing students is due to an overloaded curriculum with emphasis being placed on nurse tutor coverage of the content through classroom and clinical interaction, fragmented and artificial learning process, duplication among disciplines or subjects and the behavioural-objective model with its authoritarian nursing stance. This results in students demonstrating a lack of retention and integration of knowledge in the classroom and clinical area.

Improved interaction between the nurse tutor and the student nurses in the classroom and the clinical area require a process of identifying the learning and performance needs and developing learning skills (Caffrey, 2006). To this effect, the challenges of nurse tutor interaction with the students both in class and at the clinical area has not been addressed in Malawi nursing colleges. Therefore, assessing the challenges of nurse tutor interaction in Malawi nursing colleges would be a very important element. The process of student-nurse tutor interaction promotes support, improves communication, enhances motivation, boosts

student self-esteem and helps them to overcome learning problems experienced both in class and at the clinical area.

Retaining nurse tutors is central to the Malawi health system as they provide training for nurse technicians, who serve primarily in rural and deprived areas and are essential to the health care delivery system. Failure to retain nurse tutors due to poor nurse tutor - student interaction and relationships leads to resignations and exacerbates nurse technician shortages, which exceed 80% in some districts in the country. This means that having good nurse tutor student relationship both in class and at the clinical area is essential. Several other African countries face the same challenges and may benefit from Malawi's experience (Caffrey, 2006). Kamuzu College of Nursing (KCN, University of Malawi); Mzuzu University; De-yang College of Nursing (private) and Malawi College of Health Sciences (MCHS) are the main nursing colleges in Malawi that provide registered nurse/midwife training. In all these colleges the tutor/lecturer-student ratio is still very low compared to stipulated World Health Organization (WHO) nurse tutor/student ratio (Girigulis, 2010).

In Malawi, the public and private sectors deliver health care services. The public sector includes all facilities under the Ministry of Health (MoH), Ministry of Local Government and Rural Development (MoLGRD), Ministry of Forestry, Police, Prisons and the Army. However, all these sectors do not have adequate nursing services due to the shortage of nurses. Therefore the tradition in nursing colleges is that students are sent to the practical area in the hospital without a tutor or lecturer. They are just supervised occasionally (Girigulis, 2010). They mostly rely on the nursing staff or preceptors. This trend reduces the nurse tutor student clinical relationship as there is limited time for academic interaction.

The vacancy rate for nursing and midwifery positions in Malawi's public sector is 65%, (PEPFAR, 2012:), In Malawi, 85% of the population live in rural areas, and only 29% of Malawi's nursing professionals provide services in these areas - the remainder of the nurses work in urban areas (MOH, 2011). The health centres, which are situated in rural areas, are understaffed with regard to nurses. It should be noted that it is mostly nurses who manage the services of these centres (NCM, 2008). This results in congestion of patients at health centres as there are only one or two nurses in these primary level hospitals. Nursing students are often sent to these health centres for clinical practice without proper supervision. However,

the value of the clinical interaction between nursing staff and students has yet to be articulated in Malawi nursing colleges.

The shortage of health workers, particularly nurses, is severe even by African standards, with fewer than 4,000 health workers (doctors, nurses and midwives) serving a population of approximately 15 million (DHS, 2010). The shortage of professional health workers adversely affects the coverage and quality of health services.

According to Ngalande (2015) today's students at KCN are digital 'natives' from a very early age and are more aware of obtaining value for money, with the result that they have high expectations from their faculty. This means university education is becoming student centred with resource-based learning, focusing on 'providing stimulating learning environments' rather than didactic teaching. Nurse tutors therefore need to be skilled, competent and knowledgeable with current technology and available resources to vary teaching and learning methods. Inadequate resources for student's learning such as a lack of computer hardware disadvantage both faculty and students, resulting in lowered morale.

## **1.7 PROBLEM STATEMENT**

In nursing education, nurse tutors often come from professional backgrounds, where they have accumulated their knowledge and skills to become experts in different clinical areas. Nonetheless, many nurse tutors have been reported to perform and interact below standard in the workplace despite having extensive experience, resulting in public dissatisfaction and an outcry for better services (Grigulis, 2010). Whether such limited understanding is from the extent of classroom content covered, resources available or the type of teaching strategies is yet not known in Malawi. Efforts have been made to intervene in the training colleges through support for funding and refresher course provision from government, but no scientific method or the use of participatory approach have been used to address the problems or propose solutions to the challenges of nursing education in the country.

There is no clear understanding or agreed description of the teaching strategies currently used in Malawi nursing colleges, while the effectiveness of such teaching strategies has not been evaluated. The various colleges in Malawi use different teaching strategies and nurse tutors use different teaching strategies (Grigulis, 2010). However, at the end of three years, all students must undergo the same national council examinations. It has not yet been evaluated

whether the use of different teaching strategies at the various colleges could contribute to the current high failure rate of students in some colleges (Grigulis, 2010). Therefore, there is a need to assess the nurse tutors teaching needs and to develop an effective teaching strategy that will be acceptable for producing quality nurses in the country.

### **1.8 AIM OF THE STUDY**

The aim of the study was to develop an effective classroom and clinical teaching strategy in Malawi nursing colleges.

### **1.9 OBJECTIVES OF THE STUDY**

1. To determine the classroom and clinical needs of nurse tutors and students in nursing colleges in Malawi.
2. To explore the challenges in the classroom and clinical area for nurse tutor- student interaction in nursing colleges in Malawi.
3. To determine classroom and clinical teaching strategies effectively used in nursing colleges in Malawi.
4. To develop an effective classroom and clinical teaching strategy for nursing colleges in Malawi.

### **1.10 RESEARCH QUESTIONS**

1. What are the classroom and clinical learning and teaching needs of nurse tutors in nursing colleges in Malawi?
2. What tutor-student interaction challenges are experienced in the classroom and clinical area used by colleges in Malawi?
3. What classroom and clinical teaching strategies are effectively used in nursing colleges in Malawi?

### **1.11 SIGNIFICANCE OF THE STUDY**

The findings would assist nurse tutors in both classroom and clinical areas to improve the quality of nursing student's learning. This study is not only important in the Malawian context, it is also useful to all nursing professionals particularly in developing countries where resources are limited yet more nurses are required to be trained. This implies that the student-centred teaching approach eases the pressure of work to the already scarce tutors in

Malawian nursing colleges. The findings of this study provide some direction to all parties involved in the Malawian context on how to improve nursing education with particular focus on classroom and clinical teaching strategies.

The results of this study would assist Malawi in addressing the Sustainable Developmental Goals and its targets (UN, 2015). The Sustainable Developmental Goals 3 and 4 clearly stipulated that UN member states like Malawi should promote gender equality and empower women by increasing ratios of girls to boys in tertiary education like nursing colleges. Target 3 of the fourth goal clearly stipulates that by 2030 this global village should ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university. While Target 5 of the same goal clearly indicates that by 2030 the world must ensure all learners acquire knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, and human rights. This is a continuation of the previous Millennium Development Goals (MDG), which entailed the need to develop a global partnership for development through targets 8C and 8F (WHO, 2008). These MDG targets clearly stipulate that Malawi should address the special competence and performance needs of its people as a landlocked developing country, through the Programme of Action for the Sustainable Development as an outcome of the twenty-second special session of the General Assembly. One of the needed programmes is the effective teaching strategy for nurse tutors in Malawi, which requires many more competent and performance based nursing professionals.

Evaluation of nurse tutor teaching strategies in Malawi is a complex but integral component of a nursing education. Therefore, it has been an ongoing process of collecting and describing data, which provided the basis for decision making in nursing education as it has been the first time this has been done in the country. This study has provided answers to requests for competence and interactive information in all nursing schools in Malawi. The outcome of the study has also developed faculty and staff in nursing education and examined the planned and actual effects of nursing programmes within colleges. The results of the study have helped to make professional educational changes accordingly in all colleges.

This study provided additional information from the tutors' perspectives on the use of alternative and effective teaching strategies. It presented tutors' perceived effectiveness and limitations of competence and performance in teaching and student learning, as well as a

context-based assessment as envisaged by the aims of Nurses Council in Malawi (Nurses Council, 2010).

Although some arts and science courses are included in postgraduate programmes, the BSN tutors provide a much stronger base in the humanities and sciences. Therefore, developing the new nurse tutor teaching strategy has helped to facilitate the production of quality nurse graduates in all nursing colleges in Malawi, which is a stepping stone for their future post graduate studies.

This study serves as the basis for future plans of action by nursing college administrators with regard to teaching strategies. Policy makers may use the findings from this research for the development of nursing career paths, formulating clear promotion policies for teaching in nursing, and monitoring teaching strategies for the tutors' performance. This new teaching strategy aims to ensure the quality of nurse graduates in Malawi. Nurse tutors and students in all nursing colleges in Malawi and other countries, especially in Africa, are the primary beneficiaries of this study. It will uncover the quality of nursing education in Malawi.

## **1.12 PERSONAL PARADIGM IN NURSING EDUCATION**

### **1.12.1 NURSING EDUCATION**

After 15 years of being involved in nursing education, working at the University of Malawi, College of Nursing, the researcher has had the opportunity to perceive nursing education as an integrated process through which students gain the interactive knowledge, understanding, and skills necessary to practice nursing. The term 'education' refers to 'formal education' based on organized and structured systems of curriculum-based classroom teaching and periodic evaluation at different levels (Kumar, 2013). However, more broadly, education also refers to all kinds of 'experiences' which help student nurses grow and become enlightened and empowered members of the nursing profession at a higher level.

Teacher-centred education tends to be more authoritarian and conservative, to emphasize the values and knowledge that have survived through time and it is not advocated in current nursing education in Malawi. The major teacher-centred philosophies of education are essentialism and perennialism. Student-centred philosophies are more focused on nursing student's individual needs, contemporary relevance, and preparing nursing students for a

changing professional future. College is seen as an institution that works with students to improve the profession or help students realize their competent professional individuality.

Nursing is transformational and steeped in the ethics of caring. In the process of creating individualized caring (selfcare) through such connecting interactions, the nurse tutor too, is transformed.

### **1.12.2 NURSE TUTOR**

It is the researcher's belief that nurse tutors should perform competently both in class and at the clinical area for the student to learn effectively. The academic setting provides the opportunity for the student to expand learning competently. A staffed auto tutorial laboratory assists the nurse tutor to effectively teach students using different teaching strategies like demonstrations and case studies. College laboratory time is utilized by the nurse tutor and students to validate and expand on skills needed before entering the clinical setting. Multiple settings such as home, community and hospital allow the student to carry out the nursing process in a variety of planned learning experiences under the facilitative eye of the nurse tutor. The nurse tutor does not simply give knowledge to the nursing student, but instead serves as a facilitator of learning. In general, there is no definitive theory about how learning occurs and how it is affected by teaching. It is the experience of these nurse tutors that leads to an appreciation of bio-psychosocial wholeness, well-being, and a higher level of interaction with nursing student. The practical skills of the nursing student are always available in the clinical area.



Clinical practice of the nursing students requires critical thinking and problem-solving abilities that require facilitation by the nurse tutor, specialized psychomotor and technological skills, and a professional value system. Practice in clinical settings exposes students to the interactive realities of professional practice that cannot be conveyed by a textbook alone (Gaberson et al, 2010). The clinical skills must be taught to students using different clinical teaching strategies for the students to perform competently.

This researcher believes that teaching and learning is an interactive process whereby both nurse tutor and nursing students assume interactive and competent responsibility of imparting knowledge to the learner. Teaching is a process which enables nursing students to gain knowledge, skills, and insights, and to acquire cognitive, affective and psychomotor skills competently from the nurse tutor. Teaching sets the benchmark for measuring the appropriateness of interaction, teaching strategies, the scope of one's competent activities in

and out of the classroom, the assessment of student learning competencies, and the effectiveness of the teaching skills of the nurse tutor. It is a personal "mission statement" for anyone who helps others learn. Teaching also defines the performance standards for the professional individual. It may be judged for its performance depth: how fully does it address the context of interactive learning and/or scholarly research about teaching and learning? It may be judged for its scope: is it modest or ambitious? It may be judged for the quality of the performance justification: to what degree is there diversity in learning - institutional and disciplinary contexts? Therefore, the nurse tutor is defined as a person that helps nursing students to learn. The nursing programme integrates classroom, simulated laboratory, and clinical laboratory learning. Syllabi, written materials, multimedia and computer aided instructions are some of the methods used to aid the student in preparation.

### **1.12.3 A LEARNER/ STUDENT NURSE**

Learning is a lifelong process in nursing education that influences cognitive, affective, and psychomotor skills, leading to individual growth and influencing thinking, values and actions. The progressivism, social reconstructionism and existentialism place the learner at the centre of the educational process. Nursing students and nurse tutors work together on determining what should be learned and how best to learn it. Learning can be defined as acquiring knowledge, attitudes, or skills. These definitions indicate that the teaching-learning process is an active one, requiring the involvement of both teacher and learner in the effort to reach the desired outcome, a change in behaviour (Parker, 2005). The researcher in this study believes that the learner is a self-directed and active participant in the learning process and is accountable for personal behaviour and performance; therefore the nurse tutor must only facilitate the learning process to students. Learning is enhanced by various teaching methods including tutor-student discussion and the use of multimedia to help the learner think critically and achieve success.

However, learning can be affected by factors such as learner's readiness to learn, the learning environment, and the teaching techniques experienced by the learner. Learning must actively occur with other people and be interactive discussion-based. This does not mean that students should not read texts or attend lectures. Textbooks and classroom lectures provide the starting point for new ideas and concepts, but without some type of dynamic follow-up, the message is quickly lost to the student. Active learning requires that we discuss (interact) and debate ideas with others. Students must be creative, being playful at times and creating silly



scenarios which help to apply the mind. Students gain knowledge and understanding in a social setting. They interact with peers and instructors through a process of negotiation. They interact with the broader intellectual community through mindful reading of texts and journals. Each student starts from an initial base of knowledge and experience. All students work from this point to build a more meaningful understanding of the subject matter and to enhance their ability to ask questions and find answers. They must learn how to deal with new situations with difficult problems and unknown answers in the curriculum using different teaching strategies.

#### **1.12.4 TEACHING STRATEGIES**

The nursing curriculum prepares the diploma nurse to utilize the nursing process with members of the health care team in providing and managing care and teaching students. The graduate is empowered to practice autonomously within the guidelines of the Nurse Practice Act of Malawi in an entry level position, and to be accountable for care given and care which has been delegated in the curriculum. The graduate also identifies situations in which additional guidance is needed and seeks such guidance in the nursing curriculum. The curriculum is delivered to the students through a syllabus under which teaching strategies are prescribed.

Teaching strategies enhance learning if they are appropriate to the student's needs. Progressivism is based largely on the belief that lessons must be relevant to the students to enable them to learn and must be delivered using appropriate teaching strategy. The curriculum of a progressivist school is built around the personal experiences, interests, and needs of the nursing students. Numerous teaching strategies are available, including lectures, discussion groups, and demonstrations, all of which can be enhanced with specially prepared teaching materials. The lecture method or explanation method of teaching is commonly used but must always be accompanied by other teaching aids. Discussion is important because it affords the learner an opportunity to express feelings and concerns, to ask questions, and to receive clarification. Teaching aids that are available to enhance learning include books, pamphlets, pictures, films, slides, audio and video tapes, models, programmed instruction, and computer-assisted learning modules. Such teaching aids are invaluable when used appropriately and can save a significant amount of personnel time and related cost. However, all such aids should be reviewed by nurse tutors before being effectively used to ensure that they meet the individual's learning needs.

### **1.12.5 NURSE TUTOR INTERACTION**

The researcher is of the opinion that nurse tutors are responsible for providing curricula that integrate moral and ethical interactive issues and prepare students to practice according to an accepted code of professional interactive practice. Therefore, it is imperative that nurse tutors do their best to prevent students from participating in poor interactive practices such as moral cheating, plagiarism, unethical clinical moral practice, alteration of records, forgery, false representation, and knowingly assisting another in interactive dishonest acts. In this study the researcher assumes that improved interaction between the nurse tutor and the student nurses in the classroom and the clinical area requires a process of identifying the learning needs and developing competent learning skills (Mathevula, 2012). It is the nurse tutors who encourage teaching and learning discovery through deliberate interactive teaching actions. Some outcome actions or interactive behaviour of the nurse tutor leave much to be desired in nursing colleges. Therefore, increased nurse tutor interaction with students would uplift the competent relationship which is vital for student progress.

### **1.12.6 NURSE TUTOR COMPETENCE**

The public has a right to expect nurses to demonstrate professional competence throughout their careers. Competence is an expected level of performance that integrates knowledge, skills, abilities, and judgment. The integration of knowledge, skills, abilities, and judgment occurs in formal, informal, and reflective learning experiences for nurse tutors. The registered nurse is individually responsible and accountable for maintaining professional competence. It is the nursing profession's responsibility to shape and guide any process for assuring the competence of nurses. Regulatory agencies define minimal standards of competency to protect the public. Therefore, nurse tutors are responsible and accountable to provide a practice environment conducive to competent practice. Assurance of nurse tutor competence is the shared responsibility of the nursing education profession, individual nurse, professional organizations, credentialing and certification entities, regulatory agencies, employers, and other key stakeholders.

Competent nurse tutors can be influenced by the nature of a situation, which includes consideration of the setting, resources, and the person. Situations can either enhance or detract from the nurse's ability to perform.

The registered nurse influences factors that facilitate and enhance competent practice. Student module evaluation is vital for noting nurse tutor competence levels. Lack of competence in role performance may be a result of role strain. Some researchers have found that sources of role strain are cultural and interactional. An essential nursing competence includes the need for nurse tutors to be able to identify resources that are useful, informative, and reliable for students, patients and families.

By commending students' competence and strengths and offering them alternative viewpoints, a context for change is created that allows them to discover their own solutions to nursing problems. This parenting style promotes feelings of competence. The goal is to promote self-control and autonomy in children. Parenting styles influence health, providing the ongoing message that the children have some control over good health and healthy lifestyle choices.

The researcher believes that in the practice of nursing, competence can be defined, measured, and evaluated among nurse tutors and students. No single evaluation method or tool can guarantee competence. Competence is situational and dynamic; it is both an outcome and an ongoing process. The teaching context determines what competencies are necessary in nursing education. Therefore, the assurance of competence is the shared responsibility of the profession, individual nurses, professional organizations, credentialing and certification entities, regulatory agencies, employers, and other key stakeholders (ANA, 2008). In order to strengthen their relational practice, nurse tutors and students should understand that their cultural competences begin by reflecting on their own prejudices and should develop a deep awareness of how their own culture has informed their world view.

### **1.12.7 NURSE TUTOR PERFORMANCE**

It is important for nursing colleges to ensure that the performance of students is of a high standard. If this is not the case, measures should be put in place to detect and rectify the situation. It is important to improve the level of cognitive, affective and psychomotor performance of nurse tutors or those who are continuously in contact with the student during teaching both in class and at the clinical area. There is no consensus yet on the best way to evaluate teacher performance. So many measures of teacher performance might be used such

as principal evaluations, stake holder evaluations, classroom observations, and the number of times a teacher is absent. However, measures of outputs and performance rather than credentials would need to be used in nursing education. These include fundamental power and performance capabilities of both the nurse tutor and the students; a process of teaching life experience; and a learning process.

A performance indicator is a specific type of measurement that is intended to measure desired performance outcomes based on reliable, quantitative processes or outcome measures related to one or more dimensions of performance such as efficiency, effectiveness, efficacy, appropriateness, timeliness, availability, continuity, safety, and respect and caring. An individual naturally desires to obtain a reward for his successful performance. The fear of punishment encourages the individual to follow the right path in the process of performing the nursing activities. Punishment serves as a powerful motivation to follow the right path.

### **1.13 SUMMARY**

In this chapter, the introduction of the teaching strategy needs and the needs of the nurse tutors in Nursing Colleges in Malawi has been expounded. There is limited evidence that shows the levels of nurse tutor competence in the utilization of the teaching strategies in Malawi. The extent to which interaction among nurse tutors and students has also been articulated - showing its limitation for the development of nursing education in Malawi



### **1.14 OUTLINE OF THE THESIS**

This thesis is organised in the following seven chapters:

**CHAPTER 1:** This chapter provides the background to the study, the aim and objective and the study's significance. The researcher's perspective is also presented.

**CHAPTER 2:** In this chapter, the conceptual framework and the ADDIE model that has been used in the study are described in detail.

**CHAPTER 3:** This chapter presents the literature relevant to the research topic.

**CHAPTER 4:** This chapter focuses on the research methodology used in this study. It includes research ethics.

**CHAPTER 5:** This chapter focuses on the data analysis and alludes to the presentation and discussion of the research findings.

**CHAPTER 6:** This chapter describes the development of the effective teaching strategy for Malawi.

**CHAPTER 7:** This chapter focuses on the conclusions, recommendations and limitations of this study.



# **CHAPTER TWO**

## **CONCEPTUAL FRAMEWORK**

### **2.0 INTRODUCTION**

This chapter presents the conceptual framework used in this study. This framework was originally developed by Florida State University with the objective of explaining the processes involved in the formulation of an Instructional Systems Design (ISD) programme for military inter-service training that will adequately train individuals to do a particular job and which can also be applied to any inter-service curriculum development activity. This framework has since been adapted; however, the original five step model is used in this study. The five phases build on each other and remain a highly participatory instructional design in education.

### **2.1 ADDIE INSTRUCTIONAL DESIGN MODEL**

The Analysis, Designing, Development, Implementation and Evaluation (ADDIE) instructional design model is a generic model traditionally used by instructional teachers and training developers. This model was selected for this research because it is at the very core of instructional design and is the basis of Instructional Systems Design (ISD) in education.

Whilst there are various adaptations of the ADDIE model, the generic model consisting of five cyclical phases i.e. Analysis, Design, Development, Implementation and Evaluation was used in this study (Frontiers, 2012). These phases represent a dynamic, flexible guideline for building effective nursing training and tutor performance support tools in nursing education. Instructional Design (ID) is the methodological process of determining, creating, delivering, and evaluating learning and nurse training solutions. It is a foundational component of successful nursing student learning. Instructional Design is the fundamental architecture, the blueprint, of the learning territory in nursing education.

The components, considerations, planning, and elements of Instructional Design work together as a compass, revealing the direction a nursing instructional approach should take (Learning Frontiers 2012). This instructional design remains the basis of the ADDIE model. The ADDIE model closely aligns the nurse tutor and learner in an active mode of learning. The Instructional Design model has withstood the test of time. It is simply a "device" to help tutors think through a nursing course's design. Though the model appears linear, it does not

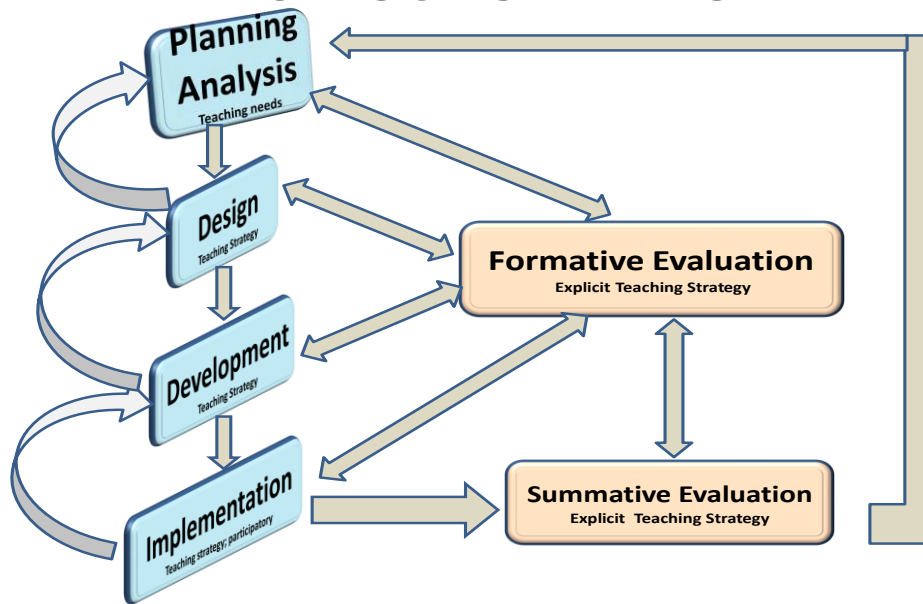
have to be followed rigidly or in a linear approach, especially if the college already has course materials or syllabi developed. ADDIE does not suggest or follow specific learning theories; it is a *project management tool*. It helps to think about the different steps in relation to the school and instructional design to be used.

The ADDIE Instructional Design model represents a complete instructional design workflow. It has built-in planning activities, quality assurance checkpoints, and feedback cycles. Each of the phases of the ADDIE model builds on the previous phase, skipping one phase can create a ripple effect throughout the entire process.

According to Leshin et al (1992) and Twilley (2014) Instructional Systems Design (ISD) is a process to ensure learning does not occur in a haphazard manner but is developed using a process with specific measurable outcomes. The responsibility of the instructional designer is to create an instructional experience, which ensures that learners will achieve the goals of instruction. Therefore, this study is totally based on the ADDIE model. The programmed classroom and clinical effective instructional (teaching) design will follow most of the steps articulated in the ADDIE model (see figure 1).

Sometimes it is not possible to delay the training projects because the ADDIE model builds each subsequent step from previous steps, skipping one step can create ripple effects throughout the entire process. While it takes more time to properly plan and execute a training project, it will substantially reduce the risk and the cost of errors throughout the training. Like every business decision, one needs to weigh risks and make a choice. However, it is best to be informed and make an educated decision.

## ADDIE INSTRUCTIONAL MODEL



**Figure 2.1: Original conceptual framework of the ADDIE model**

The acronym "ADDIE" stands for Analyse, Design, Develop, Implement, and Evaluate. While the ADDIE model has been around since 1975, it was generally known as SAT (System Approach to Training) or ISD (Instructional System Design). The earliest reference that uses the acronym of "ADDIE" is a paper by Michael Schlegel (1995), in *A Handbook of Instructional and Training Programme Design*. Figure 1 above gives an abbreviated overview of some of the components of ADDIE model.

### 2.2 DESCRIPTION OF THE FIVE PHASES OF THE ADDIE MODEL

The designing programme of the teaching strategy took 25-30 weeks, during which all the needs assessment and participatory teaching was done.

#### 2.2.1 ANALYSIS PHASE

In the analysis phase, the ADDIE model addresses the instructional problem; the instructional goals and objectives are clearly established, and the learning environment and student's existing knowledge and skills are identified. Planning and analysis is required, which the ADDIE model emphasizes as a set of skills which enables an individual to understand the nature of information and realize information needs in terms of quantity, quality, type and format. It articulates appropriate searches to locate it; organize and evaluate the retrieved information for further use in studies and research in an ethical manner.



The ADDIE analysis phase serves a major role in the quality assurance process for nursing education. It defines the teaching needs and ways to measure its success. If the ADDIE analysis phase is skipped, it can easily introduce mistaken assumptions into the training process of nursing students.

According to Intulogy (2013) there are five steps that are performed during the ADDIE analysis phase including i) discover any existing materials ii) define measurable business goals

iii) conduct an instructional analysis iv) analyse learners and contexts and v) write learning objectives. Whilst some of these steps can happen concurrently, generally it begins with the discovery process. The analysis phase of the ADDIE process includes tutor and nursing student analysis. The tutor and student performance analysis focused broadly on skills and knowledge as well as motivation of the performers. Learners' existing skills and knowledge, often termed "prior knowledge," is important to know for two reasons: firstly, the instruction can help learners build on what they already know or know how to do and secondly one can avoid spending resources teaching people what they already know and do.

Assessing learners' attitudes towards the instructional content is also useful. This determines the learner's commitment towards the learning process. Learners' ability levels are also important, particularly with respect to their stage of cognitive development.

The analysis phase further focuses on students' preferences with respect to modes of learning and teaching strategy or instructional delivery systems. Are they used to seminars, lecture/demonstrations, cooperative groups, or hands-on workshops? Are they comfortable with textbooks, video, computer-based instruction? Do they prefer teacher-centred or learner-centred instruction? How easily would they adapt to new methods?

Subject matter or task analysis is another important part of the analysis stage of the ADDIE model. These activities enable the educational nursing tutors to identify the specific skills and knowledge that students need to accomplish the instructional goals. There are several methods of task analysis, depending on the type of content. When the instruction deals mainly with facts or concepts, most tutors opt for a simple outline featuring main topics, sub-topics, etc. as required. A flow chart works best when processes, procedures, or principles

make up the bulk of the nursing content. Making a flow chart involves identifying and sequencing the steps or stages of the procedure or process, noting any sub-processes or skills involved, and adding concepts that the learners need to accomplish each of the main steps. Finally, it is important to distinguish what the learners already know about the task, what they might need to review, and what would be entirely new to them.

### **2.2.2 DESIGN PHASE**

The design phase of ADDIE model deals with learning objectives, assessment instruments, exercises, content, subject matter analysis, lesson planning and media selection. The design phase should be systematic and specific. Course developers who skip over the instructional design phase of the ADDIE model are often the people who most need the structured planning the phase offers. They do not have the formal training or experience to know how to make sound instructional design decisions. The quality of the course really depends on the skill of the instructional designer.

During the design phase, the tutors and students would plan what the teaching strategy should look like when it is complete. At the end of the instructional design phase, the tutors produce an instructional design document for the strategy. In many ways, this document is like an architect's blueprints or a software engineer's design document. The instructional design document describes the course's content, but it does not contain the course content - just like a blueprint is not a house and a software design document is not the actual software.

During the instructional design phase, the tutors review the course's learning objectives and consider the following questions: How should content be organized? How should ideas be presented to learners? What delivery format should be used? What types of activities and exercises would best help learners? How should the course measure learners' accomplishments? At this point in the instructional design process, the nurse tutors make important choices about the course's structure and its teaching methods. Overall, these choices combine to form a comprehensive instructional strategy to help students achieve the course's learning objectives.

When instructional nursing tutors create instructional strategies for courses, they draw upon theoretical knowledge and practical experience. There are many ways to sequence and

present content to learners. According to Intulogy (2013), it is the instructional nursing tutors' responsibility to choose the correct instructional strategies for the course and the learners. Tutors need to deliberate on how the course material should be grouped and sequenced competently. What instructional methods and tactics would be used to present material competently? How would assessments measure a learner's performance success?

The nurse tutors must decide if any of the course's learning objectives should be grouped together. Tutors cannot competently teach everything at once, but sometimes it makes sense to put related topics together for the learners. These related topics can form the basis for a course module. Once topics have been grouped together, the nurse tutor needs to organize the content into a course structure. The content inside of each group needs to be sequenced and then the groups themselves need to be sequenced together to form the course structure. Here are just a few of the many possible sequencing options: Step-by-step; Part-to-whole; Whole-to-part; Known-to-unknown; General-to-specific.

In the instructional design phase, the nurse tutor needs to decide how the course material would be competently and interactively presented to the students. Specifically, looking at the types of activities and exercises that would be included in the course. For example, there is a need to look at the different types of learning activities: Group discussion; Modelling; Scenarios; Mnemonics; Drills; Applied practice. However, if students want to develop interpersonal skills, rote drills offer limited value. Role-play scenarios and group discussions would probably be more effective learning activities. Generally, the course's activities and exercises must fit with the type of learning students would be asked to do.

In the ADDIE model, the nurse tutor chooses the course's delivery method during the instructional design phase. This seemingly simple choice will affect almost every aspect of the design document and the final course content.

The course delivery format should mesh with the nursing students' competence, interactive and performance needs, the content, and the goals. Some types of course material could be easily presented through job aids and self-study materials, but other courses work best when learners come together as a class under the direct guidance of an expert nursing instructor. Intulogy (2013) adds that the course delivery method influences how learners experience the course and its content. If the training specialist chooses the right delivery method, it would

make the learning process easier for the learners. However, if the delivery format doesn't fit the content and learner's needs, then the course would have very limited success. This suggests that the design should focus on the following areas. It should describe the overall learning approach of the nursing students. It should also identify instructional media choices for the courses and the need to rectify the cluster and sequence objectives. Lastly, the designing phase should make sure to describe course exercises, activities, and assessments that would be done by the nursing students. Therefore, it is important not to skip this phase. The costs of redevelopment if the phase is skipped often greatly exceed the costs of the ADDIE instructional design phase.

### **2.2.3 DEVELOPMENT PHASE**

The development phase depends largely upon the design phase. Instructional tutors understand that without a good design plan for nurse students, building a teaching strategy can lead to many frustrating moments and long hours of unnecessary teaching. Therefore, it is necessary for a training prototype to provide a preview. It shows what the final strategy would look like when it is complete. Both training tutors and students can benefit from prototypes. Up to this point, people have envisioned the course materials in their minds. In this step, the training tutors build a tangible sample that everyone can see and discuss.

One of the activities of the development phase is to create a prototype. Training prototypes often vary in scale and complexity. For some strategies, the prototype might be just a few template pages. Others might need detailed step-by-step storyboards. The course's format often influences the type of prototype the training specialist would create. Intology (2013) highlights the need to build prototypes that fit the type of course to be developed. Simple courses do not need massive prototypes. However, when a project expands and becomes more complex, prototypes help people envision the final deliverable. It is therefore necessary to explore some of the issues that nurse tutors need to know about developing course materials.

The development phase is where instructional tutors and students create and assemble the content assets contained in the blueprint developed during the design phase. In this phase, storyboards are created, content is written, and graphics are designed. If e-learning is involved, nurse tutors work to develop and/or integrate technologies. Intology (2013) added that the ADDIE development phase calls for a prototype, a table top review, and a pilot

session. However, it is often tempting to cut corners and expedite the development process. Instructional nurse tutors must know the tools used to create materials within the development phase. Appropriate skills and talents of the tutors are required to create e-learning courses or classroom training materials for students. Many large nursing colleges include a development curriculum team within their structures, which specializes in creating course material. Knowing the capabilities of the tools would improve the quality of the course and increase the learning potential of nursing students.

A successful development phase draws upon the information collected during the needs analysis phase and the decisions made in the instructional design phase by the nurse tutor. If the nurse tutors' team has done solid work during the first two phases of the ADDIE model, then the strategy development phase should proceed smoothly and quickly. The nurse tutor and students need to agree on the course's purpose, structure and content which makes it easy to focus on writing the materials. However, if there are unresolved issues from the first two ADDIE phases, then problems usually start to appear in the training development phase. There might be missed deadlines, weak and off-target materials, and even substantial cost overruns.

In this section of the development phase, the focus is on the high-level steps that end with the creation of a prototype; developing course material; conducting a table top review and running a pilot session. Since there are many types of training conducted by nurse tutors, the development phase often adapts to fit the college and the student's needs. One course might devote a lot of time to prototyping, while another session may devote more time to table top review and pilot testing. In many situations, it is a matter of matching the correct quality assurance steps to the course.

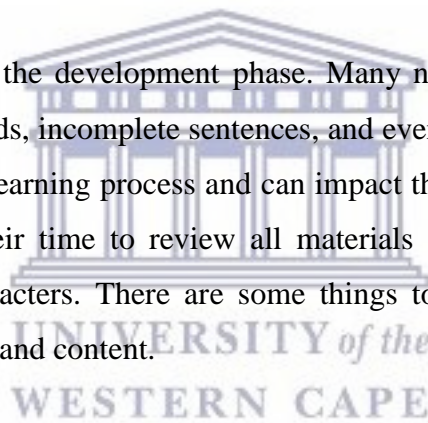
There might be some questions posed, such as; do nurse training specialists really need to perform each of these training development steps? Are there any shortcuts? In this research, we look at how the colleges of nursing would shape the training development process of the teaching strategy.

The tools used in the development phase vary and may require specific nursing training to learn how to use them. Below is a generic list of tools used in the development phase (Sayers, 2006). This list is not all inclusive as many colleges gravitate to specific tools for their

specific teaching, audience, and capabilities. E-learning Tools (i.e. Dreamweaver, Flash, Soundbooth, Media software, etc.); Classroom Tools (i.e. Word, Framemaker, In-Design, Desktop Publishing software, etc.); Graphic Tools (i.e. Photoshop, Fireworks, etc.); Server Tools (i.e. Flash Media Server, Database applications, etc.).

Testing the competence, interaction and performance levels is vital during the development phase. Many nurse tutors' plans look great on paper, but when those plans meet reality, potential issues begin to appear. These issues may be a result of the technology, environment, audience, timelines, procedures, or other constraints overlooked in the design phase. For example, a fun and engaging exercise for an e-learning course might sound great on paper, but you might not have the skill set to create the exercise or your environment may not support the type of media used to implement the exercise (Prasad, 2005). Discovering these issues can only be identified through testing.

Editing is a critical factor in the development phase. Many nurse students are sensitive to things such as misspelled words, incomplete sentences, and even inappropriate images. These items could detract from the learning process and can impact the integrity of the course. It is important that tutors take their time to review all materials to ensure that the completed product is free of these distracters. There are some things to consider during the editing process such as spelling, flow and content.



#### **2.2.4 IMPLEMENTATION PHASE**

The implementation phase of ADDIE presents instructional tutors with unique opportunities to improve nursing performance. Many instructional tutors think that once a course is written, developed, or created and handed to the nurse trainer that their job is done. However, this creates missed opportunities that could make the difference between a competent nursing training course and a great learning experience for the nursing student.

The implementation phase offers opportunities from an instructor-led course perspective and from an e-learning approach. It is important to remember that nursing student training consists of two major components. The first is the Development and Delivery. As a professional nurse instructional tutor, being a good partner with those who work on the delivery side of nursing training institutions can vastly improve the outcome of the nurse

training in colleges. Whether tutors develop an e-learning teaching strategy or an instructor-led course, it is important to approach the implementation phase of ADDIE from both perspectives (Prasad, 2005). One of the biggest opportunities for the instructional nurse tutors during the implementation phase is participating in the initial evaluation of a course. Most nursing colleges refer to this instructor-led training as a pilot. While there are many differences from one college to another about what a pilot entails, it usually provides an opportunity to test materials with nursing students. Furthermore, the delivery of the course is done by having a checklist to verify that course objectives will be achieved during the course help ensure that materials and instructions meet students' expectations. It is necessary to observe both the instructor and the learners to ensure that the materials and instructions were used appropriately to meet the objectives.

The implementation phase also helps to document timing of topics presented. While instructional nurse tutors could guess the amount of time it should take to present a topic or section of the course, the implementation phase offers the opportunity to verify timing of scheduled training for a course. Sometimes, minimal information for a section could take longer than anticipated. Identifying the length of a module, section, or topic could help you make the necessary changes to improve the flow of information (Sayers, 2006). It also helps to observe the exchange of ideas and the communication between the instructor and learners. Sometimes one might discover that an idea on paper fails to measure up to the intended results in the classroom. By observing the reactions of the learner about a specific topic or idea, it could determine whether a concept achieved its intended objective. Also, professional nursing tutors often bring increased enlightenment about a subject by including personal experiences or metaphors in explaining a concept. Documenting these ideas could improve the impact of instructor-led course and create a greater learning experience for the students. It would also improve one's skills as an instructional designer.

The implementation phase also helps to verify the appropriate order of topics in a course. Sayer (2006) stated that during the initial design of a course, certain topics might be ordered in a logical sequence. However, there are times that the instructional tutor discovers that the original order of topics lack that natural progression of learning. This could be very obvious and could cause some confusion for both the nurse tutor and the learner. Knowing the natural progression of information is often discovered during a pilot. By observing the presentation

of course topics, the instructional tutor can make the appropriate changes to ensure a solid flow of information learning.

It should to be added that periodic briefings allow the instructional nurse tutor and the nursing students to discuss critical issues within the course and to make last minute changes. These briefings work best when there are frequent opportunities for students and instructors to engage face-to-face during scheduled breaks and luncheons. Some suggested questions that instructional tutors can ask students during these briefings include: Do you feel that the course flows well? Are students able to grasp the concepts presented? Are the instructor's materials meeting your expectations? Would you do anything differently? What challenges are you experiencing? Unlike e-learning, instructor-led courses offer a unique opportunity to partner with the students, so always take the time to encourage and motivate the students as needed (Intulogy, 2013).

**Periodic student briefings:** When the opportunity permits, it is necessary to take some time to ask the learner about their experience. For multiple day courses, a daily review with the learners on how the course is organized can help the instructional tutors to identify ideas for improvement. By reaching out to the students during the training, the instructional tutor can improve his or her knowledge of the students' learning preferences. One important thing to remember is to avoid spending too much time with the participant during the pilot. As they are receiving the information for the first time, their feedback may tend to be short and limited because they have spent all day in the classroom (Intulogy, 2013). Short, periodic discussions throughout day with individuals or in group settings tend to have better feedback than at the end of the day. The objective for both instructor and participant during periodic briefings is to provide an opportunity to make immediate changes and see the outcomes of those results.

**E-Learning Approach:** For most instructional tutor groups, the initial launch of an e-learning course can be considered a pilot. The advantage of e-learning is that revisions to the course can be implemented immediately. However, this depends on the availability of computer and internet resources. The challenge is to ensure that the revisions would achieve the desired impact. Some ideas that help in conducting an e-learning pilot include the following:



**Targeting e-Learning Audience:** Many nursing colleges utilize a Learning Management System (LMS) to manage courses taken by their nursing tutors and students. For this situation, it is recommended to target a small number of individuals initially to go through the course using the LMS. This would ensure that only those individuals selected in the LMS would have the ability to take the e-learning course. Targeting the audience in this manner would help the instructional tutor to make changes to the course and to test the training on a small group to identify possible technical and content related issues prior to implementing it on a larger audience. For situations where an LMS is not available or limited in scope, it is suggested that a more controlled method be considered (Intulogy, 2013). For example, sending an email to a selected group with a link to the course would ensure that the online course is only viewed by specific individuals. This would provide an opportunity for the instructional tutor to gather feedback and make any necessary changes to the course before implementing it on a larger audience.

**Test and Quizzes:** These assessments can be very powerful for instructional nurse tutors in analysing their audience and to identify weaknesses within the nursing course materials. Analysing the results of an assessment could help validate that certain topics have been covered efficiently within the course. It could also help to verify that the training requires additional development about a specific topic. Using assessments could provide valuable feedback throughout the entire implementation of an online course. During the implementation phase, a procedure for training the facilitators and the learners is developed. The facilitators' training should cover the course curriculum, learning outcomes, method of delivery, and testing procedures.

### **2.2.5 EVALUATION PHASE**

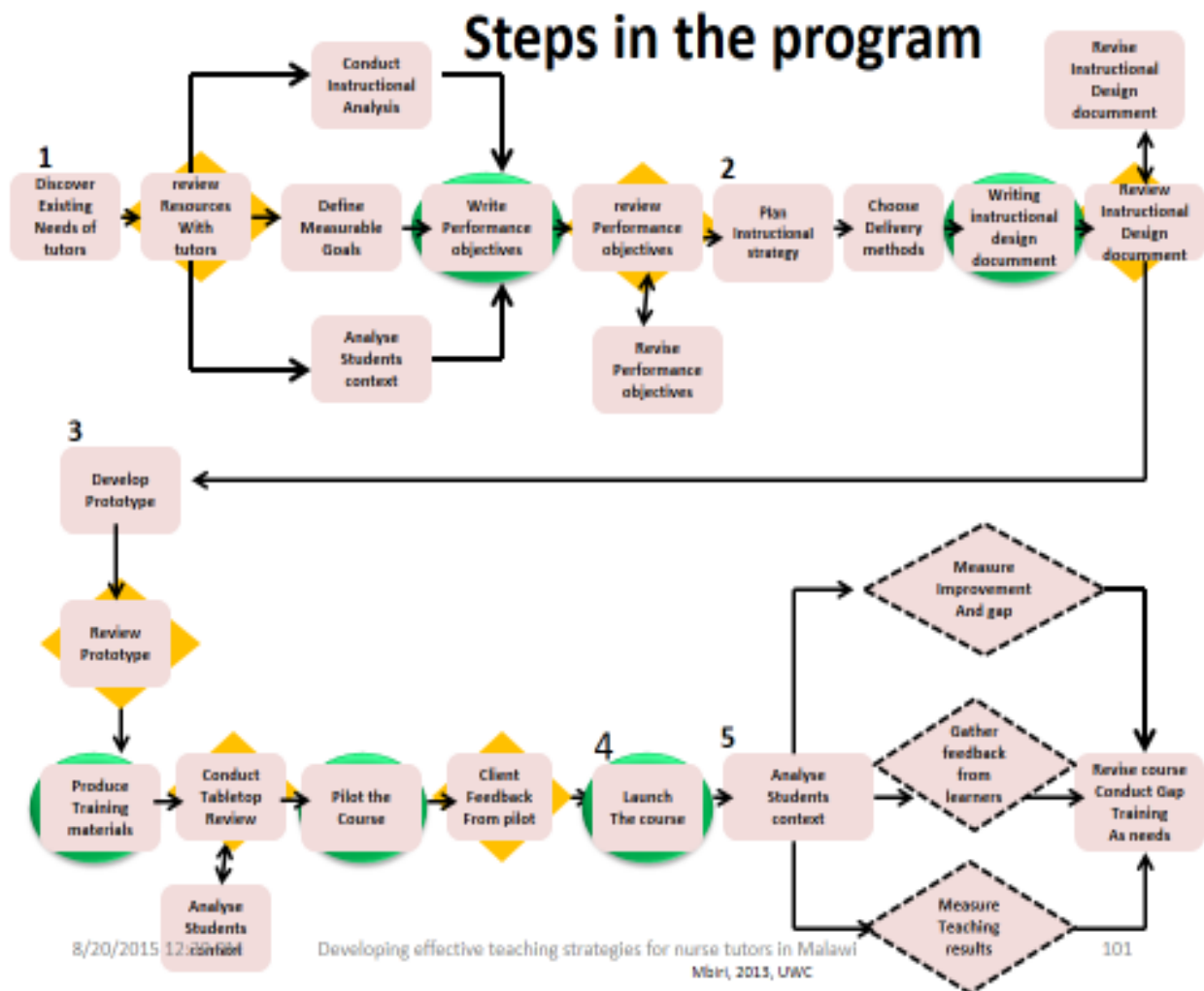
The evaluation phase consists of two parts: formative and summative. Formative evaluation is present in each stage of the ADDIE process. Summative evaluation consists of tests designed for domain specific criterion-related referenced items and providing opportunities for feedback from the users which were identified. The evaluation phase reflects much of the discoveries found in the analysis process. These discoveries include the objectives and expectations of the students. When looking at the process, it is necessary to avoid the thought that it is structured in a chronological order. Rather, the ADDIE model is a continuous circle with overlapping boundaries. Of all the process phases, the evaluation phase is least understood regarding its complexity (Intulogy, 2013).

Most instructional tutors agree that assessments or evaluations should be written during the analysis phase. The purpose of identifying assessments first is to establish a base line of teaching strategy content that correlates with the course objectives. Unfortunately, some tutors wait until the end of the development phase to create the course assessment or test.

The challenge of writing assessments or tests at the end of the development phase is the difficulty in aligning the objectives with the contents of the course to evaluate the student's knowledge. Dick and Carey (1996) and Hussain (2014) add that inexperienced tutors often fail to recognize the purpose of measuring the students' knowledge gained during the course. Thus, the inexperienced instructional nurse tutor skims through the content, picks a topic from a paragraph or page, and writes a question or two about the topic. This approach rarely provides a link back to the course objectives and fails to measure the learner's knowledge appropriately (Intulogy, 2013).

Most of the nurse tutors' develop evaluations right from the analysis phase. Once nurse tutors have identified the course objectives in the analysis phase, they begin to categorize the objectives by topics. This is a great way to identify how the information should be divided within the course to improve the learning process. Based on the categories, tutors identify key questions that relate to the objectives. This would help as they move through the various phases of ADDIE model until the real evaluation phase.

Finally, the assessment blue print of the nurse tutor plays a key role in administering the course assessment both formative and summative. It provides a road map to key topics within the course to clarify content or confirm answers. It can also assist the instructional nurse tutor to identify areas within the course that may lack information required for the students to meet the objectives. Figure 2.3 below is a summary of the minute stages in all phases of the ADDIE model discussed above.



**Figure 2.3: The steps in the programme development of the teaching strategy**

UNIVERSITY of the  
WESTERN CAPE

## 2.7 SUMMARY

This chapter has focused on the phases of the ADDIE model and its application for use in this study for the development of an effective teaching strategy. The nurse tutors’ needs on their competences and interactions have also been articulated. It has been clearly outlined that a new teaching strategy is necessary to solve the current teaching problems if quality nursing is to be achieved in Malawi.

## **CHAPTER THREE**

### **LITERATURE REVIEW**

#### **3.0 INTRODUCTION**

This chapter presents the literature that informs this study. The literature focuses on issues related to the objectives of the study and includes teaching strategies, nurse tutor interactions, competences and nurse tutor performance. Most of the databases used were found through University of Western Cape library where **EBSCOHOST** was the main search engine. However, this literature search was narrowed down to suit the main objectives of the research, which captured the main themes and variables of nurse tutor student interaction; competences of nurse tutors, performance of nurse tutors and the teaching strategies. This literature has also included the conceptual ADDIE Model. Therefore, the literature search for this study was based on conceptual issues that are key to the study. Empirical but mostly theoretical literature was found.

#### **3.1 TEACHING STRATEGIES IN NURSING**

According to Bonnie (2013) there are different teaching strategies that are used in nursing education. From a list of more than 40 possible teaching strategies in nursing, different authors have reported the use of more than 21 different strategies (Brown, 2009). However, there are five (5) main teaching strategies that nurse tutors use both in class and at the clinical area, including lecturing, student demonstration, group discussion and role play. Khan et al (2012) conducted a simulation-based workshop for students. They reported that 64% of the students felt that they learnt the skills of teamwork and felt that their approach to the problem became systematic. A total of 36% felt that they learned about the application of theoretical knowledge in a clinical setting. Moreover, it has been found that role-play, observation and feedback, as well as the application of skills assist students in achieving confidence (Jones *et al.*, 2009; Haskvitz and Koop, 2004); dexterity, and problem solving. In addition, PBL and CM were both viewed as the most effective teaching and learning strategies for the development of students' knowledge in Pakistan, whereas demonstration was perceived as an effective strategy for the development of their skills. Reflection was felt to be more effective in the development of students' knowledge and for bringing about positive attitudes (Khan et al, 2012).

Most researchers in nursing education have divided teaching and learning strategies into five parts (see figure 3.1).

i) **Direct instruction** - this is highly teacher-directed and is among the most commonly used. The main examples include lecture, explicit explanation and didactic teaching (see figure two below). According to Barak (2008) direct instruction refers to a specific pattern of instruction that emerged from studies which attempted to identify the instructional procedures used by the most effective teachers - those teachers whose students made the greatest gains in achievement. This strategy is therefore effective for providing information or developing step-by-step skills. It also works well for introducing other teaching methods, or actively involving students in knowledge construction.

Teaching in this process-product tradition begins with first locating teachers all of whom are teaching the same course and programme. All the classes are then administered pre-tests in reading the subject of interest. Next, observers visit the teachers' classrooms and observe and record the frequency of different instructional behaviours. Such behaviours include the number and type of questions that are asked (Khan, 2012), the frequency of feedback provided by the teacher, the amount of time spent in presentation and in guided practice, and how the teacher prepares students for independent practice.

At the end of these observations, all the students take a post-test, and the pre-test and post-test scores are statistically analysed to determine which teacher's classes made the largest and smallest gains, after adjusting for differences in the initial abilities of the students. In effect, there could be two sets of teachers whose students made the largest and smallest academic gains during the time of study. This makes it easy to list and compare the instructional behaviours of those teachers whose classes made the largest gains with the instructional behaviours of those teachers whose classes made the smallest gains. Thus, in this final step, the two groups of teachers are compared. Barak (2008) pointed out that those who write about direct instruction might not be aware of these different meanings. Readers who only come across disparaging comments about direct instruction may not realize that there are sets of instructional procedures, labelled direct instruction, which have been used successfully and reliably to help students learn. In nursing education in Malawi, such comparison was not done to determine the differences in competence and performance of the nurse tutors.

If educational media says that use of direct instruction is increasing—without specifying any details as to the type and form of direct instruction - the reader cannot decipher which of the meanings applies. If a college writes that they are using direct instruction, without providing more details, then the reader cannot decipher what is meant (Khan, 2012).

ii) **Indirect instruction** - is mainly student-centred and in contrast to direct instruction, although the two strategies can complement each other. Hwang (2014) asserts that indirect instruction seeks a high level of student involvement in observing, investigating, drawing inferences from data, or forming hypotheses from concepts. It takes advantage of students' interest and curiosity, often encouraging them to generate alternatives or solve problems. Indirect instruction is best suited for problem, inquiry, and concept-centred lessons such as problem solving, case studies and reflective discussion. An old adage says:

*"Tell me and I forget,  
Show me and I remember,  
involve me and I understand."*

The teaching of concepts; inquiry, and problem solving are different forms of indirect instruction that actively involve learners in seeking resolutions to questions and issues while they acquire new knowledge. Indirect instruction is an approach to teaching and learning in which (1) the process involves inquiry, (2) the content involves concepts, and (3) the context is a problem (Pearson, 2010). This group of teaching strategies focuses on student ideas which can be used to heighten student interest, to organize subject content around student problems, to tailor feedback to fit individual students, and to encourage positive attitudes toward the subject.

In indirect instruction, the learner acquires information by transforming stimulus material into a response that requires the learner to rearrange and elaborate on stimulus. Therefore, the use of indirect teaching strategy involves student-centred learning, sometimes called unguided discovery learning, and allows the student to select both the form and substance of the learning experience (Pearson, 2010). This is appropriate in the context of independently conducted experiments, research projects, science projects, and demonstrations like during bed bath demonstration to first year student in the laboratory. However, the preorganization of content is always necessary to ensure that the use of student ideas promotes the goals of the curriculum.

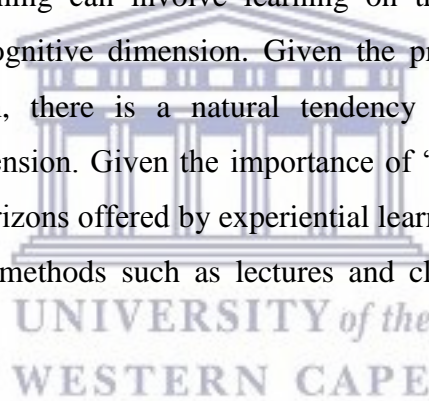
iii) **Interactive instruction** - Hokes (2011), in an exploratory study where in-depth interviews were done, emphasised that interactive teaching strategy relies heavily on discussion and sharing among participants. Nursing students can learn from peers and nurse teachers through discussion for instance, to develop social skills and abilities, to organize their thoughts, and to develop rational arguments. Role-playing, debates and group work belong to interactive instruction strategy. It is important for the nurse tutor to outline the topic, the amount of discussion time, the composition and size of the groups, and reporting or sharing techniques. Interactive instruction requires the refinement of observation, listening, interpersonal, and intervention skills and abilities by both teacher and students. The success of the interactive instruction strategy and its many methods is heavily dependent on the expertise of the nurse tutor in structuring and developing the dynamics of the group.

Interactive teaching styles incorporate a multitude of goals under one roof in education. Interactive classes are designed around a simple principle of education: Without practical application, students often fail to comprehend the depth of the study material if there is limited interaction. Interactive training styles provide four basic forms of feedback. One example of this is Measurable student accomplishments — Teachers making use of interactive teaching styles are better equipped to assess how well students master a given subject material in nursing education (Orii-Akita, 2014). Another example involves flexibility in teaching - which also focus on applying training methods that involve two-way communications. This enables the teacher to make quick adjustments in processes and approaches in the classroom or at the clinical area.

iv) **Experiential learning.** Hwang (2013) asserts that experiential learning is inductive, learner centred, and activity oriented. In this study, where 48 students were involved in inductive learning process for one semester, Hwang further commented that personalized reflection about an experience and the formulation of plans to apply learning to other contexts are critical factors in effective experiential learning. The emphasis in experiential learning is on the process of learning and not on the product of learning. It is hard to argue that experience would not lead to learning under the right nursing education conditions. However, it could be argued that the resultant learning can be fraught with errors unless care is taken to assure that those conditions occur (Gentry, 2000). While most pedagogies allow students to learn experientially to some extent, an attempt is made to distinguish those approaches which would be more likely to facilitate learning progress. Monitoring of the process by the

instructor must be included to foster positive aspects and eliminate those features that are negative. One possible concern in this strategy is whether students should have the opportunity to fail in order to learn from their mistakes. In this regard, the freedom to fail may be encouraged. On the other hand, if the experiential exercise involves a patient, failure can affect the college's reputation negatively.

Although Kolb redesigned the initial LSI in 1985 and again in 1999 to address criticisms, Kayes (2002) posits that the experiential learning strategies (ELS) over-emphasized the role of the individual while decontextualizing the learning process. Kayes argued that LSI provided only a limited accounting of many factors that influence learning. In referring to the psychodynamic level of the theory, Kayes (2002) indicates that “the experiential learning theory (ELT) does not adequately consider the context of power relations such as social status, gender, and cultural dominance. It also failed to focus on the ‘here and now’ of experience. Experiential learning can involve learning on the behavioural and affective dimensions as well as the cognitive dimension. Given the problem-solving orientation of most management education, there is a natural tendency among nursing faculties to emphasize the cognitive dimension. Given the importance of “people skills” and “technical skills” though, the broader horizons offered by experiential learning approaches (as compared to more traditional teaching methods such as lectures and class discussion) may be very beneficial in education.



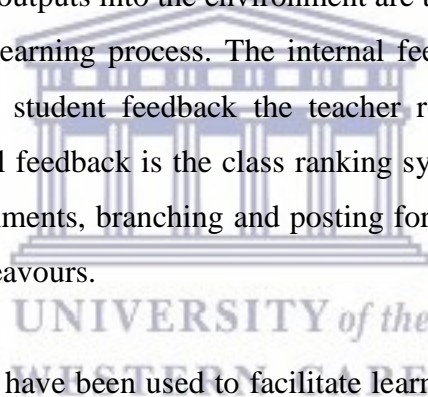
Gentry (2013) points out that feedback should be an almost continuous process from the pre-experience introduction through to the final debriefing. This includes the monitoring of the process by the instructor to foster positive aspects and eliminate those features that are negative. One possible concern in this type of teaching is whether students should have the opportunity to fail. To the extent that we learn from our errors, the freedom to fail may be encouraged. On the other hand, if the experiential exercise involves a nursing student, failure can affect the nursing college reputation negatively.

v) **Independent study** - which focuses on fostering the development of individual student's initiative, self-reliance, and self-improvement. Cox (2011) adds that while independent study may be initiated by student or teacher, the focus here is on planned independent study by students under the guidance or supervision of a classroom teacher. Such strategies include essay writing, scholarly project learning; report writing and research



projects. It also shows the usefulness of a course management system to help organize and encourage independent learning for students whether the course is distance learning based or not. It emphasizes a task-based learning approach with feedback as well a learning strategy that provides enriched content and utilizes library resources (DeLong, 2004).

Independent Learning entails that the learner, in conjunction with relevant others, can make the decisions necessary to meet the learner's own learning needs. Kesten (2013) emphasizes that independent learning is not “individualized learning nor learning in isolation. Independent learning encourages collaboration and self-motivated inquiry”. Watkin (2012) states that “... independent learning involves problem-solving, inter-personal skills, industrious activity, self-motivation, creativity, and being reflective (DeLong, 2009). The inputs from the environment are student interactions, classroom experiences, individual learning experiences, the cadet schedule and other environmental influences of extracurricular activities. The outputs into the environment are the academic products that are a result of the teaching and learning process. The internal feedback consists of the grades students earn as well as the student feedback the teacher receives through surveys and assessment tools. The external feedback is the class ranking system and opportunities that it entails such as summer assignments, branching and posting for first class cadets and student outcomes in all academic endeavours.



The above teaching strategies have been used to facilitate learning in learners in the nursing colleges. However, these teaching strategies are not utilized to the full extent due to resource limitations in Malawi Nursing Colleges such as a shortage of books, which impacts on learners as well as lecturers (Chirwa, 2007). “Teaching strategies are ways in which a teacher combines beliefs, intentions, and actions into strategic thinking, decision-making, (Pratt, Boll, and Collins 2007), and instructional practices. In addition, Pratt et al., 2007 states that “In much of the literature, there is an assumption of the generalizability for strategies that influence learning and therefore, teaching”. Strategies were believed to be only tools, with some strategies being more helpful to learning than others.

Hokes (2007) has alluded to the increased pressure to be more responsive to nursing students' and tutors' needs and more concerned about how well students are prepared through effective teaching strategies for them to assume future societal roles (Maunye, 2009). Tutors are already feeling the pressure to lecture less, to make learning environments more interactive,

to integrate technology into the learning experience, and to use collaborative effective learning strategies when appropriate (Maunye, 2009). The value in the use of various teaching strategies to the personal development of nursing students should never be underestimated (Maunye, 2009). Most nurse tutors are familiar with the teacher centred learning process which is mostly used both in class and the clinical area, particularly in Malawi Nursing Colleges. The lecture, as a teaching strategy, has been used by nurse tutors over the years, although the characteristics focus more on teacher centred strategies and the outcome has been limited and questioned by many scholars (Hoke, 2005; Maunye, 2009; Delong, 2009).

## Teaching strategies



**Figure 3.1: Teaching strategies (Delong, 2009)**

There are many teaching strategies that nurse tutors use to teach, but in Malawi literature (Chirwa, 2007; Grigulis, 2010), it has not been established which teaching strategies are effective both in class and at the clinical area.

There is limited evidence in nursing education literature that addresses the transfer of classroom knowledge to the clinical setting when active learning strategies have been used in Malawi. The absence of these studies provides little incentive for nursing faculties to expand their active learning educational expertise, for nursing education administrators to provide the extra resources needed for active learning strategies, nor for nursing students to trust that active cooperative learning will lead to success in their clinical performance (Hoke, 2005).

There are many new teaching methods or strategies that guide nursing tutors to teach the critical thinking skills necessary for the transfer and use of classroom-acquired knowledge in the clinical setting. Yet many nursing educators continue to use teacher-centred educational approaches while identifying an array of barriers for the voiced preference for student-centred education (Hokes, 2005). According to Freeth (2005), the favoured pedagogic approach of expert demonstration by tutors was followed by supported practice that necessitates attention to tutors' training in nursing colleges in USA. The muted responses of senior students signalled a need to review the Clinical Skill Centres (CSC) learning experiences offered to them. Students and tutors enjoyed learning and teaching within the CSC, although senior students were slightly muted in their views. All groups valued the supported practice of clinical and communication skills. The CSC was viewed as a learning environment that supports the linking of theory and practice. There was some ambivalence, particularly among tutors, about the relationship between performance in the CSC and in clinical areas. This suggests that teaching that is characterised by clinical learning tends to be preferred by students to improve teaching rather than lecture methods that are more commonly used. In this study it was concluded that Clinical Skills Centres (CSCs) can ease pressure on clinical skills development and assessment in clinical areas; and provide added value through experiential learning and self-directed learning to students.

The introduction of podcasts in an undergraduate research module to enhance nursing research-teaching linkages between the theoretical content and research in practice was evaluated. The aim of the podcasts was to improve the level of student support offered in a blended learning environment (Strickland et al 2012). Positive results of the podcasts suggested an increased understanding achieved by students due to the multi-modal delivery approach, a more personal student/tutor relationship leading to greater engagement, and the effective use of materials for revision and consolidation purposes. Negative effects of the podcasts centred on problems with the technology, most often relating to difficulty in

downloading and accessing the material from the internet. This paper contributes to the emerging knowledge base of podcasting in nurse education by demonstrating how podcasts can be used to enhance research-teaching linkages and raises the question why students do not exploit the opportunities for mobile learning. Therefore, nursing students can learn effectively if a new design of teaching is adopted instead of the traditional lecture method in Malawi.

According to Russell (2015) the resource capacity in nursing programmes has a direct impact on student admissions and number of graduates who enter the nursing workforce. Online delivery of nursing education is identified as a solution to expand nursing programme capacity. As nursing programmes continue to address capacity with online course delivery, it is essential that nurse educators maintain consistent evaluation practices to ensure successful and positive outcomes, compared with traditional models. Evaluation is a central component to determine programme quality and mastery of learning outcomes. This article examined the state of the science around the current evaluation of educational practices, instructional strategies, and outcomes within the context of online nursing education. Thirty-six articles met the inclusion criteria. The paper concluded that despite substantive contributions to the state of the science, the findings reflect evaluation practices that are diffuse and superficial and serve as the basis for future recommendations and research opportunities. Therefore, based on this resource capacity limitation, it is important in Malawi to determine how nurses utilize the teaching strategy, and know whether the failure in utilization is related to resource capacity in teaching.

Moreover, Worrell (2007) concurs with Hokes (2005) that increasingly complex performance and interactive needs and expanding roles in the delivery of health care require professional educational nurses to be capable critical thinkers and reinforce self-directed learning to learners. Problem-based learning (PBL) is promoted as a mean to facilitate critical thinking (CT) in nursing students attending generic and post RN baccalaureate programmes. The authors summarize and analyse nursing research and theoretical literature (1992–2005) related to four key topic areas: critical thinking, nursing education, PBL, and post RN education, to determine what is known about the impact of PBL on CT among post RN students. CINAHL, ERIC, Medline and Psych INFO databases were searched and based on the literature retrieved, there is no strong research evidence to suggest changes occur in baccalaureate nursing students' CT during their educational programmes, including those

using PBL. This paper concludes by saying there is a need for additional research and ongoing development of valid and reliable instruments to measure CT in nurses to guide teaching and learning strategies that effectively facilitate CT among nursing students. Therefore, the problem of critical thinking was part of the reason for the poor utilization of teaching strategies that caused limited nurse tutor performance in Malawi nursing colleges and was yet to be assessed.

### **3.3 NURSE TUTOR-STUDENT INTERACTIONS**

At the heart of contemporary nursing educational thinking lies the notion of student centeredness. Within a student-centred approach to learning and teaching, the traditional role and responsibility of both learner and nurse tutor is interactively changed. The adult learner, rather than being a passive recipient of expert content knowledge, actively constructs meaning through interactions and is responsible for taking advantage of learning opportunities or activities. The teacher, rather than merely transmitting knowledge, facilitates or mediates the learning through interactions, taking responsibility for creating and maintaining the conditions and interactions that make understanding possible (Ramsden, 2002; Laurillard, 2003; O`Grady, 2012). There is a belief that nursing students have always been encouraged to actively participate and be self-directed learners, and that the teachers have always endeavoured to structure learning experiences. This is the main area that was lacking core status evaluation in Malawi.

According to Turmond (2007) there must be a real interaction with nursing learners, the nurse instructors, and the technology results in a reciprocal exchange of information. The exchange of nursing professional information is intended to enhance knowledge development in the learning environment. In this study, where group discussion was the main teaching strategy used, it was noted that depending on the nature of the course content, the reciprocal exchange may be absent – such as in the case of paper printed content. Ultimately, the goal of interaction is to increase understanding of the course content or mastery of the defined goals both in class and at the clinical area. Moreover, the teacher cannot teach effectively and the examination results tend to hamper student progress if interaction is not effective in class during teaching. It was therefore, very important to understand the level of interactions among nurse tutors in Malawi.

Furthermore, Turmond (2007) distinguishes between interaction and interactivity. Interactions “occur when objects and events mutually influence one another. Interactivity appears to emerge from descriptions of technology for establishing connections from point to point, “in real time”. Interactivity therefore involves the technology used in learning, while interactions describe behaviours of individuals and groups. Therefore, nurse tutor interaction with students must be on the same theme or objective and focus on the same academic education or social education event. If the interaction is not the same event, then conflict might exist which entirely jeopardizes the learning process of students.

One barrier to interacting with the course content in nursing education is the lack of time to participate in coursework by both the nurse educator and nursing students. Atack and Rankin (2002) collected data from 57 nurse participants and reported that one of the greatest obstacles to learning in the online environment was the lack of time available to devote to the course content by nurse educators. The participants reported that they did not have time to access the content at work, indicating that their work environment probably was not an ideal environment for learner-content interactions. The issue of lack of time extended to the home environment because participants had to compete with others to access their computer at home. Time constraints affected the progress of teaching and learning.

The interaction that transpires between students and faculty is intended to help reinforce student understanding of the material or elucidate meaning. Interacting with instructors can help students clarify nebulous points and reinforce correct interpretation of course information. In the traditional classroom setting, learner-instructor interaction can often occur in a face-to-face, physical meeting. In the Web-based course, this type of interaction is limited to electronic transmissions, such as chat discussions or e-mail communications (Turmond, 2007). In Malawi, most of the interaction that nurse tutors do is through face-to-face and physical meeting, as there is limited access to web-based courses. But whether there was indeed correct interpretation with regard to the information is not yet known in these nursing colleges.

Restauri (2001) concludes that the face-to-face factor in their study was found to be unimportant and students’ interaction needs in the online environment were more dependent on frequency and personalized contact. Furthermore, a high frequency of private e-mail communication between student and instructor has been identified as a strong predictor for

higher student grades. In contrast, Beard and Harper (2002) report that students and instructors were concerned about the lack of learner-instructor interaction in a class that was delivered both in the traditional and Web-based format.

Poor interpersonal relationships of students and amongst the ward sisters themselves was a cause of concern to student nurses in South Africa, as they found themselves not knowing who to report to or side with, and when they had problems, they were shifted from one supervisor to another (Mabuda, 2008). Lack of communication amongst ward sisters frustrated student nurses and impacted negatively on their practical experiences, since communication is a fundamental component of nursing practice. However, student nurses indicated that they felt good if the ward sisters were approachable, helpful and friendly. Lack of effective communication between the college tutors and the ward sisters also contributed to the negative experiences of the student nurses, particularly during placement in hospital settings as the college tutors were not communicating effectively with the ward sisters. This has not been evaluated among the students and ward sisters in the wards in Malawi. Knowing the relationship among students and ward sister could motivate nurse tutors to entrust the ward sisters with the clinical teaching responsibilities.

Vrasidas and McIsaac (1999) and Maduda (2008) focused on interactions among students and between students and instructors in a graduate course. The course was structured to include both face-to-face and online sessions. Through observations, tape recordings, and semi-structured interviews, the researchers reported that the qualitative data indicated several major factors influencing interactions. Among the major influencing factors was receiving prompt feedback. When students perceived that instructors did not respond in a timely manner, they felt discouraged and limited their participation. The only difference between these two studies was that Maduba (2008) in South Africa did not record the conversation of the students and the instructor. It was then concluded that lack of timely feedback can result in learners' ambiguity about their performance in the courses and could contribute to their frustration. Therefore, instructors need to provide students with timely interactive feedback to keep them engaged in the learning process.

Fredericksen et al (2000) and Restairri et al (2001) concur that a positive relationship between reported levels of interaction with the nurse educators and levels of perceived learning affect students' progress in colleges. Data from this study came from students

enrolled in an asynchronous nursing course. This relationship was significant because those students who felt they did not have adequate access to their instructors tended to feel that they learned less and did not achieve the goals set before embarking on the learning process. The finding supports the need for nursing faculty staff to have frequent, constructive communication with nursing students (Restauro et al., 2001). Other researchers have also reported a positive relationship between students' levels of interaction with other students and perceived levels of learning (Fredericksen et al., 2000). However, whether in Malawi colleges there is also a positive or negative relationship between the nurse educators and the nursing students is yet to be established.

Gardner (2010), through auto-ethnographic research, found an effective approach to explore educational encounters as a means to develop both interactive teaching and nursing practice. The personal tutor/student relationship can be viewed as a parallel process developing alongside student nurse encounters with service users in practice. The roles and relationships explored extend beyond tutor and student boundaries and have relevance to nurse and service-user encounters, which is demonstrated using particular frameworks for the analysis of our auto-ethnographic account. If there are strict relationships between students and nurse tutors, learning is mostly not effective. It is therefore important for nurse tutors in Malawi to determine their level of interaction with the students. This could help to quantify the quality of the interaction between them and illustrate the quality of education in the country.

Achieving a synthesized understanding of these nursing tutor interactions with student studies is difficult for two reasons: firstly, the populations used in these studies are not consistent and secondly, there is a lack of clear and consistent definition of terms in the classroom and clinical interaction. With these limitations in mind, these studies together present interpersonal skills, nursing competence and evaluation practices as most important characteristics of effective clinical nurse teachers. They suggest that teaching ability is moderately important and that personal dimensions of nurse teachers are the least important characteristic (Gillespie, 2002; Hoke, 2005; Kosir, 2007). Consequently, these studies fail to capture the teachers' relationship with students. There has been much conjecture regarding the positive effect of the student-teacher relationship on students' learning experiences. The reconceptualised relationship has been suggested as boosting students' self-confidence in the clinical area. None of these studies has captured the magnitude of the interaction both in class and in the clinical area for comparison.



Drawing on literature from educational philosophy and the work of Levinas, it was argued that the conceptualisation of the ethics of interaction and marketing in nursing education cannot be divorced from the question of pedagogy and the responsibilities of the nurse tutor. Whilst current approaches to teaching in nursing would provide nursing students with a prescribed set of knowledge and skills during interaction, it might by the same token exclude the moral education that seems to be necessary. The significance of the teaching strategies in an atmosphere punctuated with the discourses of economic crisis was acknowledged (Brenan, 2010; Ross, 2011). Therefore, a reappraisal of the tutor/student interaction in nursing education was called for in order to facilitate a greater understanding of how nursing students could make sense of themselves and of “the other”. This research concluded that the requirements of the capable moral educator offer initial practical suggestions on how models could be incorporated within teaching strategies. However, the process of teaching in Malawi has no academic and scientific evidence that the teaching strategies are based on any moral model of interactions in nursing colleges and that nurse tutors’ interactive behaviour could impact the student learning process.

A dialogic tutor-student relationship is important for learning intercultural sensitivity. Tutoring strategies that are based on reciprocal interaction should be developed to assist students' adjustment to the differences in the host culture and to encourage their reflection on personal, experiential and scientific cultural knowledge during their study abroad. In this study, the data consisted of tutorial session observations, research diary notes, group interviews and background questionnaires. They were analysed using Spradley's developmental research sequence method for ethnographic data. The tutoring relationship was pastoral and clinical rather than academic. The pastoral aspect of the relationship was essential in assisting the students to adjust to the stress of studying in a foreign country (Koskinen, 2003). On the other hand, tutors were unable to support all the students to overcome their culture shock. Tutors were uncertain about their interaction role and did not integrate Finnish culture or practice in theory but found their role agreeable. Therefore, there was a need to expound the tutor student relationship in Malawi regarding their levels of stress when utilizing the teaching strategies.

The evidence of stress for most of the local nursing students in Malawi is not yet known during learning both in class and at the clinical area. Furthermore, student exchange has been

used increasingly in nursing education throughout Europe as a method of learning intercultural interactive sensitivity. In the host country where the research was based, each foreign student was assigned a personal tutor to enhance interaction learning in nurse colleges. In this study, the data consisted of tutorial session observations, research diary notes, group interviews and background questionnaires. They were analysed using Spradley's developmental research sequence method for ethnographic data. A dialogic tutor-student relationship is important for learning intercultural sensitivity. To this effect, therefore, in nursing education, effective teaching strategies should be developed to assist students' adjustment to the differences in the host culture and to encourage their reflection on personal, experiential and scientific cultural knowledge during their study abroad.

In another study in Europe where lived experiences of the 'support' interactions between students and their personal tutors was investigated in nursing colleges, the tutees varied in their readiness to learn, define, discuss and negotiate support. Positive encounters were experienced when the tutees felt supported (Dobinson, 2006). Tutors had an overwhelming feeling of frustration when tutees lacked study skills and came unprepared to tutorials. However, some tutors indicated a high level of empathic understanding for tutees and spent much of their personal time supporting them. The study illuminated the complexity and skills required to be a student and a tutor. Tutors' individual support style reflected students' expectations and perceptions to varying degrees. A positive experience by students and tutors was perceived when each had a shared understanding of the support concept. Mutual trust, engagement, respect and accepting responsibilities were important elements of the personal tutor and tutee relationship. This could also be a formal expectation for nurse tutors and students in Malawi although there is no scientific evidence.

It is important to classify and know the extent to which nurse tutors' and students' interactive challenges affect learning in nursing colleges both in class and at the clinical area. Measuring the standardized interactions and coming up with agreed interaction attributes during learning both in class and at the clinical area for nurse tutors can promote nursing education not only in Malawi but in the profession.

### 3.4 COMPETENCE OF NURSE TUTORS

The competency-based approach to education, training and assessment has surfaced as a key policy in many nations. Following the transition of nurse preparation to the higher education sector, the need to attenuate the tension of interests between employer and educator competences arose. While the competency-based approach has the potential to fulfil this, the application of competence to nursing is controversial and little consensus exists on definition and characteristics. Following a focused review of literature, Cowan (2007), discovered the problems inherent to the definition and utilization of the concept of nursing competence. Because nursing requires complex combinations of knowledge, performance, skills and attitudes, a holistic definition of competence needed to be agreed upon and operationalized. This facilitated greater acceptance of the concept and underpinned the development of competency standards and the tools required for the assessment. However, the assessment of tutors needs on competence and the characteristics that involve acceptable nursing competence in Malawi have not been done at national level in Malawi nursing colleges.

The definition of competence in nursing is open to debate, for some it is an objective concept that can be measured in terms of knowledge, skills and attitudes; while for others it is more than the performance of skills, it is the intuitive grasp of care situations underpinned by deep understanding and experience of the nurses (Redfern et al., 2002).

Current competence assessment methods measure only a quarter of the nurse's competence levels as they focus on skills and not knowledge in nursing colleges (Santy & Mackintosh, 2000). Those advocating alternative assessment strategies suggest that using an assessment in competence needs in Nursing colleges in which there is a reflective component can provide a tangible bridge between theory and practice by linking the knowledge student's gain through clinical experience with the knowledge they gain in the classroom (Klenowski, 2002; Pearce, 2003). Some authorities suggest that if the content of the assessment demonstrates personal development it can be claimed that the assessment is sufficient evidence of competence, while others suggest that where professional practice and public accountability are concerned, such a collection of material on its own is not evidence enough in nursing education (Macready, 2007).

In legal terms, *competency* refers to an individual who exhibits the ability to act prudently in given circumstances, including the ability to perform a job or an occupation, or to reason or make decisions. The meanings of competency are varied and include the ability of a person to perform a job (Axley, 2008); skills that are developed in a pattern (Bradley & Huseman, 2003); and a behaviour or series of actions that can be demonstrated, observed, and assessed (Manley & Garbett, 2000; Axley, 2008). More specifically, competencies have also been referred to as “core competencies”

Applin (2011) pointed out that competence is essential to ensuring safe, ethical and legal nursing practice. Various teaching strategies are used in nursing education to enhance graduate nurse competence by bridging the gap between theory learned in the classroom and professional practice as a nurse. The objective of this comparative descriptive research was to determine if there was a difference in self-reported competence between graduates from Problem Based Learning (PBL) and Non-Problem Based Learning (NPBL) in nursing programmes. A sample group of 121 graduate nurses in one Canadian province, who had been practicing for at least 6 months, took part in the study. The researcher designed a questionnaire which included both closed ended and open-ended questions. There was no statistically significant difference between the PBL and NPBL graduates on self-reported entry-to-practice competence. However, several significant themes did emerge from the answers to open ended questions which asked graduates how their nursing programmes prepared them to meet the entry-to-practice competencies and what programme improvements they might suggest. Unlike the NPBL graduates, the PBL graduates identified the structure and process of their programmes as instrumental in their preparation to meet the entry-to-practice competencies. PBL graduates associated their abilities to think critically and engage in self-directed evidence-based practice as key to enabling them to meet the competencies. A common theme for programme improvement for both PBL and NPBL graduates was a request for more clinical time. This could be the same in Malawi nursing colleges where PBL is used.

Regardless of specialty, as a nurse educator and practitioner gains experience, his/her practice may include more advanced and additional skills and knowledge not included in these entry-level competencies. In addition, as the nurse practitioner gains experience, the settings or role in which she or he practices may differ from those described for the entry-level practitioner.

For each primary care specialty, one competency identifies a minimal set of primary care procedures that graduates in that specialty are expected to perform.

Entry-level nurse practitioners should have practical experience in performing the identified primary care procedures whether through direct application or simulated experiences. The graduate would not, however, achieved the level of proficiency in performing these procedures that comes from years of direct clinical application. Further, the primary care procedures identified for each specialty are a minimum set; the entry-level nurse practitioner may have experience in performing other procedures that classify as a competence as determined by his/her academic programme and clinical experiences (AACN, 2002). It is therefore, very importance to classify the competences of nurses both in the classroom and at the clinical area.

A literature review article found insufficient evidence to suggest that medication errors are caused by nurses' poor calculation skills as an ability competence. Of the 33 studies reviewed, only five articles specifically recorded information relating to calculation errors and only two of these detected errors using the direct observational approach (Wright, 2010). The literature suggests that there are other more pressing aspects of nurses' preparation and administration of medications which contribute to medication errors in practice that require more urgent attention and call into question the current focus on calculation and numeracy skills of pre-registration and qualified nurses (NMC 2008).

However, more research is required into the calculation errors in practice. There is a need for a direct observational study on paediatric nurses as this area of practice has not been examined. In this review, there were no studies that examined nurses' drug calculation errors in practice. As a result, studies and systematic reviews that investigated the types and causes of drug errors were examined to establish whether miscalculations by nurses were the causes of errors and influence incompetence. It is therefore important for nurse tutors to know the extent of incompetence of clinical students and staff during provision of nursing care to patients. This can promote quality nursing care if correctly classified, monitored and controlled.

From 1923-1977, mandatory-nursing syllabuses set by the General Nursing Council of England and Wales required registered nurses to have acquired certain specific clinical skills

as a mode of assessing competence. These were rigorously tested to a specific standard set by the General Nursing Council before a nurse was awarded state registration. Twenty-five years later, the loss of this system for ensuring this competence and the implications of this loss have been widely recognized (Bradshaw, 2008; Hoke, 2011). As a result, many nurse-training institutions have introduced clinical skills laboratories, simulation of practice and the Objective Structured Clinical Examination (OSCE) as new models of nurturing competences in nursing education. However, contrary to their initial expectations, the Nursing and Midwifery Council has not made these systems uniform or mandatory and so still has no way of ensuring all nurse training produces safe nurses in the United Kingdom. The authors conclude that the untested educational ideology that brought wholesale changes to nurse training in 1983 and which failed to produce nurses 'fit for practice and purpose' may still prevail in England and Wales in many years to come (Bradshaw, 2008).

Competency is essential to the profession of nursing and providing a clear theoretical definition of competency is only the first step. The competency of all nurses and healthcare providers must be assessed to provide safe care, protect the public, and maintain the credibility of nurses in education. Standards must be established and adhered to both in education, practice and evaluation of competency (Axley, 2008). Competency in nursing has a direct influence on the health and safety of all patients. Quality care can only be accomplished if the providers are deemed competent to provide the best possible standard of care. Unfortunately, the absence of competency may lead to serious nursing care errors, resulting in serious consequences for the patient. It is evident that a major limitation for nursing is the ability to measure competency and have assurance that patients and families are receiving care that is safe and that adheres to the established professional standards (Axley, 2008). As competency standards are developed, it is therefore, important for the stakeholders to consider how evaluation and measurement will be implemented and validated. Ongoing development and testing are necessary in order to establish both reliability and validity of competency measurement both in classroom and in the clinical area in nursing education.

Axley (2008) concurs with AACN (2002) that preparing nurses to practice in the 21st century requires a commitment of all educators to recognize the inherent importance of competency in the practice of nursing. Educational strategies and student evaluation must include a focus on competency. Nursing students must recognize from the outset the importance of scientific knowledge, accountability for actions, adherence to established standards, and the

interpersonal responsibility associated with the development of competency. The Nurse Council of Malawi (2010) also added that educators should demonstrate competency in their own practice and make students aware of the life-long learning required to maintain competency. In addition, students should be evaluated in a way that recognizes how and when their competency is being measured. Doing this provides opportunities for problem solving skills collaboration and exploration on resources needed to develop and maintain competency. This study, therefore, aims to measure competence in education of nurses in Malawi nursing colleges based of the set standards by the nurse council of Malawi to contribute to this knowledge.

Bradshaw (2000) argues that there was previously too much professional freedom in defining nursing competence. For example, nurses, in creating and utilising opportunities to promote the health and well-being of patients, were left to decide when to seek specialist/expert advice as they deemed appropriate (NMC, 2002). Accordingly, Bradshaw (2000) argues further that there is no agreed consensus by which nurses can judge what they know, what they should know and what they do not know. Indeed, competence is a poorly defined concept and its measurement is even more problematic. Despite noting a possible prejudice, competence must have specific attributes that are agreed upon in the profession that maximise the definition. It is therefore important to have Malawian nurse tutor attributes that define professionally the concept of competence in nursing education, hence the need for this study.

The professional teaching competence of nurse preceptors was seen to be monitored regularly in China. However, the existing instruments that are designed to measure professional nurse teaching competency seldom examine updated indicators such as inter-professional practice (IPP) and evidence-based practice in China (Shu, 2014). This study constructs indicators for assessing the teaching competence of the nurse preceptor. Phase I used a literature review to identify appropriate indicators of nurse preceptor teaching competence. Phase II conducted focus-group interviews with 10 nurse preceptors and 6 new nurses from a teaching hospital in southern Taiwan. Content analysis was used to construct a preliminary framework of indicators. Phase III invited 15 experts to evaluate the content validity of the preliminary indicators in two rounds using the Delphi method in measuring competence attributes. The teaching-related competence of nurse comprises 36 items in the five dimensions of passionate commitment to teaching, harmonious learning atmosphere, inductive teaching skills, objective feedback and evaluation, and inter-professional practice. It was concluded that the

indicators developed in this study may be used by nurse preceptors to examine their teaching abilities and by healthcare institutions to design preceptor training curricula. Therefore, it is also necessary to develop indicators of competence in nursing education in Malawi for nurse tutors.

### **3.5 PERFORMANCE OF NURSE TUTORS**

The way in which performance in nursing and midwifery is managed and measured is of concern to individual practitioners, managers, employing organizations, nursing educators and patients. Most nurses and other health care practitioners in Malawi do not measure nurse performance correctly. Performance is a reference to the nursing knowledge, skill or judgment possessed and applied by the nurse and/or midwife in the practice of nursing and/or midwifery (Nurses Midwife Council of Malawi- NMCM, 2011). The professional performance of a nurse and/or midwife is unsatisfactory if it is below the standard reasonably expected of a nurse and/or midwife of an equivalent level of training or experience.

The fact is that nurses spend more time with patients than do any other health care providers and patient perceptions are affected by nursing care quality. Thus, improvements in patient safety can be achieved by improving nurse tutor cognitive, affective and psychomotor performances. A review of literature on nursing performance, including cognitive, physical, and organizational factors that affect such performance, focusing on research studies that reported original data from nurse participants was conducted (Delucia, 2009). The nurse's work system often does not accommodate human limits and capabilities and nurses work under cognitive, perceptual, and physical overloads. Nurses engage in multiple tasks under cognitive load, and they encounter insufficient lighting, illegible handwriting, and poorly designed labels in psychomotor capabilities. They spend a substantial amount of time walking, work long shifts, and experience a high rate of musculoskeletal disorders. Research is overdue in the areas of cognitive processes in nursing, effects attribute of nursing performance, communications during patient handovers, and situational awareness in nursing. Human factors and ergonomics (HF/E) professionals must play a key role in redesigning a nurses' work system to determine how performance overloads can be reduced and how the limits and capabilities of performance can be accommodated. Collaboration between nurses and other health care specialists is essential to improve nursing performance and patient



safety. Therefore, knowing the cognitive, affective and psychomotor performance attributes of nurse tutors and students in the clinical area could help improve of their services.

According to Richman (2010) in Kings College of Nursing, presently ascertaining an accurate picture of how many nurses are “poorly performing” is impossible as there is no effective requirement by the NHS or other organizations to report cases of suspension to the DH. There is little collaboration of evidence relating to different performance concerns regarding nurses and midwives. Many such incidents are dealt with by the individual’s employer, yet despite a voluntary reporting system, there is little available evidence which documents the scale of the problem. A National Audit Office report is the only major national study on this topic in Wales. The study found that between April 2001 and July 2002, 562 nurses and midwives were suspended for at least one month; equating to 53% of all NHS staff suspensions. Nurses were more likely to be formally suspended than doctors; their average length of suspension was nineteen weeks with only a small proportion then referred to the National and Midwives Council. Such poor performance without proper record, might also affect Malawi Nursing College nursing staff, although Malawi cannot be compared with the United Kingdom in terms of educational development and infrastructure.

Moreover, several recent high-profile cases of poor practice in nursing, both individual and institutional, have highlighted the importance of managing and learning from poor performance. Scholars have recently defined poor performance as: “any aspects of a practitioner’s cognitive, affective and psychomotor performance or conduct which: pose a threat or potential threat to patient safety; expose services to financial or other substantial risk; undermine the reputation or efficiency of services in some significant way; are outside acceptable practice guidelines and standards” However, this definition has yet to be evaluated against practice and the extent to which it proves to be a robust and shared definition of poor performance, necessary to assess how to best manage and improve practice, is unknown. Whilst current guidelines define poor performance primarily in relation to patient safety and risk, in practice fewer than 20% of nurses were suspended for professional incompetency reasons in nursing education (Richman, 2010). Professional and personal conduct comprised most of cases (65%). Exclusions where patient safety is an issue was uncommon and complaints from colleagues (rather than patients) was the highest reason for referral for performance management.

There is considerable variation in procedures and in quality management of performance between trusts in nursing education. Eighty-six per cent of trusts carried out initial investigations on clinicians, but the quality and rigour of investigations was variable. Two thirds who used DH guidance felt it was of little use and resulting local procedures were open to interpretation and widespread inconsistency. Inconsistency regarding suspensions of nurses was noted and immediate exclusion, for reasons other than patient safety, was common. Managers often used suspension and exclusion as a tool of first choice and approach to poor cognitive, affective and psychomotor performance, which were often punitive despite the lack of efficacy of this approach to improve performance. Furthermore, nurses are not always aware of reasons behind the decision and documentation is poor. The evidence also suggests that clinicians who perform below standard are not properly admonished (Malawi Nurses Council, 2010).

Along with the critical need for more nurses to address the current shortage, there is a need for more nurses to be educated at the baccalaureate level. By 2000, only 32 percent of America's nurses had baccalaureate degrees, and 10 percent had master's level preparation or higher. The national advisory Council on Nurse Education and Practice recommended that by the year 2010, at least two thirds of all RNs should have obtained BSN degrees or higher. An investigation by Ehrenfeld, et al (2005) on causes for student attrition in a baccalaureate programme revealed that the highest attrition rate (82.3 percent) occurred within the first year of the programme due to poor performance. To help reduce attrition, a tutoring programme was developed for first semester students. This article reports on a study focused on the first semester of a baccalaureate nursing programme. Voluntary tutoring designed to address adult learning barriers was offered to students enrolled in the pathophysiology and Pharmacology courses. The effects of tutoring services and the potential influence of prerequisite science course grades on first semester academic performance were examined. It was noted that the cognitive, affective and psychomotor performance of nurse tutors must be measured to improve the standard of nursing education in the country. To this effect, Malawi nurse tutors too need to be assessed on how they are performing in the classroom and at the clinical area.

The influence on academic performance and needs of nurse tutors were also assessed among nurse educators in Norway. The purpose of the study was to evaluate the relationship of a prerequisite science course performance and tutoring services with academic performance of first semester nursing students (Potolsky et al, 2003). Quantitative data were gathered from

student records after a semester in which tutoring services were offered. The convenience sample consisted of 37 students enrolled in first semester nursing courses. Influence on academic performance was determined by comparing the academic performance of two groups, students who attended four or fewer tutorial sessions and students who attended five or more tutorial sessions. Previous academic performance was shown to have a statistically significant relationship with first semester nursing school performance. With this in mind, the nurse tutors and students' academic needs focussing on the cognitive, affective and psychomotor performance is yet to be determined in Malawi nursing colleges.

A longitudinal, quasi-experimental study conducted by Angel (2000) with 142 junior nursing students focused on the measurement of performance learning outcomes in two areas: acquisition of knowledge and development of critical thinking skills. The variation in clinical teaching strategy (structured versus unstructured health pattern assessment) was the independent variable (Angel, 2000). Results indicated significant gains in both knowledge and critical thinking performance from the beginning to the end of the semester. The significant gains in critical thinking performance provides support to the assertion that domain-specific measures of critical thinking are needed in nursing education. Additionally, results suggested that it was the interaction between learning strategy and the characteristics of the learner that was more significant in determining knowledge improvement than the particular strategy. Pursuant to this study, it was recommended that faculty develop and use an evidence-based model to support their decision-making regarding teaching methodologies. This seems especially relevant for large, introductory clinical courses that use team teaching to achieve educational goals related to improvement in critical thinking or knowledge. Therefore, based on these results, a question remains; would the ADDIE model be a realistic model to develop a new strategy in nursing education in Malawi?

Interest in Student Growth Modelling (SGM) and Value-Added Modelling (VAM) arose from nursing educators concerned with measuring the effectiveness of teaching and other school activities through changes in student cognitive, affective and psychomotor performance as a companion and perhaps even an alternative to status (Schafer et al, 2012). Several formal statistical models have been proposed for year-on-year growth and these fall into at least three clusters: simple change (e.g., differences on a vertical scale), residual change (e.g., simple linear or quantile regression techniques), and value tables (varying salience of different achievement level outcomes across two years). Several of these methods

have been implemented by states and districts in USA. Thus, in this paper, where they evaluate teachers and schools using student growth models; under practical assessment, research and evaluation, they reviewed relevant literature and report results of a data-based comparison of six basic SGM models that permitted aggregating across teachers or schools to provide evaluative information. The investigation raised some issues that compromised current efforts to implement VAM in teacher and nursing school evaluations and made suggestions for both practice and research based on the results. It is therefore important to come up with a value-added model for nurse tutors in Malawi nursing colleges that would improve the cognitive, affective and psychomotor performance of the nurse tutors.

Attention is the most powerful asset of human beings, and if correctly used, it can have numerous benefits. At the same time, it is difficult to master. A descriptive survey was conducted to assess the impact of teaching time, i.e. classes for two hours, on the attention and concentration span of student nurses (Lamba et al, 2014). The study was conducted in selected College of Nursing in Dehradun and Uttarakhand in India. Ninety-one student nurses were randomly selected. Data was collected through a self-reported checklist. Forty-five percent of students were from the GNM group and 55% were from the B.Sc. group. Results showed that 44% of the students had good attention and concentration, 46% had an average attention and concentration and 10% had poor attention and concentration scores during the teaching - learning activities. It was concluded that attention span of the students depends on the performance of the nurse tutors. If the nurse tutors' performance in teaching is poor, the attention span of the students tends to decrease. This could be the same for nurse tutors and students in Malawi nursing colleges, where their attention span has not been assessed in terms of performance.

The Nursing profession requires knowledge of ethics to guide performance both in class and at the clinical area. The nature of this profession necessitates ethical care more than routine care. Today, a worldwide definition of professional ethic code exists based on human and ethical issues in the communication between nurse and patient. To improve all dimensions of nursing, there is need to respect ethic codes (Mohajjel-Aghdam et al, 2013). The aim of this study was to assess knowledge and performance about nursing ethic codes from nurses' and patients' perspective. A descriptive study was conducted on 345 nurses and 500 inpatients in six teaching hospitals of Tabriz in 2012. To investigate nurses' knowledge and performance, data were collected by using structured questionnaires. Statistical analysis was done using

descriptive and analytic statistics, independent t-test and ANOVA and Pearson correlation coefficient, in SPSS version 13. Nurses' and patients' perspective about ethic codes differed significantly. A significant relationship was noted between nurses' knowledge of ethic codes and job satisfaction and complaints of ethical performance. According to the results, consideration to teaching ethic codes in nursing curriculum for student and continuous education for staff was proposed, while at the same time recognizing failures of the health system, optimizing nursing care, informing patients about nursing ethic codes, promoting patient rights and achieving patient satisfaction was seen to minimize the differences between the two perspectives on performance.

### **3.6 MALAWI GOVERNMENT RESPONSE ON NURSING EDUCATION**

In response to this critical shortage of nurses and poor teaching processes, the government of Malawi has been working tirelessly to train more nursing students to fill the existing vacancies, improve the level of competency, and achieve a better performance in nursing care. According to MOH (2010), the government sponsors more than 3,500 new students every year across all 17 nursing colleges in the country. It is responsible for the annual disbursement of funds to the colleges to facilitate teaching and learning. Despite this effort by the government, the country is still experiencing staffing problems at health care facilities. For instance, the WHO (2010), in its annual report for non-developed countries, shows that there were only 2 physicians and 38 nurses for every 100,000 people in Malawi and the unfilled vacancy rate for nurses at national level increased to 74%.

In trying to solve this problem, the government, in conjunction with its development partners, implemented a 5-pronged 6-year Emergency Human Resource Work plan from 2005-2010 which included a 52% salary top up to 11 groups of health professionals, including nurses. This resulted in a 50% increase in the health work force and increased enrolment in nursing training institutions. However, funding has been a difficult issue, which has caused most of the colleges to remain closed or operate with limited teaching resources.

Ten years after government realized the need for more nurses and the above shortcomings, it again increased funding for nursing colleges. This has caused the students intake to double or treble. For example, the Kamuzu College of Nursing intake has more than trebled from 60 students per year in 2008 to 200 students per year in 2012 (Ngalande, 2012).

Through this plan, the government has trained more than 6,000 new health workers since 2004, many of which are nurses. There are now 1.44 health workers per 1,000 people in Malawi, up from only 0.87 per 1,000 in 2002, thus representing a 66% increase over that period. Despite these efforts, there is still a shortage of health workers in most health facilities of the country. The shortage of qualified health care professionals poses a barrier to equitable access to health services.

Although there are efforts to increase nursing intake, the quality of education being offered has not been adequately assessed. To consolidate government efforts on nursing education, several non-governmental organizations (NGOs) are supporting nursing education services. Government nurse graduate employees are being seconded to CHAM nursing institutions as tutors. However, there has been a challenge regarding the lack of promotion prospects until they return to government service (Caffrey, 2006). The monetary incentives are perceived as an entitlement and no longer serve their initial purpose of teaching.

### **3.7 CHAM NURSING COLLEGES**

Nursing education in the CHAM colleges constitutes a considerable part of the education of nurses in Malawi (CHAM, 2015). The programme offered by the 12 CHAM colleges is a 3-year nursing education programme leading to a Diploma in Nursing Midwifery Technician (NMT). This has produced 65% of nurses since the colonial era in Malawi (CHAM, 2009). The NMT programme is presented in a syllabus, endorsed by the Nurses and Midwives Council of Malawi (NMCW). These colleges are solely monitored and controlled by CHAM Secretariat. These are the colleges where tutors are posted by Government and work after completing their sponsored Bachelor of Science degree in nursing education in the universities mentioned above. The syllabus for the nurse technicians contains general philosophy and programme objectives for the NMT-programme, as well as rules, regulations and requirements for the current programme. The syllabus also presents and suggests specific objectives and content for all 25 courses in the NMT programme. However, the syllabus does not limit the use of teaching strategies. This is left for the tutors to decide creatively. However, it is assumed that all tutors that are posted to the schools have adequate knowledge of the teaching strategies.

In the 1990s there was great concern over low nursing/midwifery tutor retention rates in Malawi. In 1997, the MoH instituted a salary supplement scheme, funded by overseas donor organizations for CHAM nursing colleges. The scheme had a positive effect on tutor numbers in the 12 CHAM training institutions, which increased from 43 in 2000 to 100 in 2006. With approximately 500 students enrolling per year for a 3-year course, this represents a ratio of 1 tutor per 15 students, which is above the MoH target tutor student ratio of 1:10. Furthermore, the overall ratio does not take cognisance of the reality that some classes have between 50 and 200 students. This is particularly the case in the faith-based nursing colleges in the country.

The faith-based organizations that are members of CHAM operate 10 nurse-training institutions, whose graduates represent 80% to 90% of the public and private nurse workforce in rural areas. The shortage of nurse tutors in the late 1990s brought several CHAM training institutions to the verge of closing. As a result, the MOH instituted a salary supplement scheme to attract and retain nurse tutors in the colleges (NCM, 2014).

Ministry of Health Annual Report (2005) noted that all nurse CHAM training institutions have remained open since 2000. The number of nurse tutor and clinical instructor posts has increased and remains relatively stable. As of September 2005, there were 71 tutors and 22 assistant tutors across the ten nurse technician training institutions operated by members of CHAM compared to 39 tutors and 12 assistant tutors in 2000. Nurses Council of Malawi (NCM), however, closed two institutions in 2009 because of the critical shortage of nurse tutors in the colleges. Most of the current qualified nurse tutors have undergone a teaching strategy refresher course monitored by the nurses' council of Malawi. By 2014, there were 178 nurse tutors from 10 CHAM nursing colleges, representing an increase of 53% from the 2012 census of nurse tutors (NCM, 2014). However, the quality of the nurse tutors has not been determined in terms of their competences performance and challenges of their interactions with the students. These areas would affect their delivery of the curriculum through numerous teaching strategies.

Determining the quality of student learning and tutors' performance is an ongoing challenge to all nursing educators. However, for tutors and students in the health profession, evaluation

of learning takes on a different dimension in terms of ensuring that graduates are competent, and thus safe, practitioners.

Clinical skills underpin nurses' professional practice, thus student nurses need effective opportunities to acquire, develop and master these skills in Malawi (WHO, 2010:p9). Enabling practical skills development is a key dimension of nurse education (Carlisle, 2009:p71). This is because patient education must be both formal and informal and utilise different teaching strategies. Thus, in CHAM colleges, students acquire these skills in class from their tutors as role models in teaching. This poses a challenge to nurse tutors, particularly in ensuring that the integration of theory and practice occurs within both the practice and academic settings.

Objective Structured Clinical Evaluation (OSCE) is one of the approaches that have been used for evaluation in most CHAM nursing colleges to meet these challenges for nurses in the clinical settings. This is a mode of monitoring student clinical performance that tutors undertake as part of student assessment measures. This approach has not been widely utilized nor evaluated in nursing colleges for student nurse education within Malawi (Munkhondya, 2014). Munkhondya (2014) adds that over the past ten years, Kamuzu College of Nursing (KCN) has adopted the use of OSCE in the assessment of student's attainment of clinical competences for the undergraduate nursing programme. The conduct of OSCE has varied from year to year and is continuously being informed by each preceding year. However, OSCE is not used as a sole assessment strategy for student's clinical competences. To ensure reliability and validity of OSCE, other assessment strategies are used, these include portfolios and case studies.

Tutors have access to a variety of courses to improve teaching skills and knowledge. Registered nurses with generic nursing degrees have been involved in the administration of OSCE to upgrade their skills in Malawi.

Kamuzu College of Nursing (KCN) has been training nurse tutors at degree level mature entry for more than 15 years. In this programme, experienced registered nurses are selected from different hospitals and attend to a two-year Bachelor of Science degree in nursing education. Courses include teaching strategies in nursing; curriculum development; curriculum administration and teaching practicum as the skill acquisition process in readiness



for their tutorship deployment at the country' nursing colleges. KCN also developed a short course in teaching methodology for assistant tutors and clinical instructors from CHAM institutions. Therefore, many of the clinical instructors, commonly called preceptors, are redeployed into the nursing schools (Caffrey, 2008:10).

As with nursing education formal training at Kamuzu College of Nursing, many other nurse training institutions in Malawi cannot achieve the 1:15 tutor-to-student ratio as stipulated by WHO and have ratios from 1:20 to 1:50 or more. Even the best ratios raise doubts, however, because they are based on total numbers of staff. The reality is that tutors often have 50 to 100 students in their classes at a time, which creates a burden on tutors to teach effectively. Many tutors remain frustrated, which makes it difficult to retain their services. These tutors do not use an effective teaching strategy for all students. Most of the training institutions in Malawi are far from the recommended nurse instructor/preceptor-to-student ratio of 1:5, ranging from the most optimistic estimate of 1:27 to 1:65 or more (Nurses Council, 2009).

There is also an inadequate supply of clinical instructors, which has a negative impact on the quality of practical training. Many tutors undertake the role of clinical instructor by default due to their teaching roles, which increases their workloads and may affect the quality of their classroom teaching. Most of the tutors in Malawi use primary college knowledge for instructions without refresher courses. The current Nurses council refresher programme only focuses on newly employed nurse tutors, leaving the older nurse tutors with diminishing skills, which impacts on the quality of education they provide.

Many of the CHAM nursing institutions rely on government-seconded tutors to meet staffing requirements. These tutors serve as part of a bonding arrangement in exchange for their education. Currently, 65% of tutors are government seconded, filling many of the principal tutor positions, including college principal (Caffrey, 2006). Because these tutors often remain only for the two-year bonding period, relying on them makes the nurse training institutions more vulnerable to staffing shortages.

### **3.8 CONCEPT OF CLINICAL NURSING EDUCATION**

Gaberson (2007) explained that philosophy is a set of beliefs about the purposes of clinical nursing education and the responsibilities of teachers and learners in nursing clinical settings.

It was further stated that it is a “belief system” about human beings and their place in the world”.

The philosophy of clinical instructions provides a framework for making curricular choices from among options and understanding the implications of alternate educational decisions, values and beliefs that provide structure and coherence for a curriculum. But these belief systems are meaningless if contradicted by clinical practice of nurses. The Malawi government, through the nursing department in the Ministry of Health, believes in this philosophy. However, the general public views nurses in Malawi in a generally negative light. Whether this negative image is due to inadequate clinical nursing education is yet to be evaluated in these nursing clinical settings. It should also be mentioned that 85% of the student clinical attachments are done in government hospitals, but how such clinical instruction are done is yet to be documented at national level.

In Malawi, the government runs a free hospital system, which is designed in a three-tiered network of interlocking medical facilities. The third tier is a large network of rural hospitals spread throughout the country. They serve as the first line of defence in the war against diseases. Most medical cases enter the system through the rural hospital nearest their home. There are almost no doctors and only a few nurses at any of the rural hospitals. A limited number of students are sent for clinical practice in the rural health centres, as they do not have proper supervision. The main health centre management team comprises nurses from all the nursing schools. If these nurses are not well trained by tutors at the clinical area they fail to articulate and demonstrate required skills when they are posted to the health centres after graduation.

### **3.9 SUMMARY**

This chapter focused on reviewing the literature of different current scholarly authors on the teaching strategies in nursing education, the challenges of nurse tutor interaction and the competence of nurse tutors in classroom and at the clinical area. The latter part discussed the performance of the nurse tutors in both classroom and at the clinical area. Mostly, the literature alludes to there being many teaching strategies, but there are no effective teaching strategies that have adequate attributes and produce maximum qualitative outcomes in nursing education.

Chapter four describes the methodology used in the study.



# **CHAPTER FOUR**

## **RESEARCH METHODOLOGY**

### **4.0 INTRODUCTION**

This chapter presents the methodology used in this study. The study adopted a concurrent mixed-method approach for the purpose of triangulation of multiple data sources (Grove, Gray & Burns, 2015). In addition, the phases related to the ADDIE model, an instructional design model which is used as the conceptual framework for the study and was used to frame the study. The phases of this model are 1) analysis, 2) design, 3) develop, 4) implement, and 5) evaluate. The methodology is presented as follows: The overall research approach and research setting is described in its totality for the study. Thereafter a description of the research design, population, sampling, instruments, data collection and analysis, rigor and research ethics of each of the quantitative and qualitative methods are presented separately.

### **4.1 RESEARCH APPROACH**

A mixed method research approach was used in this study for the purpose of triangulation of data. Quantitative and qualitative data was collected concurrently. Mixed methods refer to the combination of the quantitative and qualitative designs. The strength of using mixed methods lies in the fact that the disadvantages of each method cancel each other out. In other words, the two approaches complement each other since using one approach may be insufficient to explain the complexity of the phenomenon (Maree, 2012). Moreover, an integrated approach can lead to theoretical and substantive insights into the multidimensional nature of reality. The mixed-method research can also provide feedback loops that augment the incremental gains in knowledge from a single-method study. In addition, confirmation of hypotheses through multiple types of data can strengthen study validity and in cases where findings are inconsistent, a careful scrutiny of the discrepancies could push the line of inquiry further. It is a strong belief in research that knowledge is not neutral but reflects the power and social relationships within the societies we construct under experience and quantity achievements (De Lisle, 2011). Mills (2016) expanded that the main purpose of mixed methods research is to use the advantages of both quantitative and qualitative research designs and data collection strategies to understand a phenomenon more fully than is possible using either quantitative or qualitative design alone.

In this study there were three different population groups with separate data collection methods: questionnaires, focus group discussion and in-depth interviews.

Firstly, a quantitative, positivist approach was used to describe variables in the questionnaire which are linked to the research questions. According to Burns, Gray and Grove (2015), quantitative research is a formal, objective, rigorous and systematic approach to collecting numerical data. Quantitative research is conducted to describe new situations and to examine relationships amongst variables.

Secondly, naturalistic inquiry or a qualitative approach was used to systematically explore and find meaning in the words of the participants regarding teaching strategies, needs and challenges of nurse tutors and students regarding classroom and clinical teaching in nursing colleges in Malawi. This approach, therefore, allowed for a deeper understanding of this phenomenon (Grove, Gray and Burns, 2015).

## 4.2 RESEARCH SETTING

The study was conducted in eight CHAM nursing colleges in Malawi. The nursing colleges include: Ekwendeni and St. Johns Colleges from northern part of Malawi; Malawi College of Health Sciences and Nkhoma Nursing College from central region of the country; St. Lukes College of Nursing, Trinity College, Holy Family Nursing College, Mulanje Nursing College and St. Joseph Nursing College from the southern region. These colleges were selected because all these colleges use one curriculum prescribed by CHAM secretariat and follow the same syllabus provided by the Nurses Council of Malawi.

## 4.3 PHASE ONE: ANALYSIS

The analysis phase of the ADDIE process entails two major steps, each of which entails several activities:

*Step 1: Performance Analysis (PA):* front-end analysis focus on the needs assessment and its data management; cause analysis entailed the interpretation of the need assessment and determining the course of action.

*Step 2: Training Needs Assessment (TNA)*: this focused on what to do and how to do it; audience analysis; instructional goal analysis, which also helped to create the goals for action; and subject matter or task analysis.

The quantitative data management was done separately using two questionnaires. These questionnaires focused on the student nurse and were done concurrently with focus group discussions with nurse tutors and students respectively. This design was chosen because of two non-interfering sequences in participants' selection, and a non-interfering pool was prepared according to the research instructions (DeLong, 2009).

### **4.3.1 QUANTITATIVE METHODS**

#### **4.3.1.1 RESEARCH DESIGN**

A descriptive design was used in the quantitative phase of the study as it provided specific details of a situation and focused on “how” and “why” questions. According to de Vos, et al (2011), a descriptive design may be used in both qualitative and quantitative research approaches. However, when used in quantitative research, the aim is to provide an accurate account of individuals, groups or situations with natural settings.

#### **4.3.1.2 STUDY POPULATION**

A study population is “all the potential individuals who possess specific characteristics in which the researcher is interested” (De Vos, et al 2011). The study population included all tutors and students at the selected eight nursing colleges. By 2013, there were a total of 88 tutors and 2075 students in the 8 CHAM nursing colleges.

#### **4.3.1.3 SAMPLING AND SAMPLE SIZE**

Probability, purposive sampling was utilised in the quantitative phase of the study. Probability, multi stage sampling was used to select the nurse tutor sample. Polit and Beck (2003) pointed out that probability sampling methods use random procedures for selecting subjects like tutors and students in clustered categories to reduce the risk of a biased (unrepresentative) sample. In a probability sample, every member of the population has an equal probability of being included in the sample (Brink, 2007).

Where  $n$  was the sample size of tutors and students in colleges,  $P$  was the proportion of number of tutors or students and  $E$  was the margin error. This formula allowed 5% for expected margin of error ( $E$ ) with 95% confidence level as the denominator.  $Z^2$  was a constant score with a value of  $1.96^2$  (at 95% confidence level and 5% precision). In the formula there were two steps. The first step was to find the population  $n$  at 95% confidence level.

#### *Tutor sampling*

Stratified randomized sampling was achieved through the college level first. Out of 14 colleges only 8 colleges were selected based on the resources, student availability, tutor availability and active administration. Later in each college, tutors, students and nurse administrators were selected based on simple randomization where every second nurse tutor met was included when she or he met the inclusion criteria (see below).

In order to achieve a sample worthy of generalization quantitatively, a sample was obtained from the colleges in a multistage format and based on the approximated (random probability) number of tutors. Drawing a sample from the population was done until the desired sample size was achieved, and it used the following sample proportion formula.

$$\text{Sample Size} = n / [1 + (n/\text{population})]$$

In which  $n = Z * Z [P (1-P)/(E*E)]$  (Lemeshow, Hosmer, Klar & Lwanga (1990)).

*First, we calculated the value for "n"*

$$\text{This means } n = \frac{1.96^2 * (95/100) \{1 - (95/100)\}}{0.05^2}$$

$$\text{Therefore: } n = \frac{1.96^2 * \{[0.95][1 - 0.95]\}}{0.05^2} = 35$$

Then *this means*  $s = 35 / \{1 + (35/188)\} = 82$  tutors

#### *Student sampling*

In drawing a sample of nursing students, the researcher first drew a stratified random sample of nursing schools from both urban and rural areas from the 8 nursing colleges out of 14 colleges in their strata. This was followed by the random selection of students from each

college that was selected. Every third student met during break period was requested to participate in the questionnaire. Thereafter, students from the selected schools were sampled using the same formula as above.

*First, we calculated the value for "n"*

$$\text{This means } n = \frac{1.96^2 * (95/100) \{1 - (95/100)\}}{0.05^2}$$

$$\text{Therefore: } n = \frac{1.96^2 * \{[0.95][1 - 0.95]\}}{0.05^2} = 35$$

Then *this means*  $s = 35 / \{1 + (35/2075)\} = 129$  **students**

This formula was selected because of a high precision effect that helped to generalize the results from the sample to the concerned population.

Moreover, this formula used the standard error of 5%, which is very high. According to Card (2012), the standard error is always inversely related to sample size, for some effect sizes. The standard error for this research was related to the effect size itself. Adjusting effect sizes for artefacts of the study also affected the standard error. Again, the test statistic *z- effect estimate/ standard error* provides the basis for testing the hypothesis. The observed value *z- obs* is used as the starting point for testing the hypothesis and answering the question in Chapter one. The research questions were later classified as the hypothesis during data management, where different hypotheses were created from the main research questions (see quantitative analysis below).



## SAMPLING FRAME FOR TEACHING STRATEGY NEEDS ASSESSMENT IN MALAWI

TABLE 4.2

NURSING COLLEGE	total students Yr1/yr2/yr3/mw Data date- March, 2013	total tutors & clinical instructors	sampled Students questionnaires	sampled tutors questionnaire	IN-DEPTH INTERVIEW	FOCUS GROUPS
	total students per college and distribution in each year	tutors and perceptors	student	tutors	Dean/Principal/Tutors	Subject Tutor
PHALOMBE	0/49/50/0=99	10/2	25	13	1/1/2	1+1=2
MULANJE	91/63/70/31= 255	15/4	30	15	1/1/3	1+1=2
ST. JOSEPH	67/49/59/26= 201	12/6	20	16	1/1/3	1+1=2
MALAMULO	70/55/53/28= 206	17/3	20	18	1/1/3	1+1=2
ZOMBA	103/98/89/0= 290	21/6	40	20	1/1/4	1+1=2
ST.LUKES	80/55/71/29= 235	16/3	30	16	1/1/2	1+1=2
TRINITY	65/46/63/25=201	10/2	25	11	1/1/2	1+1=2
NKHOMA	36/44/49/15=144	18/13	35	25	1/1/3	1+1=2
EKWENDENI	70/34/85/57=246	15/3	40	17	1/1/3	1+1=2
ST.JOHN'S	30/73/74/93/25= 294	12/4	30	15	1/1/2	1+1=2
TOTAL	2072	158/50	290	166		57

### 4.3.1.4 DATA COLLECTION METHODS

#### Instrument development

The questionnaires were developed after a review of literature pertaining to both nursing tutors in education and consultation with professional experts in this field. The questionnaires were developed based on several criteria. Most of the questions in each questionnaire were based on the objectives of the study. However, specific questions were developed based on the Overseas Educational and Curriculum Development (OECD) samples from Australia and Canada research instruments after consultation.

The questionnaire has sub-sections that focus on the objectives. The first section focused on participant demographics; the second on the teaching strategies and needs of the student; the third on the nurse tutor and student interactions; and the fourth on the performance and nursing clinical evaluation of the students.

Moreover, the questionnaire was based on the ADDIE model that was used by OECD Teaching and Learning International Survey (TALIS) and was recently used in the

Netherlands, Canada, Germany and the United Kingdom. Only limited questions pertaining to competences, interaction and performance of the nurse tutors were selected and included. Two structured questionnaires were developed for tutors and students. These questionnaires had a high reliability score.

### **TUTOR QUESTIONNAIRE**

The tutor questionnaire (see appendix 2) has 11 sections of mainly 5-point Likert scales. Respondents may avoid using extreme response categories (central tendency bias); agree with statements as presented (acquiescence response bias); or try to portray themselves or their group in a more favourable light (Polit & Beck, 2008).

Therefore, the Likert scale that was used ranged from strongly disagree, slightly disagree; disagree; agree; slightly agree and strongly agree.

Section A: Demographic data comprising 10 questions including - gender, age, education, occupation and marital status.

Section B: Teaching strategies comprised of 6 core variables related to teaching strategies

Section C: Teaching strategies related to tutor competency comprising 7 variables

Section D: Teaching and learning aids

Section E: Student tutor interaction

Section F: Tutor performance

Section G: Tutor self-performance

Section H: Common teaching motivators and barriers comprising 5 variables

Section I: Student clinical needs

Section J: Effectiveness of teaching strategies comprising 3 variables

Section K: Assessing nursing skills

### **STUDENT QUESTIONNAIRE**

The student questionnaire (see appendix 4) has 11 sections of mainly 5-point Likert scales.

Section A: Demographic data comprising 10 questions including - gender, age, education, occupation and marital status.

Section B: Teaching strategies comprised of 6 core variables related to teaching strategies

Section C: Teaching strategies related to tutor competency comprising 7 variables

Section D: Teaching and learning aids

Section E: Student tutor interaction challenges

Section F: Tutor performance

Section G: Tutor self-performance

Section H: Common teaching motivators and barriers comprising 5 variables

Section I: Student clinical needs

Section J: Effectiveness of teaching strategies comprising 3 variables

Section K: Assessing nursing skills

#### **4.3.1.5 VALIDITY**

The content validity for the instruments in all phases of the study was maintained by requesting the opinions of experts from two international universities. The University of the Western Cape provided input through Professor Daniels and from the Upper Graduate University Board after the PhD fellow students, who periodically criticized the documents. The University of Malawi where the researcher works also reviewed the whole proposal COMREC (College of Medicine Research and Ethics Committee). Howitt (2011) points out that there are a variety of ways of assessing validity – none of which is identical to any of the others. Validity is a more complex concept that broadly concerns the *soundness* of the study's evidence - that is, whether the findings are cogent, convincing, and well grounded. Like reliability, validity is an important criterion for assessing the methods of measuring variables (Polit & Beck, 2003).

Therefore, in this research, the fact that it was deliberated and presented to different forums for comments strengthened content validity. Validity is not a property of a test itself but a complex matter of the test, the sample on which a test is used, the social context of its use and other factors (Pallant, 2011). The questionnaire items were carefully collected to reflect a wide variety of the facets of the concept being assessed. Using diverse means of eliciting potential items for inclusion was important in assessing the validity of the study. Such diversity included the research literature and interviews with people similar to potential participants. Content validity required the use of recognized subject matter experts to evaluate whether the test items assessed defined content and more rigorous statistical tests than the assessment of face validity (Dorak, 2012).

Face validity was met by ensuring that the items in each section measured what they were intended to measure. It also helped to answer the following questions: Did the items on tutor needs measure the important characteristics that it wanted to measure (content validity)? How well did we understand the concepts of the teaching strategies and tutor-student interaction (construct validity)? Did the measure predict future behaviour of the tutors and students (predictive validity)?

Furthermore, a test-retest procedure and a pilot study for the instruments were used to test the intended variables in the assessment tools and this helped to increase the validity of the questionnaire. Personal interviews using a structured face-to-face method were conducted to elicit information from the deans and heads of nursing colleges, who are experts in nursing education in the country, regarding the assessment of teaching needs of nurse tutors and procedures.

#### **4.3.1.6 RELIABILITY**

The internal consistency was measured using SPSS version 22 and Cronbach's alpha of more than 0.8 in each section was found as the items in the scale were more than 30 (Tomietto et al, 2012) and variation of alpha values was determined in each item. By definition, statistical reliability refers to the probability that the same results would be obtained with a completely new sample of subjects - that is, that the end results are an accurate reflection of a wider group than just the particular people who participated in the study (Polit & Beck 2003). This was so as Cronbach's alpha is an index of reliability associated with the variation accounted for by the true score of the "underlying construct or variable (Santos, 2013). Internal reliability indicated how consistently *all* the items in a scale measure the concept in question. If a scale is internally reliable, any set of items from the scale could be selected and they provided a measure that was more or less the same as any other group of items taken from that scale (Howitt, 2011). Therefore, in this study, this was calculated using SPSS software in order to identify the contribution of each item to the overall (Split half) internal reliability in the scale. The scales were composed and had items strongly correlated with each other as well as a high alpha coefficient. This coefficient was an indicator of high internal consistency of the items in a scale. It was an indicator for the internal consistency, i.e. homogeneity, of the items of a scale (Oermann, 2009). Moreover, reliability is the consistency between independent measurements of the same thing (See the table below).

**Table 4.3: QUESTIONNAIRES STATISTICAL RELIABILITY**

SECTION	TYPE OF VARIABLES	NUMBER OF ITEMS	ALPHA LEVEL
Section A	Demographic variables	11	0.82
Section B	Teaching strategy Variables	61	0.95
Section C	Competence Variables	42	0.91
Section D	Teaching and Learning Aids variables	17	0.84
Section E	Interaction Variables	42	0.91
Section F	Performance Variables	71	0.97
Section G	Student Needs Variables	52	0.93
Section K	Assessment variables	14	0.83

The alpha level was obtained after data entry for 129 student questionnaires, in SPSS version 22.

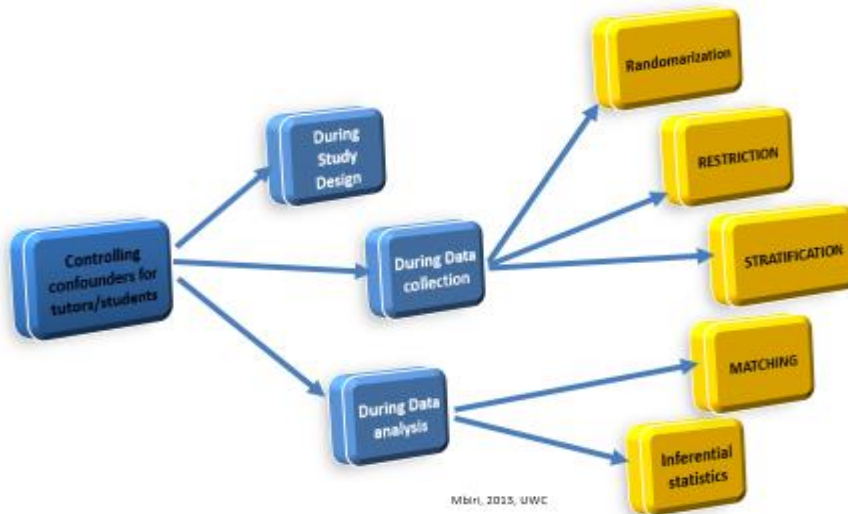
Following the same procedure, using the same measurement methods and obtaining the same results meant that the measurement was free from random errors. A correlation coefficient ( $r$ ) determines reliability and was expressed in values ranging between 0–1. The values close to one showed high reliability (Polit and Berk, 2004). The alpha reliability had been chosen as it gave the best overall picture. Fortunately, the calculation of alpha reliability could be achieved more directly using an analysis of variance-based method on SPSS software as mentioned above.

#### **4.3.1.7 CONTROL OF CONFOUNDING VARIABLES IN QUANTITATIVE DATA**

This study used five methods to control confounding variables. These included: randomization, restriction, matching, stratification and inferential statistical analysis (See figure 4.5). Randomization was done during student sample collection. Restriction was mainly focused on the inclusion and exclusion criteria. During data collection, to maintain a high level of confounding variable control, it was imperative to perform matching on all items on the student and tutor questionnaires. This was done to make sure that students and tutors all focused on the same competences, interactions, teaching strategies and performance attributes. Stratification was met in this study by making sure that the selection of colleges, students and tutors was done in levels following specific strata. According to Polit and Beck (2003), stratification should be based on one or more variables that would reflect important differences in the dependent variable under study. Such variables as age, gender, ethnicity,

educational attainment, and medical diagnosis are often good stratifying variables. Moreover, the use of inferential statistics like regression analysis that focused on the p-value, confidence interval, and the beta coefficient also helped to control the confounding (see below).

**Figure 4.5: Control of confounding**



8/17/2015 2:59 PM

Developing effective teaching strategies for nurse tutors in Malawi

85

**Figure 4.5: control of confounding variables in the study**

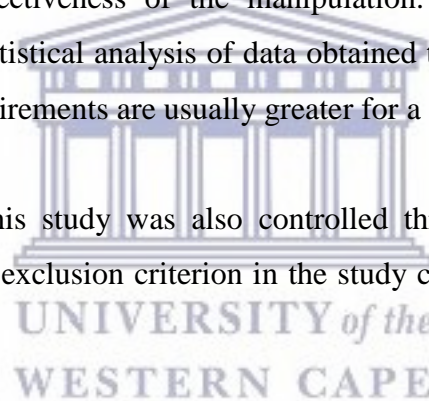
By definition, confounding is a distortion of the association between an independent variable and dependent variables that occurs when the study groups differ with respect to other factors that influence the outcome. Unlike selection and information bias, which can be introduced by the investigator or by the subjects, confounding is a type of bias that can be adjusted for in the data collection and analysis, provided that the investigators have information on the status of study subjects with respect to potential confounding factors (Dorak, 2012). Extraneous variables are classified as controlled or uncontrolled and as recognized or unrecognized. If these extraneous variables are not considered, they can confuse the interpretation of the results and confound the effects of the independent variable. Therefore, extraneous variables are sometimes called confounding variables.

According to Dorak (2012), confounding involves *error in the interpretation* of what may be an accurate measurement. The consequence of confounding is that the estimated association is not the same as true effect. Confounding can cause overestimation or underestimation of the true association and may even change the direction of the observed effect. Confounding can be positive or negative. Positive confounders cause overestimation of an association (which may be an inverse association), and negative confounders cause underestimation of an

association. It is not easy to recognize confounders. A practical way to achieve this is to analyse the data with and without controlling for the potential confounders. If the estimate of the association differs remarkably when controlled for the variable, it is a confounder and should be controlled (by stratification or multivariable analysis). To be able to do this, investigators should make every effort to obtain data on all available risk factors for the disease under study.

The most important method of controlling confounding is randomization, which was done during data collection quantitatively. This means that nurse tutors were iteratively randomized during selection for participation in the questionnaire. Randomization ensures that potential confounding factors, known or unknown, are evenly distributed among the study groups. Polit and Beck (2008) note that this approach reduces the possibility of contamination between two different groups, that is, the mingling of subjects in the groups, which could reduce the effectiveness of the manipulation. The main disadvantages of randomization are that the statistical analysis of data obtained through this approach is more complex and sample size requirements are usually greater for a given level of accuracy.

Therefore, confounding in this study was also controlled through restriction during data collection. The inclusion and exclusion criterion in the study clarifies the restriction process for this study (see above).



Furthermore, these extraneous variables were controlled by matching process. This means that tutor's gender, age and nurse tutor work - experience were matched during data collection both on the tutor and student questionnaires. There is thus equal representation of subjects with certain confounders among study groups and this can overcome a great deal of confounding. This was done to make sure that the distribution of the factors was similar or identical in the subjects in both the student and tutor questionnaires, thereby reducing confounding.

Moreover, since the student and tutor instruments have been classified and the selection of samples has been in different stages from different groups, it explains how the stratification as yet another method of confounding control was achieved for the samples. This was very important as far as confounding control was concerned. Polit and Beck (2003) assert that in stratified random sampling, the population is first divided into two or more strata. The aim of

stratified sampling was to enhance representativeness and control confounding variables. Stratified sampling designs included subdividing the population into homogeneous subsets from which an appropriate number of elements were selected at random. Therefore, tutors, students and management team were categorically placed in their own strata during data collection.

Stratified random sampling enabled researchers to sharpen the precision and representativeness of the final sample. When it was desirable to obtain reliable information about subpopulations whose memberships were relatively small (less than 10), stratification provided a means of including a sufficient number of cases in the sample by oversampling for that stratum. Stratified sampling, however, may be impossible if information on the critical variables is unavailable (Howitt, 2007). Furthermore, a stratified sample requires even more labour and effort than simple random sampling because the sample must be drawn from multiple enumerated listings like nurse tutors, nursing students and nursing administrators.

Confounding was also controlled using inferential statistical analysis for this study. This means that there were comparisons and association of the variables as a means of controlling confounding, particularly in the binary logistics regression analysis.

#### **4.3.1.8 PRE-TESTING/ PILOTING**

Pre-testing for the instruments was done at Kamuzu College of Nursing (KCN) in Lilongwe, Malawi. Eight nurse tutors and twelve students participated from each college. Laake et al (2007) noted that a pre-testing may have various purposes, such as testing procedures in practice or estimating the variability of an outcome variable to calculate the number of participants to be included in the study. It also helps to rectify unintended questions and statements where corrections are done before the real data collection. It is common practice to pre-test the instruments such as questionnaires on a small number of people before they are used in earnest. This helps to increase the reliability and validity of the instruments (Williman, 2011). Furthermore, although this study had followed the normal scientific process, peers, consultants, and lecturers had critiqued the document. Other reviewers also scrutinised the study to obtain substantive, clinical, or methodological feedback before implementing the plan. It is essential to pre-test the instruments as they have never been used before in any study.



#### **4.3.1.9 DATA COLLECTION PROCESS**

Data collection was done using the student and nurse tutors' questionnaires. In each college, students were randomly selected, and face-to-face interviews were conducted, using the semi-structured questionnaires. Selection of the students was done based on the stratification process. This means that in each nursing college which was included in the study, students from different class levels were selected based on their experience in the learning process. As a result, no first-year students were selected and those in their second and third year were randomly selected. Randomization was achieved by selecting every third student met during class break time.

During the interview, the selected students were allowed to make an informed decision on whether they would participate in the study and given a consent form to sign. This was done to reinforce the validity too.

#### **4.3.1.10 QUANTITATIVE DATA ANALYSIS**

The quantitative data was analysed using SPSS 21.0. Descriptive statistics in the form of frequencies and means were computed for tutors' needs, student-tutor interaction and effective teaching strategies. After the descriptive analysis, inferential analysis was used to find the extent of the variables frequencies and compare dependent and independent variables. Dependent variables included nurse tutors' teaching strategy and competence needs, and nurse tutors' and students' interactive and performance needs. The other dependent variables included participants' demographic variables such as age, education, occupation and number of children. The main independent variables were the nurse tutor work experience and the student study experience. There were multiple hypotheses from independent and dependent variables. The hypothesis generation was made to be simple and straightforward towards the variables comparisons. Laake et al. (2007) noted that a good hypothesis is worded in simple, clear, and concise language. This was done to compare the nurse tutor experience with the teaching strategy variables, nurse tutor competence variables, and nurse tutor performance variables. These comparisons were generated to give a true reflection of the maximum nurse tutor teaching strategy utilization, nurse tutor competences and interaction challenges. Similarly, student study experience was compared to nurse tutor teaching strategy variables; nurse tutor competence variables and nurse tutor performance variables.

The null hypothesis of “poor teaching aids are not associated to nurse tutor work experience” was tested. Another null hypothesis, namely “students’ punctuality is not associated to student study experience” was also tested in bivariate analysis. Null hypotheses (or statistical hypotheses) state that there is no relationship between the independent and dependent variables (Polit & Beck, 2003).

In each subsection of the questionnaire the summated constructs were used as the independent variable to the demographic variables and as the dependent variable in the hypothesis degeneration. These types of hypotheses helped to determine the nurse tutor needs and know the tutor-student interaction both in class and at the clinical area.

Inferential statistics such as bivariate analysis and binary logistic regression for the scale, categorical (predictor) and ordinal variables were displayed. The bivariate analysis was done in order to determine the correlation between dependent and independent variables as described above.

When data is recorded at the ordinal Likert scale of measurement to the ordinal scale by transforming them to five ranks, there is need to perform the computational procedures of correlation on the ranks (Dowrdy, 2004). The resulting correlation coefficient, which is given the symbol  $r_s$  and called *Spearman’s rank correlation*, has much the same meaning as the correlation coefficient we have already studied. This analysis provides a measure of linear association between the ranks of the  $x$  (dependent) variable and those of the  $y$  (independent) variable. The bounds on the coefficient are the same. This statistical test helps to measure the magnitude of bivariate relationships and to test whether the relationship is significantly different from zero, Spearman’s rho and Kendall’s tau for ordinal level data (Polit & Beck 2003).

If the correlation coefficient is inordinately large and positive, then there is close positive agreement between the ranks of the two variables. If the correlation coefficient is close to 1.0, then, when one variable has a high rank, its companion tends to have a low rank, and vice versa. Also, when it is near zero, the ranks of the  $x$  and  $y$  variables are nearly independent. The cut point of the *Spearman Correlation Coefficient* was set to be 0.05 based on the 95% confidence level.

*Logistic regression models* were employed for the significance and association of the grouped means of the different variables using a P- value of 0.05.as a cut point. This was done to all variables that show significant correlation in the bivariate analysis. Comparisons between independent and dependent variables in the logistic regression were done following the ENTER method, which is the default procedure available in SPSS. Student-tutor interaction and demographic variables were assessed to check the association on bivariate analysis with reference to the nurse tutor work experience and student study experience. Tutors' teaching strategies and tutor-student interaction were the main dependent variables. While the nurse tutor work experience and the student study experience were the main independent variables, the demographic variables were also used as dependent variables.

A Logistic Regression model was constructed based on only variables that showed statistical correlation at P-Value of below 0.05 in the above bivariate model. The cut point of analysis was the mean differences that were determined between the independent and dependent variables in the logistic models. Dorak (2012) elaborated that the logistic model assumes that for each possible set of values for the independent (X) variables, there was a probability p that an event (success) occurs. Then the model was that Y was a linear combination of the values of the X variables:  $Y = b_0 + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 + \dots b_k * X_k$ , where Y was the logit transformation of the probability p. Logistic in statistical usage stems from logit and has nothing to do with the military use of the word, which means the provision of material.

Logistic regression (sometimes referred to as logit analysis) uses maximum likelihood estimation for analysing relationships between multiple independent variables and a categorical dependent variable. Therefore, nurse tutor performance attributes were compared to nurse tutor work experience and student study experience in the binary logistic regression models. This was done as the nurse tutor performance attributes were to be found in both classroom and clinical areas. Logistic regression transforms the probability of an event occurring into its odds (Polit & Beck, 2003). The odds of an event are the ratio of two probabilities: the probability of an event occurring to the probability that it would not occur. Probabilities that range between zero and one in actuality are transformed into continuous variables that range between zero and infinity. Because this range is still restricted, a further transformation is performed, namely calculating the logarithm of the odds. Binary logistic regression is one of the non-parametric tests that were used to compare the magnitude mean

comparison of the dependent and independent variables. The dependent variables such as nurse tutor teaching strategies, nurse tutor competences and nurse tutor interaction challenges were used. The binary logistic regression makes sure that the analysis breaks the outcome variable down into a series of comparisons between two categories.

It should be noted that Logistic regression allows for testing models to predict categorical outcomes with two variables. The predictor (independent) variables can be either categorical or continuous, or a mix of both in the one model. Predictor variables like nurse tutor work experience and student study experience were used because they were assumed to be strongly related to the dependent variables but not strongly related to each other.

To make sense of the results of binary logistic regression, it was important that the set-up of the coding of responses to each of variables was carefully reviewed. This means that the covariates were dichotomised from the five-ranked Likert scale to a two-ranked scale consisting of “*agree and disagree*” for the dichotomous dependent variable. During coding it was necessary to ensure that the “*disagree*” responses were coded as 0 and the “*agree*” responses were coded as 1. Pallant (2011) added that the value of 0 should be assigned to whichever response indicates a lack or absence of the characteristic of interest. In this study, 0 was used to code the answer “No” to the questions. The value of 1 was used to indicate a “Yes” answer. A similar approach was used when coding the independent variables of nurse tutor work experience and student study experience. Therefore, for continuous independent variables, high values should indicate more of the characteristic of interest.

Hypotheses created from the logistic regression model included the effects of positive tutor-student interaction like *cheerfulness, consideration, reflective, accommodativeness, empathy and honesty* as dependently grouped variables, where they depended on the work experience in years as the factor, together with 0.05 as the level of statistical significance. This means that all dependent variable co-variables were dichotomized to two-ranked Likert scale of *agree and disagree*.

Moreover, the effect of negative nurse tutor and student interactions like tutors’ rudeness, talkative, reserve, and aggressiveness as dependent grouped variables were tested for their dependence on either the work experience of the tutors or the students study experience. This was done under the *Beta Coefficient model*.

The outcome of the binary logistic regression involved The *Omnibus Tests of Model Coefficients*, which showed an overall indication of how well the model performed, over and above the results obtained for Block 0, with none of the predictors entered into the model. This was referred to as a ‘goodness of fit’ test. For this set of results, a highly significant value (the Sig. value should be less than .05) was expected. The results were also expected to show headed Hosmer and Lemeshow Test which supported the model as being relevant (Pallant, 2011). This test, which SPSS states is the most reliable test of model fit available in SPSS, is interpreted very differently from the omnibus test discussed above. For the Hosmer-Lemeshow Goodness of Fit Test, poor fit is indicated by a significance value less than .05. Therefore to support our model, we actually want a value greater than .05.

There was also the sensitivity of the model, which refers to the percentage of the group displaying the characteristic of interest (e.g. agree) that has been accurately identified by the model (the true positives). The specificity of the model is the percentage of the group without the characteristic of interest (disagree) that is correctly identified (true negatives). The positive predictive value was the percentage of cases that the model classified as having the characteristic that was observed in the group. Therefore, the effect of positive or negative interaction and tutor work experience would be greater or not when tested. This suggests that the differential effect of the nurse tutor-student interaction, according to the condition in question, was termed condition interaction effect. If the interaction between the student tutor interaction and the tutor work experience was statistically significant, we had an interaction effect (Dorak, 2012).

Therefore, the results of first two objectives through both qualitative and quantitative methods were assessed to decide on the requirement of objective three, thus developing an effective teaching strategy, which was achieved through an intervention programme (see the table on development and intervention).

It must be added that the choice of the use of mixed methods was made because of the need to analyse data from different sources. In the *mixed methods design*, quantitative data are collected first and are more heavily weighted than are qualitative data. In the first study or phase, the researcher formulates a hypothesis, collects quantitative data, and conducts data analysis. The findings of the quantitative study then determine the type of data collected in a

second phase, known as qualitative, which includes data collection, analysis, and interpretation of qualitative data (Mills 2015). This is the process that was followed.

## **4.3.2. QUALITATIVE METHODS**

### **4.3.2.1 RESEARCH DESIGN**

An exploratory descriptive design was used in the qualitative phase of the study. In this phase, an exploratory design is conducted to gain insight into phenomena that are new or where there is lack of information about the phenomena. According to Kreuger and Neuman (2006), exploratory research answers the “what” questions in generating qualitative data.

### **4.3.2.2 STUDY POPULATION**

The population comprised tutors, students, deans and principals of the selected colleges. The students were important due to their direct involvement in the teaching and learning process both at the clinical area and in the classroom. The tutors were important because these are the people who teach the nursing students both in class and at the clinical area.

### **4.3.2.3 SAMPLING AND SAMPLE SIZE**

Non- probability purposive sampling was used for the qualitative phase of the study. Purposive sampling was used to select participants for the qualitative part in the study, mainly to fully understand the activities of nurses and students during their interaction with each other in the teaching and learning process respectively. Each tutor was important to fully express the experience they encounter during teaching process with the students.

Nurse tutors who were not involved during the questionnaire were those with greater working experience. This was done to allow them to participate in the in-depth interviews. The same applied to 10 students from each nursing college who were involved in the focus group discussion. This means that any tutor who had been teaching for more than 6 years was considered as they were deemed to have sufficient knowledge of the student teaching process, interaction among tutors and to the students, reasonable competence and experience.

The administrators such as the Dean and the Principal, who also had more than six years of working experience, were involved in the in-depth interview. The sampling decision was

based on the need for quality information from both the experienced nurse tutors and the experienced students. In the colleges, the interviews were performed utilising the minimum number of nurse tutors and then increase until the data was saturated. There was also one focus group that was selected based on the students' experience from second year and third classes. These students had already been exposed to the clinical area and were selected for their continuous interactions with the nurse tutors and reasonable competences regarding nursing care from the nurse tutors' performance

**Table 4.4: SAMPLE SIZE DETERMINATION**

*Focus group discussion*

<b>Participants</b>	<b>Data collection method</b>	<b>Sample size</b>
<b>Students</b>	Focus group discussion	10 x 10 (100)

*In-depth Interview*

<b>Participants</b>	<b>Data collection method</b>	<b>Sample size</b>
<b>Tutors</b>	In-depth Interview	5x 8 (40)
<b>Deans and Principals</b>	In-depth Interview	2 x 8 (16)

*Semi-structured interviews*

<b>Participants</b>	<b>Data collection method</b>	<b>Sample size</b>
Tutors	Semi-structured interviews	10 x 8 (80)
Students	Semi-structured interviews	14 x 10 (140)

*The above table explains the point of saturation of the data during qualitative data collection*

**4.3.2.4 INCLUSION AND EXCLUSION CRITERIA**

*Inclusion criteria*

- All preceptors (assistant tutors with a degree qualification) who were not only instructing students in the wards but also teaching in the classroom were regarded as tutors.
- Tutors with two or more years of work experience as nurse tutors and had a degree.
- Students who were in first, third or fourth year of continuous studying.

*Exclusion criteria*

- Tutors who participated in the quantitative study were not included.
- Tutors who completed the questionnaire were not included in the in-depth interview.
- Participants who participated in one particular data collection method were excluded from any other method

- Foreign expatriates due to their lack of contextual knowledge of teaching strategy needs in Malawi.
- Students who were in second year, second semester and were not among the intervention group at Nkhoma Nursing College.
- Students who were in fourth year and were in clinical area during the intervention period

#### **4.3.2.5 INSTRUMENT OF IN-DEPTH INTERVIEW**

The development of an in-depth interview guide for tutors, deans and principals focused on the interaction process of the students and tutors during teaching, both in class and at the clinical area. The interview guide comprised a demographic section and other broad questions focusing on teaching strategies and teaching aids, challenges of student interactions, nurse tutor competences and nurse tutor performance, which formed an integral part of the research objectives.

The teaching strategies and teaching aids were included in one section of the in-depth interview. Areas such as lectures, didactic questions, demonstrations, role-playing, brainstorming, discussion, problem-solving, tutorial groups, case studies, reflective discussion, concept mapping and essays questions that had multiple probing questions were addressed under this section. The nurse tutor competences and nurse tutor performance were also included in the interview guide. The interview guide further included relevant performance questions.

An in-depth interview guide was developed due to the requirement for more accurate and rich information concerning the teaching strategy utilization, student tutor interaction, nurse tutor competences and tutor performance. In-depth interviews are most appropriate for situations in which open-ended questions are asked that elicit in-depth information from relatively few people. Its use in this study allowed the interviewer to explore the tutors', deans' and principals' views on the research phenomena (Polit & Beck, 2008).

#### **4.3.2.6 DATA COLLECTION PROCESS**

##### **In-depth interviews**

To obtain the depth of information required, the researcher used a number of probes as listed in the interview guide. During the in-depth interviews, five nurse tutors were selected and



face-to-face interviews were conducted with each nurse tutor at each college. This was done in their own offices when they were not involved in teaching. As the interviews were conducted in many areas and involved probing questions, on average the interviews took one hour to complete. The number of nurse tutor participants was increased each time at each college until the saturation of the required information pertaining to the teaching strategies, interaction competences and nurse tutor performance was achieved. The deans of the colleges and principals also added information that focused on the teaching strategies utilization, interaction of tutors and students, nurse tutor performance and nurse tutor competences. At each college, all tutors were interviewed on the same day to avoid recall bias. The interviews were done by the researcher himself to get first-hand information that helped towards making the decision for the outcome of objective three. Since the researcher and the participants were conversant with English as an official language of communication in the colleges, it was possible to conduct the face-to-face interviews without any problems.

### **FOCUS GROUP DISCUSSIONS**

The focus group discussion was another instrument that was used during qualitative data collection. There were 10 students who were randomly selected from the second and third year classes of each college, to participate in the focus group discussion. This means that there were 8 focus group discussions that were conducted. This was done in order that each student had the opportunity to provide logical answers and express themselves freely. The main areas explored in the focus group were the same as those covered during the in-depth interview. These areas included the teaching strategy utilization; nurse tutor and students interactions; tutor competences and tutors performances during teaching both in class and at the clinics.

Rabiee (2004) pointed out that a focus group is a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive, although not necessarily representative, sampling of a specific population. Polit and Beck (2003) describes focus group sessions as carefully planned discussions that take advantage of group dynamics for accessing rich information in an efficient manner. During the focus group discussions, care was taken to ensure that the discussion was located in an environment that felt safe for all the students. Active participation and an avoidance of dominating the conversation remained the key rules during the discussion. The discussion was tape recorded after getting the consent from the students, who had been informed about the importance of the

information being collected. The researcher took notes during the discussion to make sure that key information was not missed. Each recorded information was then translated by the researcher himself.

#### **4.3.2.7 QUALITATIVE DATA ANALYSIS**

Qualitative data was analysed with the aid of Atlas ti version 7.0. The qualitative analysis was based on the Thomas deductive analysis approach with verbatim transcription. A general deductive approach for analysis of qualitative evaluation data is described below. According to Yukhymenko et al (2014), deductive analysis is an efficient way to analyse data as it is informed by an established conceptual framework and sensitizing concepts or based on the act of preliminary coding of a small portion of the data.

Familiarization with the data before coding was achieved by listening to recorded tapes, reading the transcripts in their entirety several times, and reading the observational notes taken during interviews together with the summary notes written immediately after the interview. The aim was to interrogate all the details and get an overall sense of the interview before breaking it down into strands (categories). During this process, the major themes began to emerge. According to Polit and Beck (2003) a theme is an abstract entity that brings meaning and identity to a current experience and its variant manifestations. As such, a theme captured and unified the nature or basis of the nurse tutors and students experience into a meaningful whole on teaching strategies, nurse tutor competences, the challenges of interactions and performance needs. In thematic analysis, the task of the researcher is to identify a limited number of themes which adequately reflect their textual data. This is not so easy to accomplish and although the identification of a few superficial themes is generally quite simple, it does not reflect the required level of analysis adequately (Howitt, 2011).

According to Howitt (2011), based on the coding, the researcher then tries to identify themes which integrate substantial sets of this coding. It was necessary to be able to define each theme sufficiently so that it was clear to others exactly what the theme was. The next stage involved identifying ideas or concepts arising from the texts and developing categories on each column of the theme. The third stage involved indexing, which comprised shifting the data, highlighting and sorting out quotes and making comparisons both within and between cases. The fourth stage addressed charting, which involved lifting the quotes from their original context and re-arranging them under the newly developed atlas Ti system.

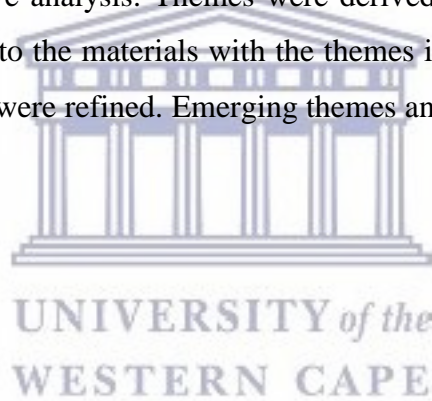
The analysis in this phase allowed priori coding of responses and the manipulation of data (codes) in various ways, grouping the data and generating different tables, all of which enabled the interpretation of the teaching strategy needs of the tutors, competence needs of nurse tutors, challenges of nurse tutor and student interactions, and nurse tutor performance. The coding process involved several steps and theme processing. According to Polit and Beck (2010), the priori codes conceptualization focuses their analysis on certain aspects of a person's experience. That framework is based on the premise that human experience is an inherent property of the experience itself, not constructed by an outside observer. Through the software, meaningful parts of response statements or data segments were selected and coded using codes derived from respondents' voices or words from recorders. The decision about how frequently to make a coding depended partly on the particular data in question as well as on the broader purpose of the analysis. As a rule of thumb, a coding should be made at regular intervals – every line may be too frequent, every two or three lines would probably be acceptable. The portion of the text being coded does not have to be the exact same number of lines each time a coding is made (Howitt, 2011). At every stage of the analysis, the researcher altered and modified the analysis in the light of experience and as ideas developed. Thus, the process led to numerous adjustments of earlier coding in light of the full picture of the data. The idea was really to get as close a fit of the coding to the data as possible without having a plethora of idiosyncratic coding.

Priori Codes were made using the concepts (nurse tutors' teaching strategy needs, nurse tutor competence needs and student-tutor interaction) as the strands. The strands generated different related concepts that were critically modelled into the Atlas TI system. Emerging themes and subthemes were reported as results. At every stage of the analysis, the researcher altered and modified the analysis in light of experience and as ideas developed. Thus, the researcher adjusted earlier coding in the light of the full picture of the data. The idea was really to get as close a fit of the coding to the data as possible without having a plethora of idiosyncratic coding. According to Saunders (2009), priori codes link the research into the existing body of knowledge in the subject area and help to provide an initial analytical framework.

The researcher was required to define each theme sufficiently so that it was clear to others exactly what the theme was. All the themes, strands and concepts were properly processed

until the saturation of the data was achieved for objective one of nurse tutors needs on teaching strategy and objective two, which focused on tutor student interaction challenges. All those with positive connotation were interpreted and presented conceptually. All the strands and concepts were deeply scrutinized for their peculiarity, intuition, uniqueness and consistency. All the strands and snap shots that revealed unique value in the teaching strategy needs assessment were presented. The search for themes involved not only discovering commonalities across participants like the tutors, students and administrators, but also seeking natural variation among them.

All concerns on whether the themes identified accurately represent the perspectives of the tutors and students interviewed or observed were addressed. Several validation procedures were used. Some concepts were triangulated and although triangulation could not ensure thematic validity, it did minimize idiosyncratic biases. An iterative approach was used as it is always necessary in qualitative analysis. Themes were derived from the narrative materials and the researcher went back to the materials with the themes in mind to see if the materials fitted, after which the themes were refined. Emerging themes and subthemes were reported as results, see the table below.



**TABLE 4.3: PRIORI CODE STRUCTURE**

<b>THEMES</b>	<b>CATEGORY</b>	<b>PRIORI CODES</b>
TEACHING STRATEGY	Direct instructions Indirect Instructions	lecture, didactic questions, demonstrations, role-playing, brainstorming, discussion, problem solving, tutorial groups, case studies, reflective discussion, concept mapping, essays, reports, homework, research projects questioning
TEACHING AIDS	Classroom / Clinical	research articles internet, small group facilitations, posters, whiteboard, models, workbook, library, module, overhead projector, LCD, computer, laboratory, patient manikins, posters
INTERACTIONS	Communication Values	respectful, arrogant, fair examination, satisfy, cheerful, honest, models, polite, self-directed teaching, support, freedom, opportunities, over-familiar, apologetic, empathetic, enthusiastic, humour, commitment, advocates, cooperation, equity human right, tolerance, willingness, considerate, responsibility, attentive, a sense of care, sociable, accommodative, warmth, honest, open-minded, nurturing social distance, non-judgemental, rudeness, talkative, aggressive, constructive, punctual, risk, talking entire class, communicate, reserved, approachable, trustworthy, sensitive, goal oriented, have clear language, non-verbal
COMPETENCES	Classroom / Clinical	opportunities for student, practising skills, role-played, motivate student, keeps track, decision mapping, facilitator, non-verbal and verbal simulation, support services, stakeholders, administration, identify the goal, act as the facilitator, very reflective, look arrogant, student welfare, excellent strategy, content, key points, evaluate, instructions, role-played, clarifies material, liaisons, communication, supportive training, assessing, referral, monitoring and evaluation, educational materials, open-ended questions, keep track of discussion, any idea sharing, human rights, goal of the discussion, objectives, guiding questions, organization, direction, local participative, promotes learning, support, positions
PERFORMANCE	Classroom/ Clinical	stimulates clinical group, case information, resource mobilization, reflection in tutorials, confidentiality, students stress, respect, collaborate, change agents, critical thinking, self-evaluation, skill adjustment, patient care, orientation, communicate, teamwork performance, skills, feedback, staff meetings, clinical tutorials, clinical expectations objectives, clinical questions, demonstrate
ASSESSMENT	Types Strategies	exhibitions, journals, projects, interviews, essays, portfolios, concept mapping, systematic observation, long-term investigation, manipulative skills, short answer items, multiple-choice, laboratory

#### 4.3.2.8 RIGOUR FOR QUALITATIVE METHODS

This research used four criteria for establishing the trustworthiness of qualitative data from the tutors, students and administrators: These were credibility, dependability, confirmability, and transferability.

Credibility refers to confidence in the truth of the data and interpretations (Polit & Beck, 2008). Moreover, Shenton (2004) added that credibility deals with the question, “How congruent are the findings with reality?” Therefore, credibility was achieved through triangulation of data through prolonged engagement in the field, peer debriefing and member confirmation. This was done through training of all the members involved in the in-depth interviews. The research followed the basics of data gathering through the conduction of face-to-face in-depth interviews. This was done because specific procedures employed in the study, such as the line of questioning pursued in the data gathering sessions and the methods of data analysis, should be derived, where possible, from those that have been successfully utilised in previous comparable projects.

Dependability of qualitative data refers to the stability of data over time and over conditions. Another technique relating to dependability was an audit trail that this research had throughout data collection. This was done to make sure that all data collected were properly secured, followed and in the process trusted in order to obtain a valid outcome. In addressing the issue of reliability, the positivist employs techniques to show that, if the work were repeated, in the same context, with the same methods and with the same participants, similar results would be obtained (Shenton, 2004). Therefore, in order to address the dependability issue more directly, the processes within this study was reported in detail, thereby enabling a future researcher to repeat the work without any problems, if not necessarily to gain the same results.

Confirmability focusses on whether the findings can be confirmed by others, the potential for congruence between two or more independent people about the data’s accuracy in terms of the audit trail, relevance, or meaning (Gallin, 2007). Moreover, confirmability enables the researcher to ensure that, the findings are the result of the experiences and ideas of the informants, rather than the characteristics and preferences of the researcher (Shenton, 2004). This helps to reduce the effect of investigator bias.

Transferability refers essentially to the generalizability of the data, that is, the extent to which the findings can be transferred to other settings or groups. However, Shenton (2004) added that sufficient description of the phenomenon under investigation should be provided to allow readers to have a proper understanding of it, thereby enabling them to compare the instances of the phenomenon described in the research report with those that they have seen emerge in their situations. In this case, this study will rely on the experience of the nurse tutors and students that had been in the system of nursing education for more than six years. The research also used questions that were already used in another ADDIE model utilization in schools in Australia and Canada. Shenton (2004) added that the utilization of previous instruments helps in employing the same methods used in another study but conducted in different environments. This can be of great value for the research trustworthiness.

#### **4.3.2.9 ETHICS**

This study was approved by the research ethics committee at the University of the Western Cape (UWC), the University of Malawi (UNIMA) through COMREC. Each head of the participating nursing college gave written approval for the tutors and students to participate in the study. The colleges' administrators and the CHAM secretariat also gave approval for the study to be conducted at their specific colleges.

Confidentiality was addressed by making sure that all the nurse tutors that were involved during in-depth interviews were informed that their information was confidential, which meant that only the principal investigator would access the data. The interviews were conducted in private places where each nurse tutor felt free to participate.

Anonymity of the participants was achieved through proper number coding of the recorded data from the in-depth interviews and the data from the recorded focus group.

It has also to be stated that all participants participated voluntarily in the in-depth interviews and focus group. This was done after the participants were thoroughly briefed on the importance of the research to society and the colleges. It also involved letting the participants sign an informed consent before the interviews were conducted.

This research ensured that risks and benefits were totally balanced by making sure that the risks did not outweigh the benefits and vice versa. This was done by way of a full explanation of the importance of the research to every participant before conducting the interviews.

#### **4.4 PHASE TWO: DESIGNING**

After the survey, a task force was formulated to conceptualize the effective teaching strategy based on the survey findings. The design phase of the ADDIE process involved four activities: 1) drafting instructional objectives, 2) drafting test items for measuring competences, interactivity and performance, 3) specifying instructional teaching strategies, and 4) selecting the delivery method both in classroom and at the clinical area.

It was during this second phase where identification of concepts in a form of a blueprint for the new teaching strategy was done using note taking and checklists. It was also in this phase where the following processes were conducted: specifying how materials were learned; identifying specific learning goals; determining the structure of activities; and how assessments were conducted. The tutors made important choices about the course's structure and its delivery methods. Student classification to determine their capabilities on the new strategy was agreed for the implementation. The grouping and sequencing content was done to suit the new instructional teaching strategy based on the needs identified under teaching strategies, competences, interactions and performance attributes. Porter (1997) and Zelen (2010) agreed that there is a need to design course content specifically for use with an interactive, electronic medium. Therefore competence, interactive and performance tests to show mastery of the tasks were developed.

Tutors also listed the entry behaviour that nursing students must demonstrate prior to entering the learning programme. Time was allocated for feedback from the tutors and administrators. This phase took four weeks. In the designing phase of the programme, note taking and use of checklists helped with the collection of pertinent information focusing on the effective teaching strategy.

##### **4.4.1 RESEARCH METHODS**

Development of an effective teaching strategy for nurse tutors, using the five phases of the ADDIE model, was undertaken. The experimental intervention design was adopted to



develop and implement the new teaching strategy in one nursing college and another similar college was adopted as a control. In phase two, the experimental intervention design was more effective to improve the drafting of instructional objectives and test items as well as selecting the delivery method. The controlled experimental quantitative intervention design was chosen because there was the need to compare the new teaching strategy implemented in one independent nursing college with the teaching strategies that were in use both in class and at the clinical area in another similar college. According to Field (2009), an experimental design is an independent design in which different treatment subjects utilize different organisms and so the resulting data are independent (between-group or between-subject designs). Thus, St. Johns nursing college was chosen as the control centre while Nkhoma Nursing College was chosen for the intervention. This was done because the two colleges were more than 300km apart, which reduced the recall and information bias. Moreover, an experimental design incorporating two or more predictors (or independent variables) all of which have been manipulated using different participants (or whatever entities are being tested), was employed.

#### **4.4.2 SAMPLING**

Purposive sample of administrators and college tutors and random sampling of students and experts in nursing education was done for phase two. Multi-stage sampling was done in this phase in the process of the drafting instructional objectives, test items and selecting the delivery method. The formulation of a nurse tutor task force helped to achieve the four stages of this phase. The main instruments included meetings, use of checklists, note taking, observation of classroom activities, and checking of the curriculums based on their blue prints.

#### **4.4.3 RELIABILITY ASSESSMENT**

In the process of developing an effective teaching strategy, the reliability assessment focused on equivalence between observers in rating or coding behaviours of tutors and students behaviour. This helped to estimate interrater (or inter-observer) reliability.

#### **4.5 PHASE THREE: -DEVELOPMENT**

In the development phase, tutors and administrators developed the prototype for the teaching process. A training prototype provided a preview of the teaching strategy. It showed what the

final course will look like once it is completed. This phase focused on redesigning or modifying and refining the newly developed instructional design in phase two. In this phase, which also used the experimental design, research methods focused on the implementation of the new teaching strategy. This was done step-by-step, including who would do what and when. It resulted in an improved and effective teaching strategy emanating from this phase.

It was also during this phase where the piloting of an effective teaching strategy as a template was drawn up by tutors to students. The effective teaching strategy was assembled and subjected to peer review amongst professionals from different nursing departments, students, tutors themselves and experts. There was a need to collectively agree or settle on a particular student centred teaching strategy as a method of delivery of learning to students in the classroom and at the clinical area. This new method was assessed among tutors and administrators for its consistency and was validated by experts. The experts were mostly senior lecturers and professors in nursing education at the universities of the Western Cape (UWC) and Malawi. Tutors, as the experts, read through the model process (the teaching strategy) materials, looking for errors rather than as learners interacting with the course. It was during this phase where tutors learnt how to search for information on internet, upload information and communicate with students via the internet (E-learning). It was important to test the instructional design in order to measure the amount of time students require for each module or course using the new teaching strategy. Greaney et al (2005) pointed out that it is during development phase where tutors confirm that learners understand the teaching instructions for activities and exercises. This phase took approximately 3 weeks to be completed.

#### **4.5.1 SAMPLING**

The main role players in the development phase were the randomised students, purposive nurse tutors, administrators and purposively selected experts. The students were involved in modifying the main attributes. Much work was done by the selected nurse tutors committee on modifying the teaching strategy characteristics, competence characteristics, interaction characteristics and the performance characteristics. The experts helped to eliminate the unwanted characteristics from the new teaching strategy. The main instrument was the different attributes checklist which was circulated to various experts for their professional judgement. The task force of nurse tutors used the internet and current electronic books to

uplift the standards of the qualities of teaching strategies, teaching aids, competences, interaction and performance.

#### **4.6 PHASE FOUR: IMPLEMENTATION**

This was the phase where the programme participatory implementation was done following the same experimental design research method as in previous phases. This means that all the student tutoring using a student centred and developed teaching approach was done. During this phase it was important to make sure that the course was efficiently delivered to the learners by making sure that there was adequate tutor preparation on the new effective teaching strategy. This means that tutors underwent comprehensive training on how to use the new teaching strategy.

Generally, the implementation phase contained a lot of project management and logistics issues. There was a need to establish the course timetable for the course rollout. Using the note taking and checklists, the in-training evaluation of the implementation on the chosen teaching method was done both in the classroom and at the clinical area. There was intensive monitoring on how tutors and students performed in the process of the implementation. Nurse tutors' performances were evaluated, thus they were guided on how to effectively use the teaching strategy both in the classroom and at the clinical area. Students wrote a mid-semester and final test on the course content in this phase.

The planning of the performance indicators was done during this phase, which also helped to properly plan for evaluation. Therefore, the teaching strategy that yielded the best results both in the classroom and at the clinical area was called the effective teaching strategy. Simonson et al, (2000) note that the tutors and administrators should be prepared in the event that technical problems occur and discuss alternative plans with the students ahead of time. Bourne et al, (1997) also noted that summative evaluations help to assess the outcome of the course. Thus, developing this phase took almost ten weeks.

##### **4.6.1 SAMPLING AND INSTRUMENTS**

The purposively selected first year students and third year students were the main groups of students who were taught using the new teaching strategy in classes during the two semesters.

The nurse tutors who were teaching modules from these classes were also frequently monitored to check on their progress. Nurse tutors were advised to use the checklist of the teaching strategy as the main instrument of the programme. The Dean of the faculty of nursing was responsible for monitoring of the teaching process in both intervention and control colleges.

#### **4.7 PHASE FIVE: EVALUATION**

In this phase the main activity was to evaluate the efficacy of the new teaching strategy through student examinations in order to test the instructional standards in both intervention and control colleges. Tutors were required to complete an evaluation form regarding the effectiveness of the new teaching strategy. However, the evaluation of the instructional new design started in the earlier phases through formative evaluation, where the students were given mid-semester examinations, and it continued up to the final examinations. The collection of examinations by tutors after tutorial feedback was also regarded as part of the continuous or formative evaluation. Greaney et al (2005) note that effective training helps learners make lasting changes in their workplace behaviours. The changes should not just last for a few days or weeks, they should remain with the learner for months after the training course. Greaney et al (2005) add that formative evaluation takes place at each stage of the project, while summative evaluation occurs upon full implementation of the project.

The final measurement of the effectiveness and efficiency of the instructional design in this study was done through series of meetings among students, tutors and administrators. In these feedback meetings, note taking and checklists were used to capture the overall effect of the instructional design and the gap analysis that was conducted through professional meetings to summarise the effective teaching strategy. Tables and figures on the evaluation results from both the students and the nurse tutors in both nursing colleges were compared to check if the new teaching strategy was effective.

##### **4.7.1 EVALUATION METHODS**

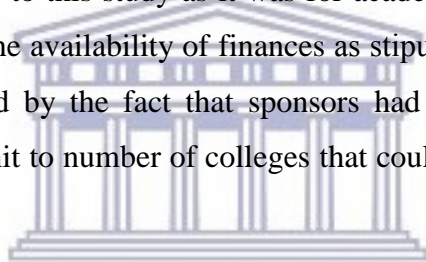
Gap descriptive analysis was the main method of evaluation in both the interventional and control nursing colleges. Using the main attributes, both students and nurse tutors were compared on their teaching competences, interaction and performance needs. The examinations results of the students also guided the reality of the effectiveness of the new

teaching strategy. Nurse tutors who were directly involved in teaching the students during the intervention period were also compared with their counterparts in the control college.

#### **4.8 POSSIBLE CONSTRAINTS OF THE STUDY**

The presence of the researcher during the implementation phase affected the focus of the tutors on teaching to some extent due to the fact that many of them had conducted research previously or had assisted a researcher in nursing as a student (i.e. Hawthorne effect). This led to an overestimation of quality. Gerrish and Lacey (2010) propose that participants may not conceal features of their usual practice for a longer period. Therefore, prolonged exposure to observations proposed in this research had the potential to reduce any chances of behaviour resulting from the “observer effect” as the researcher became accustomed to the tutors and they relaxed and conducted their teaching in their usual way (Hughes, 2013).

There were budget constraints to this study as it was for academic purposes and funding for this study was dependent on the availability of finances as stipulated in the sponsors’ budget. The problem was exacerbated by the fact that sponsors had limited budgets for research projects. This resulted in a limit to number of colleges that could be visited, time spent at the college and activities done.



UNIVERSITY of the

WESTERN CAPE

#### **4.9 SUMMARY**

This chapter has focused much on the methodology of the research in each phase based on the research objectives. Objectives one and two have been addressed in phase one of the ADDIE model while objective three has been addressed in phase two to phase five of the ADDIE model. Mixed methods were adopted mainly in phase one, while phases two to five used interventional experimental methods. The importance of the sampling techniques, instruments, inclusion criteria, data analysis and ethical issues were expounded.

# **CHAPTER FIVE**

## **DATA ANALYSIS AND PRESENTATION OF RESULTS**

### **5.0 INTRODUCTION**

This chapter presents the results based on the first three objectives of the study. These objectives were set out to examine the experience of tutors and students on teaching strategies, teaching and learning aids, tutors' competency, tutors' interaction with students and tutors' performance. This chapter, therefore, presents both the quantitative and qualitative findings on these objectives. The results reflect analysis for the randomly sampled 129 nursing students and 82 nurse tutors quantitatively with a response rate of 96% for students and 81 % for tutors as shown in chapter three above.

During analysis, the two questionnaires (students and nurse tutors) were classified into seven components that reflected the teaching strategies, teaching aids, tutors' competency, tutor and student interaction, tutors' classroom performance, tutors' clinical performance and student assessment. A group of 37 tutors were involved in in-depth interviews and 8 classified student focus groups represented the qualitative part with full participation. All the data was processed manually as described in Chapter 3 above. The questionnaires of both nurse tutors and students were mostly compiled of 5 ranked Likert Scale. There were 61 variables in section two of the teaching strategy and the Cronbach's Alpha was found to be 0.964 without standardisation and 0.963 after standardisation. This means that the data is very reliable and reflects the real teaching strategies that nurse tutors in Malawi use when teaching at the various colleges.

Generally, tutors use the lecture method in conjunction with other strategies such as questions and answers. There is a large discrepancy in student-tutor interaction both in the classroom and at the clinical area. The use of teaching and learning aids differ from one nursing college to another, although at these colleges, nurse tutors use the same Nurses Council prescribed curriculum and syllabus. Although the tutors' competence shows positive distribution in bivariate analysis, the students' outcome evaluation reveals common negative correlations in bivariate analysis and negative association in binary logistic regression.

The students' study experience and nurse tutors' work experience has shown different reflections on the challenges of interaction both in the classroom and at the clinical area. Nurse tutors believe that their performance in their teaching process both in the classroom and at the clinical area is good, however, students are generally not satisfied with the tutors' performance, particularly in the clinical area. College funding has been a major barrier to the proper utilisation of teaching strategies although there has not been a strong association between tutors' work experience and the teaching strategies, students' study experience and the interactions respectively, in both bivariate analysis and the logistic regression analysis.

### **5.1 DISTRIBUTION OF TUTORS' AND STUDENTS' ON THE USE OF EACHING STRATEGIES**

In table 5.1, using the Likert scale, only two teaching methods under the direct instruction teaching strategy group were found to be commonly used by tutors. A total of 44.6% (55) n=129 of the students agreed that tutors use the lecture teaching method; and 41.1% (53) n=129 of the students strongly agreed that their nurse tutors have used demonstration strategy during teaching in their class and at the clinical area (see table 5.1 below).

In the interactive instruction category, the findings reveal that four teaching strategies were not often used during teaching by nurse tutors in the last semester of 2014. 41.9% (54) n=129 of the students agreed that during the last semester they had seen their tutors using role-play as a teaching strategy. Furthermore, 49.6% (64) n=129 of the students indicated that they had seen some of their tutors using brainstorming as a teaching method in class. However, 46.5% (60) n=129 of the students agreed that they were not sure that they had seen their tutors using Jigsaw as a teaching strategy. This suggests that most of the tutors in Malawi nursing colleges do not use Jigsaw as a teaching strategy both in the classroom and at the clinical area.

**Table 5.1: Distribution of Students' on tutors' use of teaching strategies n=129**

Teaching strategy	strongly disagree	disagree	not sure	agree	strongly agree
Direct Instructions :	N(%)	N(%)	N(%)	N(%)	N(%)
Lecture	5(3.9)	4(3.1)	7(5.4)	<b>55(42.6)</b>	<b>58(45.0)</b>
Explicit Teaching	11(8.5)	10(7.8)	44(34.1)	<b>45(34.9)</b>	19(14.7)
Demonstrations	6(4.7)	7(5.4)	11(8.5)	<b>52(40.3)</b>	<b>53(41.1)</b>
Guided & Shared - reading, listening,	5(3.9)	6(4.7)	19(14.7)	<b>67(51.9)</b>	32(24.8)
Interactive Instructions:					
Debates	30(23.3)	30(23.3)	15(11.6)	42(32.6)	12(9.3)
Role-playing	26(20.2)	26(20.2)	10(7.8)	<b>54(41.9)</b>	13(10.1)
Brainstorming	6(4.7)	4(3.1)	14(10.9)	<b>64(49.6)</b>	41(31.8)
Discussion	3(2.9)	5(3.9)	8(6.2)	43(33.3)	<b>70(54.3)</b>
Jigsaw	25(19.4)	18(14.0)	<b>60(46.5)</b>	19(14.7)	7((5.4)
Indirect Instructions:					
Problem Solving	9(7.0)	9(7.0)	21(16.3)	<b>63(48.8)</b>	26(20.2)
Case Studies	4(3.1)	5(3.9)	7(5.4)	<b>58(45.0)</b>	<b>54(41.9)</b>
Concept Mapping	14(10.9)	21(16.3)	<b>65(50.4)</b>	18(14.0)	11(8.5)
Independent Studies					
Essays	9(7.0)	14(10.9)	14(10.9)	<b>42(32.6)</b>	<b>50(38.8)</b>
Reports	9(7.0)	11(8.5)	29(22.5)	<b>53(41.1)</b>	27(20.9)
Learning Activity Packages	13(10.1)	18(14.0)	<b>44(34.1)</b>	35(27.1)	19(14.7)
Homework	7(5.4)	10(7.8)	16(12.4)	<b>52(40.3)</b>	<b>44(34.1)</b>
Research Projects	16(12.4)	10(7.8)	27(20.9)	37(28.7)	39(30.2)
Experiential Learnings:					
Field Trips	36(27.9)	23(17.8)	20(15.5)	20(15.5)	29(22.5)
Simulations	26(20.2)	24(18.6)	<b>52(40.3)</b>	14(10.9)	11(8.5)
Storytelling	24(18.6)	25(19.5)	26(20.2)	41(31.8)	11(8.5)
Clinical Observations	18(14.0)	30(23.3)	24(18.6)	34(26.4)	23(17.8)
Role-playing	23(17.8)	23(17.8)	25(19.5)	36(27.9)	22(17.1)
Surveys	24(18.6)	26(20.2)	35(27.1)	24(18.6)	20(15.5)
Instructional Skills:					
Explaining	4(3.1)	1(0.8)	7(5.4)	<b>60(46.5)</b>	<b>57(44.2)</b>
Demonstrating	3(2.3)	4(3.1)	5(3.9)	<b>55(42.6)</b>	<b>62(48.1)</b>
Questioning	3(2.3)	3(2.3)	1(0.8)	<b>63(48.8)</b>	<b>59(45.7)</b>
Questioning Technique	1(0.8)	9(7.0)	12(9.3)	<b>62(48.1)</b>	<b>45(34.9)</b>



With reference to the teaching strategy, one of the nurse tutors pointed out that:

*“Lecture method has its own advantage, mainly you can present content in a specified period of time and you also deliver that content to a large number of students at the same time, these other methods are limited because let’s say a tutor is using a group discussion... Sometimes the topics are a little bit more challenging to the students so much that you will need a lot of explaining to do for them to understand. It’s not every topic to use lecture method but I select on the list the topics that I have to teach or I feel need more explaining as a lecture for the students than just using any other method ...”*

*“the content itself so I would check out the content and maybe weigh that if I use a different method from the lecture method is it is the message going to go across like I want it to be or are there going to be some gaps between. Because most of the time like with the NMT programme there is a need of a lot of leveling that you need to do and you see that some content are difficult”.*

This suggests that time, type of topic, students’ cognitive levels and class size determine the lecture teaching strategy selected by nurse tutors. Furthermore, when the theme of teaching strategy was discussed by nurse tutors on the priori code of time management, it was noted that time is a strong predictor of teaching strategy choice for nurse tutors as she pointed out:

*“The time period given for tutors is short with break periods in between (almost six weeks) so in order for them to cover most of things we use lecturing strategy...moreover, traditionally I think lecture was the method that tutors were well oriented to when they were being given an orientation to teaching. That was the traditional method that was highlighted and that’s what they found mostly other tutors or lectures using so we followed suite but later on we were using newer methods like PBL which we were then given an orientation too...”*

However, 54.3% (70) n=129 of the students agreed that they had seen their nurse tutors using discussion as a teaching strategy. Although 2.9% (3) n=129 indicated that they disagreed that they had seen their tutors using the discussion as a teaching strategy, it must be pointed out that discussion is a common teaching strategy under many interactive instructions for nurse tutors in Malawi.

While there are more than ten indirect teaching instructions, nurse tutors in Malawi commonly use problem solving; case study; reflective discussion and concept mapping

teaching strategies. It was noticed that 48.8% (63) n=129 of the students agreed that the nurse tutors had used the problem-solving teaching strategy both in the classroom and at the clinical area in the last semester (see table 5.1). It has also to be noted that this type of discussion is different from interactive discussion as it focuses on a student-centred approach, where the tutors give class work to students to discuss on their own. The following reflects the views of some students when the theme of teaching strategy was probed in the category of indirect instructions, the priori code of group discussion come out as below:

*“For group discussion normally what they do is to divide us students into groups and then assign different topics, which they tell us to work on them as a group, and we are given time, to say for example, two weeks to write the assignment and then come up with a power point presentation. Therefore, we present in class for sometimes we do the group work then submit for marking”.*

However, when the students were asked about the use of case study as a teaching strategy, 45.0% (58) n=129 of the students agreed that they had seen tutors using case study, while 45.7 (59) n=129 agreed that they had seen their tutors utilising reflective discussion during teaching. Although concept mapping is advocated by the nurses’ council, 50.4% (65) n=129 of the students indicated that they are not sure that nurse tutors utilise this teaching strategy. It was also noticed that 50.4% (65) n=129 of the students agreed that their tutors had used concept mapping during the last semester.

On the independent instruction, only three teaching strategies such as essays, clinical reports and homework were found to be ever used by tutors. 38.8% (50) n=129 of the students strongly agreed that their nurse tutors used essay questions when writing examinations. While 41.1% (53) n=129 of students agreed that they had seen their tutors using reports as the teaching strategy, only 40.3 (50) n=129 of the students agreed that their tutors had ever used homework as a teaching strategy (see table 5.1).

In the category of experimental learning; field trips, simulation, story-telling and role-play were mostly used by nurse tutors. For example, it was noted that 15.5% (20) n=129 of the students had seen their tutors utilizing field or clinical trips as a teaching strategy although 27.9% (36) n=129 of the students strongly disagreed that their tutors had used this teaching strategy during the previous semester. However, 27.9% (36) n=129 of the students agreed

that they had seen their tutors facilitating a role-play as a teaching strategy in their classroom, but not at the clinical area and 19.5 (25) n=129 of the students were not sure that their tutors had used role-play as a teaching strategy in the clinical area. This suggests that role-play is not commonly used by nurse tutors as a teaching strategy in the clinical area. When some tutors were asked about this during in-depth interviews, they indicated that some of these teaching strategies are new to them and were not trained to use them.

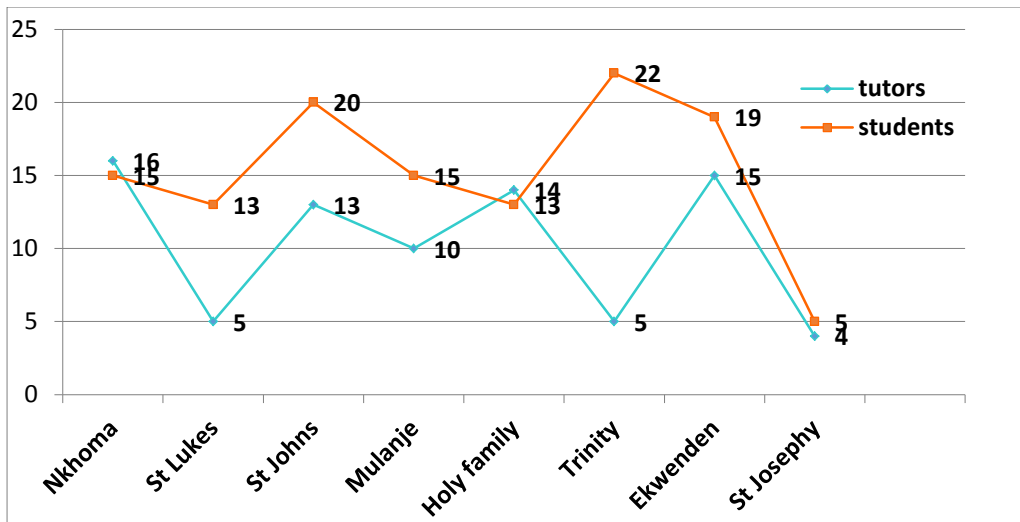
In the category of instructional skills, only demonstration appeared to be regularly used by nurse tutors in Malawi. This is because 48.1% (62) n=129 of the students strongly agreed that their tutors had used demonstration method during teaching in the last semester both in the classroom and at the clinical area. It was only 2.3% (3) n=129 of the students who strongly disagreed that their tutors made use of demonstration as a teaching strategy in the classroom and at the clinical area. When the nurse tutors were probed to explain why they use the demonstration method, one of them said:

*“In the nursing profession because it’s a mostly skill based, there is no way you can teach students to acquire knowledge without a demonstration so what you do is when you take the students to the clinical area there are several skills which they have to accomplish by the end of the placement so in actual sense you should go skill by skill put the skills that are involved in that particular placement”.*

UNIVERSITY of the  
WESTERN CAPE

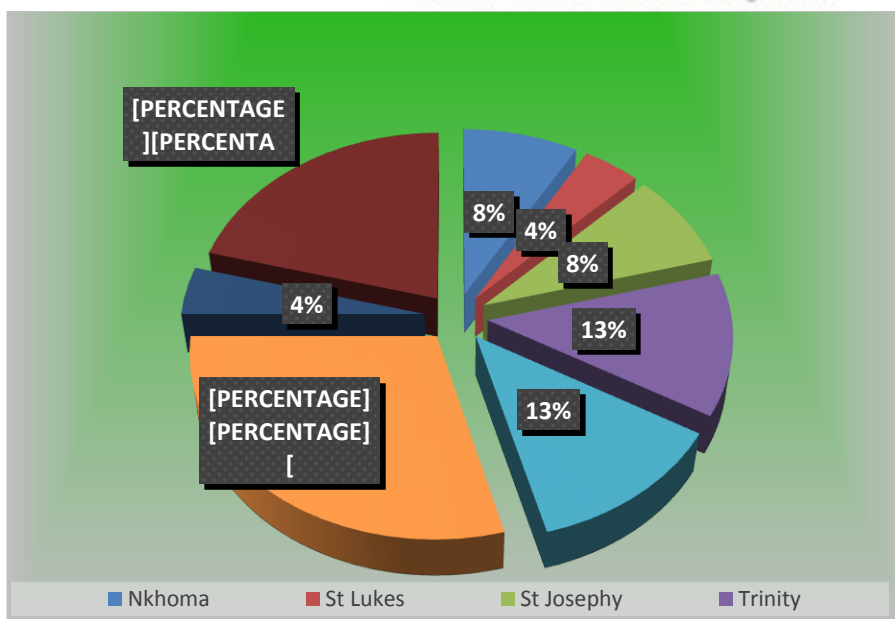
It should be noted that the use of demonstration is common in nursing because the profession is skill based. Students need to practice skills in different clinical area. However, nurse tutors face a variety of challenges with demonstration due to large numbers of students and a lack of resources.

Furthermore, 44.2% (57) n=129 of the students strongly agreed that their tutors had used the explanation strategy when teaching in the classroom and at the clinical area. It was only 3.1% (4) n=129 of the students who strongly disagreed that their tutors used explanation as a teaching strategy in the classroom. This suggests that instructional skills are commonly used by nurse tutors in all colleges of nursing in Malawi.



**Figure 5.1: Distribution of students' and tutors' participation in the study**

Figure 5.1 shows the number of students and tutors from the various nursing colleges that participated in the study. It is clearly indicated that out of eight colleges that were involved in the data collection, only St Lukes Nursing College, Trinity Nursing College, and St. Joseph Nursing College exhibited a poor response rate on the questionnaires. However, Ekwendeni Nursing College and St. Johns Nursing College had a much higher response rate. Nkhoma Nursing College and Ekwendeni Nursing College both had adequate nurse tutors' and students' response rate on the questionnaires.



**Figure 5.2: Distribution of tutors on role-play**

In figure 5.2. The use of role-play as a teaching method was compared in all eight nursing colleges. It was deduced that 29% of the students who strongly disagree with the use of Role-play were from Holy Family Nursing College, followed by the students from St. Johns. This suggests that the use of role-play as a teaching strategy is very limited in all nursing colleges in Malawi.

On the theme of teaching strategy, nurse tutors were probed to give reasons on why they used the methods, one of the nurse tutors said:

*“A situation determines the teaching strategy, which you want to use that time. For example, you cannot use lecture or role-play in the ward where you want students to acquire skills. Sometimes it’s the time allocated to that topic because discussion takes a little bit more time than lecture. Type of the topic; contents of the topic I should say. Amount of content and level of learners. For the beginners I think it is very difficult to use role-play method because they know nothing”.*

This suggests that choosing a teaching strategy is largely dependent on the individual lecturer who is going to teach the topic to the students. Although the teaching strategies are stipulated in the curriculum, nurse tutors have the mandate to choose their teaching strategies in line with the topics, content and type of students. For example, one student in a priori code of a focus group stated that:

*“Sometimes is the resources that make you choose the particular teaching strategy to use during out presentations in class. For example, lecture method they need a lot of resources so in situations where you don’t have enough resources you would choose just to stand in front of the students talk to them off you go”.*

Therefore, the availability of resources in colleges dictates what type of teaching strategy the nurse tutors choose.

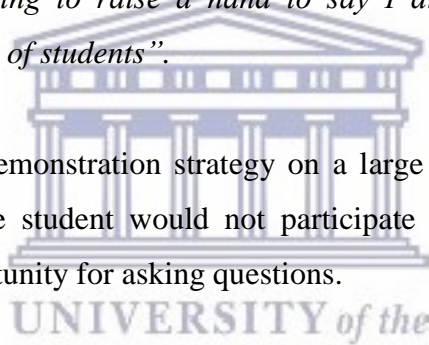
In table 5.2 regarding direct instruction, nurse tutors at the various colleges indicated that they commonly use the lecturer method, deductive questioning and demonstrations. A total of 56.1% (46) n=82 of the tutors in all colleges strongly agreed that they commonly use the lecture teaching strategy. Only 4.9% (4) n=82 strongly disagreed that they commonly use this strategy. Only 28% (23) n=82 of the nurse tutors strongly agreed that they also use didactic questioning in combination with the lecturer method in the classroom and at the clinical area.

It should be pointed out that 69.5% (57) n=82 of the nurse tutors strongly agreed that they use demonstration both in the classroom and at the clinical area. This concurs with the nursing students, who also highly agreed that demonstration is the common teaching strategy both in the classroom and at the clinical area.

In response to the in-depth interview on the theme of teaching strategy and the challenges that nurse tutor's experience regarding the use of demonstration, a nurse tutor in Mulanje Nursing College said:

*“The main challenge when the lecture is demonstrating... the lecture demonstrates to a large number of students so maybe somebody has not understood and majority has understood and the lecture say have you understood the majority will say yes we have understood maybe a few, one or two people haven't understood so they are not maybe able to raise a hand maybe to say demonstrate again, it's a challenge because some understand and some don't understand and they are failing to raise a hand to say I didn't understand because its demonstrated to a large group of students”.*

This implies that using the demonstration strategy on a large group of students presents a significant challenge as some student would not participate fully. Some students do not understand and have no opportunity for asking questions.



**TABLE 5.2: DISTRIBUTION OF TUTORS ON TEACHING STRATEGIES n=82**

Teaching strategy	strongly disagree	disagree	not sure	agree	strongly agree
<b>Direct Instructions :</b>					
Structured Overview	20(24.4)	6(7.3)	20(24.4)	21(25.6)	15(18.3)
Lecture	4(4.9)	7(8.5)	5(6.1)	20(24.4)	<b>46(56.1)</b>
Explicit Teaching	13(15.9)	11(13.4)	<b>36(43.9)</b>	13(15.9)	9(11.0)
Drill & Practice	17(20.7)	12(14.6)	15(18.3)	21(25.6)	17(20.7)
Compare & Contrast	13(15.9)	11(13.4)	12(14.6)	<b>34(41.5)</b>	12(14.6)
Didactic Questions	15(18.3)	10(12.2)	21(25.6)	23(28.0)	13(15.9)
Demonstrations	4(4.9)	3(3.7)	1(1.2)	17(20.7)	<b>57(69.5)</b>
<b>Interactive Instructions:</b>					
Debates	19(23.2)	21(25.6)	10(12.2)	20(24.4)	12(14.6)
Role-playing	7(8.5)	11(13.4)	11(13.4)	<b>29(35.4)</b>	24(29.3)
Brainstorming	4(4.9)	11(13.4)	6(7.3)	27(32.9)	<b>34(41.5)</b>
Discussion	1(1.2)	2(2.4)	2(2.4)	<b>27(32.9)</b>	<b>50(61.0)</b>
Jigsaw	28(34.1)	14(17.1)	26(31.7)	10(12.2)	4(4.9)
Problem Solving	10(12.2)	10(12.2)	14(17.1)	<b>32(39.0)</b>	16(19.5)
<b>Indirect Instructions:</b>					
Problem Solving	9(11.0)	5(6.1)	8(9.8)	<b>32(39.0)</b>	<b>28(34.1)</b>
Case Studies	3(3.7)	1(1.2)	5(6.1)	25(30.5)	<b>48(58.5)</b>
Reflective Discussion	7(8.5)	4(4.9)	6(7.3)	<b>40(48.8)</b>	25(30.5)

Concept Mapping	20(24.4)	16(19.5)	19(23.2)	21(25.6)	6(7.3)
<b>Independent Studies</b>					
Essays	12(14.6)	8(9.8)	6(7.3)	31(37.8)	25(30.5)
Journals	21(25.6)	19(23.2)	17(20.7)	19(23.2)	4(4.9)
Reports	13(15.9)	5(6.1)	5(6.1)	<b>38(46.3)</b>	21(25.6)
Homework	<b>7(8.5)</b>	<b>6(7.3)</b>	<b>2(2.4)</b>	<b>36(43.9)</b>	<b>31(37.8)</b>
Research Projects	<b>24(29.3)</b>	<b>10(12.2)</b>	<b>13(15.9)</b>	<b>22(26.8)</b>	<b>13(15.9)</b>
<b>Experiential Learnings:</b>					
Field Trips	23(28.0)	11(13.4)	9(11.0)	16(19.5)	23(28.0)
Narratives	21(23.6)	16(19.6)	13(15.9)	<b>24(29.3)</b>	8(9.8)
Simulations	9(11.0)	12(14.6)	10(12.2)	<b>27(32.9)</b>	<b>24(29.3)</b>
Storytelling	22(26.8)	19(23.2)	9(11.0)	19(23.2)	13(15.9)
Clinical Observations	10(12.2)	11(13.4)	9(11.0)	<b>28(34.1)</b>	<b>24(29.3)</b>
Role-playing	10(12.2)	12(14.6)	8(9.8)	<b>27(32.9)</b>	<b>25(30.5)</b>
Model Building	21(23.6)	23(28.0)	13(15.9)	15(18.3)	10(12.2)
Surveys	22(26.8)	22(26.8)	10(12.2)	14(17.1)	14(17.1)
<b>Instructional Skills:</b>					
Explaining	2(2.4)	1(1.2)	3(3.7)	<b>25(30.5)</b>	<b>51(62.2)</b>
Demonstrating	1(1.2)	4(4.9)	4(4.9)	<b>21(23.6)</b>	<b>52(63.4)</b>
Questioning	1(1.2)	3(3.7)	1(1.2)	<b>30(36.5)</b>	<b>47(57.3)</b>

On the interactive teaching instructions (table 5.2), nurse tutors were found to be using mainly role-play, brainstorming, discussion, problem solving and, occasionally, tutorial groups. 35.4% (29) n=82 of the nurse tutors agreed that they used role-playing as teaching strategy both in the classroom and at the clinical area. However, only 8.5% (7) n=82 of the nurse tutors disagreed to have used the role-play as teaching strategy during the last semester. This is in contrast with the nursing students, who mainly disagreed that tutors regularly make use of role-play as a teaching strategy in the classroom. 41.5% (34) n=82 of the nurse tutors strongly agreed that they have used brainstorming as an interactive teaching instruction during the last semester both in the classroom and at the clinical area. 61.0% (50) n=82 of the nurse tutors strongly agreed that they had used discussion as a teaching instruction during the last semester both in the classroom and at the clinical area.

During the in-depth interviews on the theme of the teaching strategy on priori code on the use of case studies, one of the lectures from St Luke Nursing College said:

*“Case studies are very good because you put the student in the scenario, in the situation and they think over the situation, they are able to feel the condition and when you teach using a case study the students understand the condition much more than when you just bring in the topic of maybe, I will give an example of maybe diabetes type 2, first of all you can maybe give a scenario to the students before you start teaching but the students should look for information pertaining to that case and when they bring in their information following that case, when you are discussing they will understand the condition much better than the way you can just bring in”.*

Therefore, nurse tutors feel case study is a suitable method as it places the students in real situations where they can easily assimilate knowledge which they still remember during examinations. They are eager to participate and influence one another during the learning process.

On the indirect teaching instructions, nurse tutors commonly make use of problem solving, reflective discussion and concept mapping. 39.0% (32) n=82 of the nurse tutors agreed that they use problem solving as a teaching strategy both in the classroom and at the clinical area. However, only 6.1% (5) n=82 of the nurse tutors disagreed that they had used problem solving during the last semester when teaching both in the classroom and at the clinical area. 48.8% (40) n=82 of the nurse tutors agreed that they have used reflective discussion as a teaching strategy both in the classroom and at the clinical area. Although problem-solving and reflective discussion teaching strategies are commonly used by nurse tutors as indirect teaching instructions, only 7.3% (6) n=82 of the nurse tutors strongly agreed that they have used concept mapping during teaching in the last semester (table 5.2).

Some nurse tutors gave specific valid reasons for the use of concept mapping. For example, a nurse tutor from Ekwendeni Nursing College noted:

*“I think it makes concepts easier for students to remember because it is presented in a diagram, so when a student is relaying the notes, she can easily get what was taught. Because they are presented in a diagram, they attract students to grasp the concepts. They are also related, you relate the concepts easily in a concept map. When you are reading, even depending on how you have presented it, so if its colors or what, so it can also attract the students in that way”.*

This implies that some students would more easily understand the topic if it is presented in pictures and figures. Furthermore, on the theme of teaching strategy, when nurse tutors were questioned on their use of the priori code of concept mapping, one nurse tutor said:

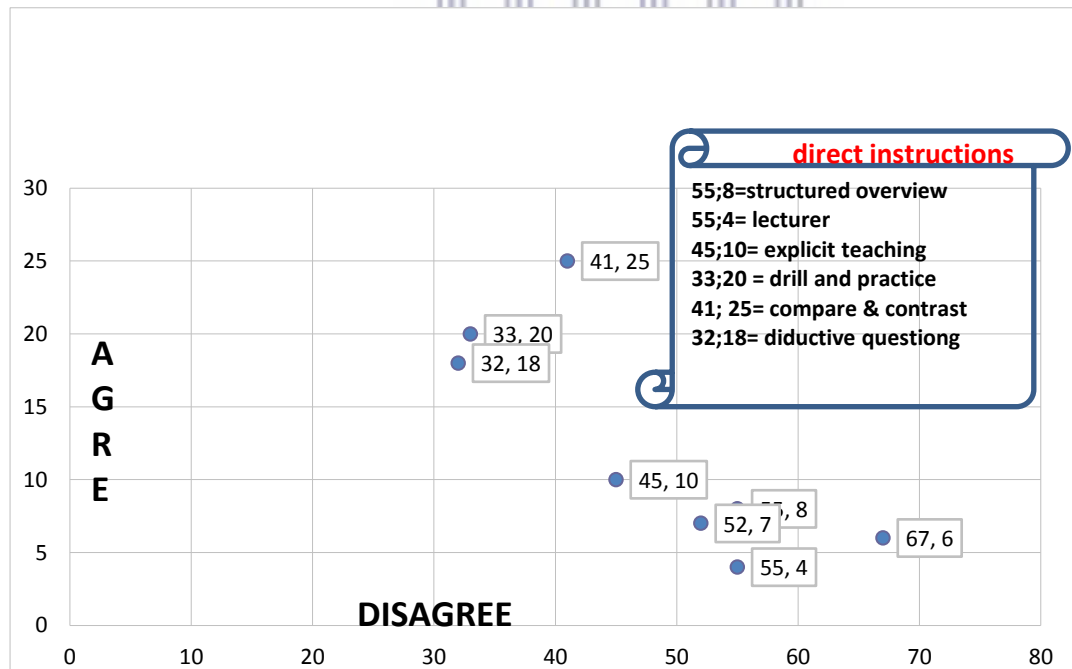
*“It helps reduce boredom, suppose you are using one teaching strategy they may label you. If you use one strategy they can associate you with that strategy so when we employ different strategies like concept mapping, the students learn and they are ready for your class in class. therefore you want to be the best tutor or lecturer, you are supposed to choose innovative*



teaching methods, not just the lecture method that I was using, but I needed to have a teaching strategy that is innovative, so concept mapping I thought it was simple, it was simple for me in terms of teaching as well as I think students would be able to understand issues more clearly, so that's what prompted me to use it. And I understood it I class, not in class but during my readings, so I wanted to use it. Students were attracted with it”.

This indicates that students become active in class if the nurse tutors make use of innovative teaching strategies. Varying the teaching strategy prevents students from becoming bored in class.

In figure 5.3, nurse tutors' use of direct teaching instructions was tabulated on a grid box plot. It was clearly observed that nurse tutors disagreed on the use of guided read and listen, lecturer, demonstration and explicit teaching. However, they agreed on the use of deductive questioning, drill and practice, compare and contrast, and structured overview. This suggests that although there are many types of indirect instructions, nurse tutors in Malawi only use limited teaching strategies and do so in a mixed format rather than a stand-alone strategy.



**Figure 5.3 Distribution of nurse tutors on direct teaching instructions**

On Independent studies, nurse tutors indicated that they commonly use essays, reports and homework. 30.5% (25) n=82 of the nurse tutors agreed that they have used essay writing as a

method of teaching during the last semester. Only 9.8% (8) n=82 of the nurse tutors disagreed that they have provided essays to their students as a method of teaching during the last semester. It should also be noted that 46.3% (38) n=82 of the nurse tutors agreed that they have used report writing during the last semester as a teaching strategy both in the classroom and at the clinical area. In addition, 43.9% (36) n=82 of the nurse tutors agreed that they use homework as a teaching strategy both in the classroom and at the clinical area. However, only 8.5% (7) n=82 of the nurse tutors strongly disagreed that they have used the homework as a teaching strategy both in the classroom and at the clinical area.

On the experiential teaching instruction of field trips, simulation and clinical observation were the most commonly used teaching strategies. It was noted that 28.0% (23) n=82 of the nurse tutors agreed that they have used field trips as a teaching strategy both in the classroom and at the clinical area. However, another 28.0% (23) n=82 of the nurse tutors strongly disagreed that they have used field trips as a teaching strategy during the last semester. 32.9% (24) n=82 of the nurse tutors agreed that they have used simulation as a teaching strategy both in the classroom and at the clinical area during the last semester, while only 11.0% (9) n=82 of the nurse tutors strongly disagreed that they have used simulation as a teaching strategy during the last semester. 29.3% (24) n=82 of the nurse tutors strongly agreed that they have used clinical observation as a teaching strategy, particularly at the clinical area. 12.2% (10) n=82 of the nurse tutors strongly disagreed that they have used clinical observation as a teaching strategy during last semester.

On the priori code of the focus group, the question of why students fail in the clinical area was raised and one student pointed out that:

*“In class some lectures... they demonstrate but in the ward..mmmm... on the human being sometimes. I feel like they cannot perform on the patient they have forgotten the skills as a result we have to learn from the sisters. So, we know in our hospitals they use shortcuts. When we learn those shortcuts we come and during the exams we do the same and they ask where have you gotten this, but themselves they are not coming to demonstrate the right thing to us. And they say you have to learn from the sisters. So we learn what they do at the end we are wrong because we have used the shortcuts and then we have done wrong things but yet they are there. I feel like they have also forgotten the skill maybe they are afraid of being*

*ashamed as say a lecturer*". Further comments were in the local language which focused on the failure of the nurse tutors and that they need to be active again in the clinical area.

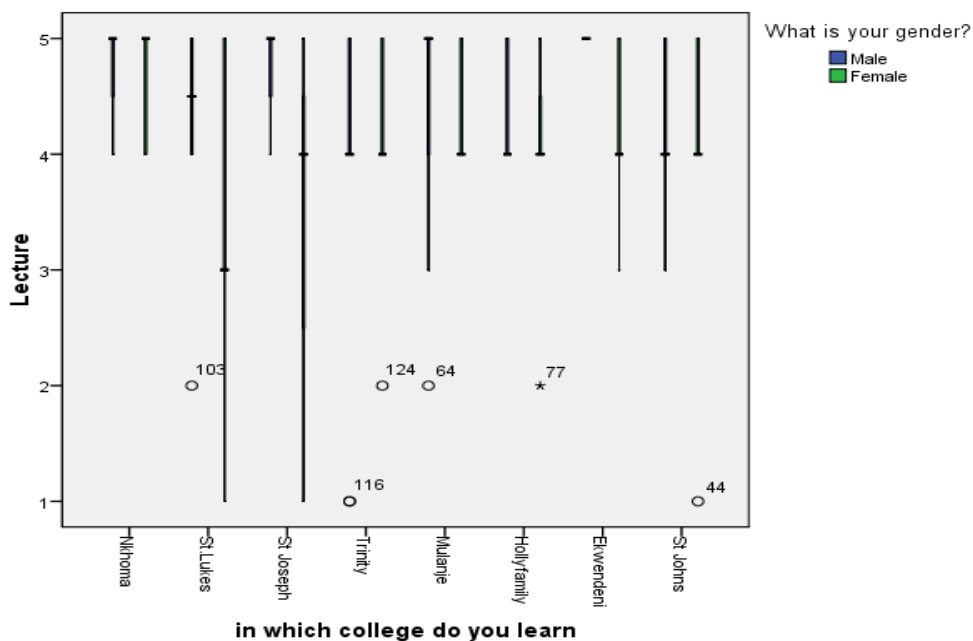
Therefore, nurse tutors are not performing to students' expectation levels, with the result that there is a perception that their knowledge and skills are not utilised to their full potential. Students feel that they learn more from the ward sisters, who mostly take shortcuts in relation to clinical procedures. Nurse tutors tend to lose some of their skills when they do not visit the clinical area regularly.

On instructional skills, it was noted that nurse tutors commonly use demonstration and questioning techniques as teaching strategies, both in the classroom and at the clinical area. 63.4% (52) n=82 of the nurse tutors strongly agreed that they have used demonstration as a teaching strategy both in the classroom and at the clinical area. While 39.0% (32) n=82 of the nurse tutors strongly agreed that they have used the questioning technique as a teaching strategy during the last semester both in the classroom and at the clinical area. Only 7.3% (6) n=82 of the nurse tutors strongly disagreed that they have used questioning techniques as a teaching strategy during the last semester.

One student had the following to say regarding the issue of direct instruction and the failure of nurse tutors in relation to practical demonstrations in the clinical areas:

*"That's very true example, during last allocation, our group Dedza we spent 3 weeks at the antenatal, not even a lecture demonstrated to us then at the labour ward, we stayed maybe 2 to 3 weeks not even a lecture came to demonstrate to us so like that we need their skills as well. It's like what we learn was only from the sisters and fellow senior students. I think most of the methods are used maybe I can say the role-play where we ask the clients to play themselves but most of the methods are the ones which are used because the lectures come and demonstrate to us what they are supposed to teach, because most of the times when they come in class we need to use our hands, develop the skills. Most of the time we do return demonstration, the lecture comes they demonstrate to us and we demonstrate to the lectures because they want to get that we have developed the skill".*

This illustrates that nurse tutors do not perform to students' expectations in the clinical area, which frustrates the students when tutors do not utilise the demonstration teaching strategy. When the students are sent into the field, especially in remote rural areas, there is no follow-up tuition by nurse tutors.



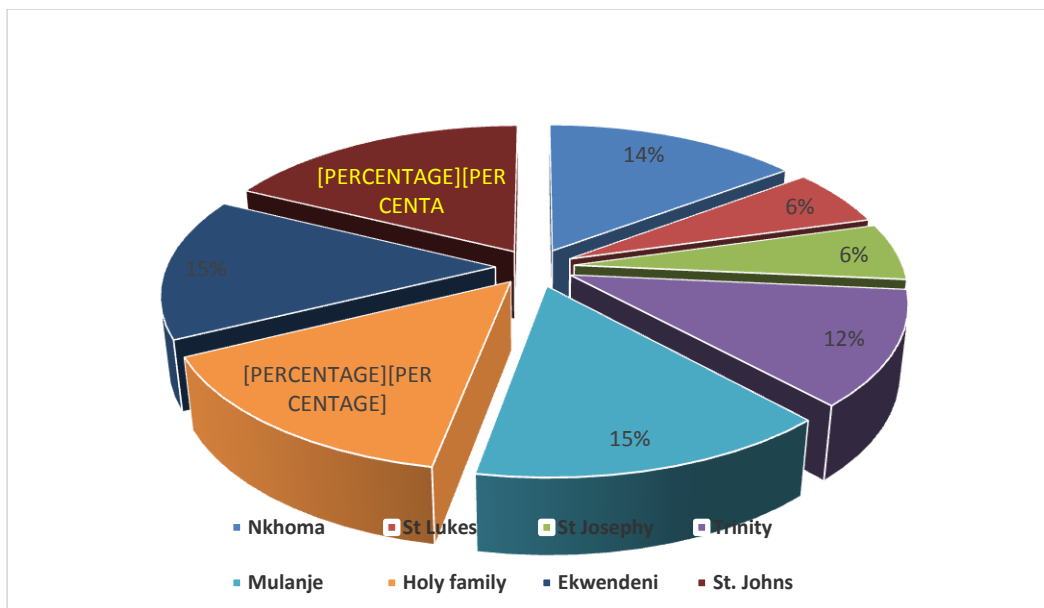
**Figure 5.4: Distribution of nurse tutors' and use of lecture method**

In figure 5.4, the use of the lecture teaching strategy was compared to the gender of nurse tutors and type of the nursing college. It was noted that in almost all colleges, nurse tutors do use the lecture teaching strategy, although female nurse tutors use the strategy more commonly than male tutors. However, there was no difference in the utilisation of this teaching strategy in St. Johns, St. Lukes and Holy Family based on the gender of the nurse tutors and their use of the teaching strategy as showing in the diagram above.

When the students were questioned in the focus group discussion on the reasons for their different choices of teaching methods, a nurse tutor from St. Johns stated that:

*“If for instance we are dealing with third years, you know that they have been to the clinical area they have information, they have seen patients. They know how to take care of patients, so you can bring in other methods that will engage the students to go out and fetch for information. Unlike when maybe you are dealing with first year students who have never gone to the clinical area and they are new in the profession, you would rather use other methods that maybe the teacher would give out more information than actually sending them out to go and search on their own”.*

This indicated that even at the clinical area, nurse tutors have the mandate to select the teaching strategy to fit the instructions in the clinical area, as patient care may not necessarily be compatible with some instructions such as the lecturer.



**Figure 5.5: Distribution of tutors on brainstorming**

In figure 5.5, when the utilisation of the brainstorming teaching strategy by nurse tutors was compared in different nursing colleges, it was noted that 17.0% (22) n=82 of the nurse tutors who strongly disagreed on the use of brainstorming were from St. Lukes Nursing College, while at Holy Family Nursing College, Mulanje Nursing College and Nkhoma Nursing College, 15.0% (20) n=82 disagreed on the use of brainstorming as a teaching strategy during the last semester.

### 5.1.1 DISTRIBUTION OF NURSE TUTORS'S WORK EXPERIENCE AND DEMOGRAPHIC DATA

The nurse tutors' work experience for this study has been classified into two sections, those who have worked for between one and 5 years, and those that have worked more than 6 years. Therefore, the demographic variables were compared with the nurse tutors' work experience as a predictor variable.

In table 5.3 below, it was found that most of the nurse tutors who have more than 6 years of work experience are over 40 years of age and the nurse tutors' age is compared to their work experience in a bivariate analysis with a two-tailed test of significance in Spearman Correlation Coefficient, it is evident that there is strong correlation between age of the nurse tutors and the work experience as the p-value was  $0.000 < p = 0.05$ . This implies that the age of

the nurse tutors influences her or his work experience regarding the utilisation of teaching strategies both in the classroom and at the clinical area.

Most of the nurse tutors who are married have worked for more than six years. This implies that they are more experienced teachers. When the bivariate analysis was conducted in SPSS software, using the spearman correlation co-efficient in a two-tailed test of significance, the null hypothesis that nurse tutors' marital status is not correlated to tutors' work experience was rejected as the p-value was  $0.010 < p = 0.05$ . This indicates that tutors' work experience correlates to the marital status. Thus, marital status influences the nurse tutors' work experience.

When the use of teaching modules by nurse tutors during the last semester was compared to work experience in a cross-tabulation analysis, 62.3% of the nurse tutors with more than 6 years of experience taught nursing modules while only 37.7% of nurse tutors who are not highly experienced did not teach nursing modules.

**Table 5.3: DISTRIBUTION OF TUTORS' WORK- EXPERIENCE AND DEMOGRAPHIC DATA**  
n=82

DEMOGRAPHIC VARIABLE	WORK EXPERIENCE				Total n(%)	P-VALUE
	1-5years		6 and more yrs			
<b>How old are you?</b>						
25-30 yrs	14	77.8%	4	22.2%	18(100)	<b>0.000</b>
31-35yrs	8	50.0%	8	50.0%	16(100)	
36-40yrs	3	15.8%	16	84.2%	19(100)	
>40yrs	7	24.1%	22	75.9%	29(100)	
<b>What is your marital status?</b>						
single	10	55.6%	8	44.4%	18(100)	<b>0.010</b>
married	21	41.2%	30	58.8%	51(100)	
Co-habited	0	0.0%	3	100.0%	3(100)	
widowed	1	10.0%	9	90.0%	10(100)	
<b>To which tribe do you belong?</b>						
Chewa	11	57.9%	8	42.1%	19(100)	<b>0.081</b>
Lomwe	2	15.4%	11	84.6%	13(100)	
Ngoni	4	36.4%	7	63.6%	11(100)	
Tumbuka	7	33.3%	14	66.7%	21(100)	
Yao	1	16.7%	5	83.3%	6(100)	
Other...	7	58.3%	5	41.7%	12(100)	
<b>In which year are you teaching?</b>						
Year 1	8	40.0%	12	60.0%	20(100)	<b>0.273</b>
Year 2	1	11.1%	8	88.9%	9(100)	
Year 3	12	42.9%	16	57.1%	28(100)	
Midwifery	11	45.8%	13	54.2%	24(100)	
<b>Which module do you teach?</b>						
						<b>0.022</b>

Nursing	20	37.7%	33	62.3%	53(100)
Bioscience	2	100.0%	0	0.0%	2(100)
Clinical	8	42.1%	11	57.9%	19(100)
Others	2	25.0%	6	75.0%	8(100)
<b>How many children do you have?</b>					<b>0.024</b>
None	13	56.5%	10	43.5%	23(100)
One	8	61.5%	5	38.5%	13(100)
Two	4	15.4%	22	84.6%	26(100)
>two	7	39.0%	13	61.0%	20(100)

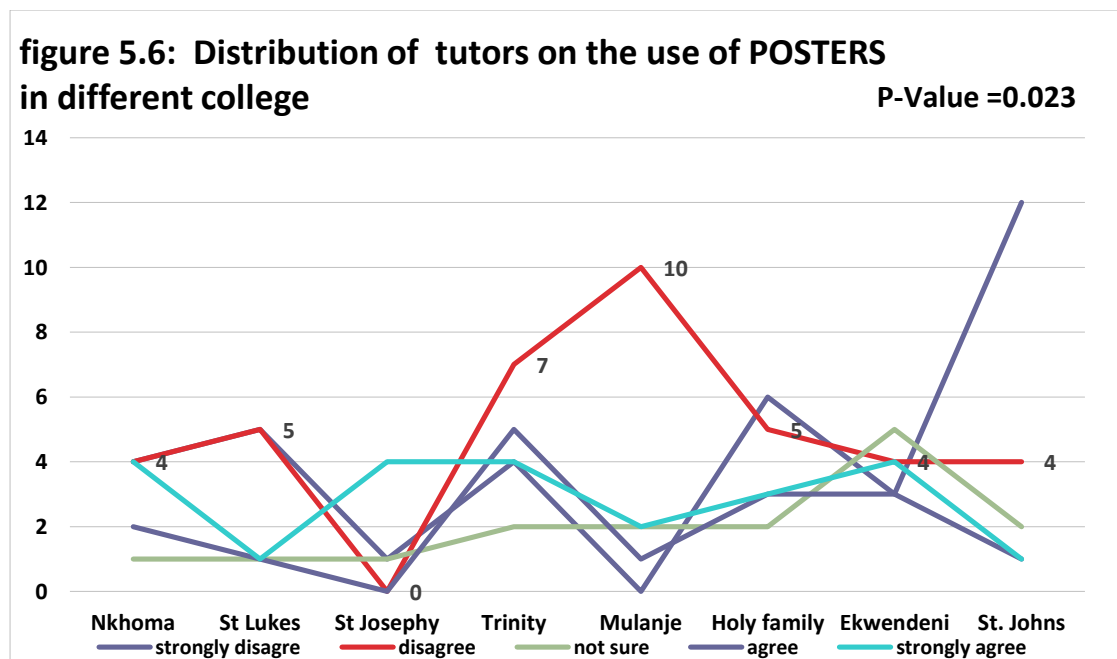
This is a bivariate analysis table where two-tailed test of significance was employed with 95% confidence interval.

Furthermore, with regard to the dependent variable, the type of module was compared to the independent variable of the tutors' work experience in a bivariate analysis using spearman correlation coefficient, after excluding the cases pairwise, the researcher rejected the null hypothesis that the type of module that a nurse tutor teaches does not correlated to the nurse tutors' work experience as the p-value was  $0.022 < p = 0.05$ . This means that the researcher accepted the alternative hypothesis that the type of module that the nurse tutor teaches strongly correlates to the work experience of the nurse tutor. Therefore, it is clear that in Malawi nursing colleges, nurse tutors' work experience influences the type of teaching module that they select from the curriculum in nursing.

However, there is no correlation between the independent variable of nurse tutors' work experience and the level of a student study year. This is because in the bivariate analysis in spearman correlation coefficient in a two-tailed test of significance, the p-value was  $0.273 > p = 0.05$ . This indicates that the tutors' teaching on the level of student study year does not correlated to tutors' work experience. Therefore, the level of the student study year is not influenced by the nurse tutors' work experience in Malawi nursing colleges. In addition, nurse tutors who have two children have more than 6 years of work experience in teaching at a nursing college were evaluated. Even when the bivariate analysis was done in a two-tailed spearman correlation coefficient, with no missing data, the p-value was  $0.024 < p = 0.05$ . This means that there is a strong correlation between the dependent variable number of tutors' students and the tutors work experience.

### 5.1.2 DISTRIBUTION OF NURSE TUTORS' AND STUDENTS' ON USE OF TEACHING AIDS

In figure 5.6, the use of teaching aids, particularly use of posters, was entered into a linear graph. It was obvious that most of the nurse tutors from St. Johns Nursing College strongly agreed that they made use of posters in the last semester during teaching. Mulanje Nursing College was the highest among those who strongly disagreed on the use of posters as a teaching aid. St. Joseph Nursing College made the least use of posters as a teaching strategy when teaching during the last semester in class.



**Figure 5.6 Distribution of tutors on use of posters**

However, in all colleges when spearman correlation coefficient was used in a two-tailed test of significance analysis, it was feasible to reject the null hypothesis that the use of posters by nurse tutors does not correlate to the type of nursing college as the p-value was  $0.023 < p < 0.05$ . This means that use of posters by nurse tutors depends on the type of college where the nurse tutor teaches.



**Table 5.4: Distribution of nursing students on the use of teaching aids by their tutors n=129**

students	Co-variates	in which college do you learn								TOTAL	(p-value)
		Nkhome	St. Lukes	St. Jos	Trinity	Mulan	Holly family	Ekwe	St. Johns		
<b>Use of whiteboard with different marker-colours</b>	strongly agree	8	7	0	8	0	7	6	12	48	<b>0.002</b>
	agree	5	4	3	12	10	7	10	6	57	
	not sure	0	1	1	1	1	0	3	2	9	
	disagree	2	0	1	0	2	3	0	0	8	
	strongly disagree	0	1	1	1	2	2	0	0	7	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of Overhead projector</b>	strongly agree	7	6	1	12	9	12	12	13	72	<b>0.002</b>
	agree	2	3	0	7	6	6	3	5	32	
	not sure	1	1	4	1	0	0	2	1	10	
	disagree	3	1	1	1	0	0	0	1	7	
	strongly disagree	2	2	0	1	0	1	2	0	8	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of LCD Power-point-Presentation</b>	strongly agree	12	7	4	17	7	10	13	12	82	<b>0.413</b>
	agree	1	4	2	4	8	5	6	5	35	
	not sure	0	1	0	1	0	2	0	2	6	
	disagree	1	1	0	0	0	0	0	0	2	
	strongly disagree	1	0	0	0	0	2	0	1	4	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of figurative Models from clinical Laboratory</b>	strongly agree	3	5	0	10	3	2	9	12	44	<b>0.011</b>
	agree	4	5	2	3	8	8	4	5	39	
	not sure	1	2	1	3	1	4	4	3	19	
	disagree	1	0	1	2	1	2	2	0	9	
	strongly disagree	6	1	2	4	2	3	0	0	18	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of research articles</b>	strongly agree	2	1	1	2	4	2	7	7	26	<b>0.050</b>
	agree	7	2	2	5	7	8	9	8	48	
	Not sure	2	6	1	5	1	5	2	3	25	
	disagree	3	2	0	3	1	3	1	0	13	
	strongly disagree	1	2	2	7	2	1	0	2	17	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of Workbook</b>	strongly agree	3	2	1	2	4	3	8	9	32	<b>0.007</b>
	agree	8	1	2	10	7	8	9	5	50	
	not sure	1	5	0	5	1	7	2	4	25	
	disagree	1	4	1	2	1	1	0	0	10	
	strongly disagree	2	1	2	3	2	0	0	2	12	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	
<b>Use of Computer laboratory</b>	strongly agree	4	1	1	7	8	2	9	4	36	<b>0.035</b>
	agree	6	5	0	7	6	7	5	7	43	
	Not sure	0	2	1	2	1	3	3	6	18	
	disagree	2	3	2	4	0	4	2	2	19	
	strongly disagree	3	2	2	2	0	3	0	1	13	
<b>TOTAL</b>		<b>15</b>	<b>13</b>	<b>6</b>	<b>22</b>	<b>15</b>	<b>19</b>	<b>19</b>	<b>20</b>	<b>129</b>	

This is a bivariate analysis table where two-tailed test of significance was employed with 95% confidence interval.

In table 5.4, nursing students generally agreed that their tutors use different teaching aids when teaching in the classroom. It was noted that in all colleges, students agreed that their tutors use the white board with different marker colours. Using the Spearman Correlation Coefficient in a two-tailed test of significance analysis, it was feasible to reject the null

hypothesis that the use of whiteboards does not correlate to the type of nursing college where the tutor teaches as the p-value was  $0.002 < p = 0.05$ . This means that in all nursing schools, nurse tutors used whiteboards as teaching aids during last semester in the classroom. However, Trinity Nursing College, Nkhoma Nursing College and St. Johns Nursing College were among the colleges where the highest number of students agreed that their nurse tutors use whiteboard during teaching.

Therefore, the use of these basic teaching aids facilitates the teaching strategy and nurse tutors should ensure that they are in good condition as a nurse tutor from Nkhoma Nursing College stated:

*“Because as a tutor you have to prepare before you go in class; if you go in class without preparing it’s a waste of time because you can plan that I will teach for one hour with things that are not working you are just wasting your time. Students can lose concentration because at first they are ready. But then they will be watching you doing other things rather than the information they are supposed to get”.*

Furthermore, when nurse tutors were questioned on the theme of teaching strategy on how they should prepare teaching aids in order to deliver the teaching strategy effectively, a nurse tutor from St. Joseph Nursing College pointed out that:

*“When you are preparing for the lesson, you have to also identify the teaching aids that you need to use in the process to make sure that the teaching aids should be specific to the topic and teaching method that you want to deliver. It should be accurate and should be those teaching aids that are clear for everybody to see or hear, so you have to make sure that they meet that criteria”.*

It has also to be noted that use of overhead projectors is still very high in most of the nursing colleges in Malawi as students from almost all colleges strongly agreed that their nursing tutors use overhead projector during teaching. Even using Spearman Correlation Co-efficient in a two-tailed test of significance analysis, the null hypothesis that the use of overhead projectors does not correlate to the type of nursing college was strongly rejected as the p-value was  $0.002 < p = 0.05$ . This implies that the use of overhead projectors is a common teaching strategy at all nursing colleges in Malawi.

Furthermore, the use of LCD-power point presentations was compared to the type of the nursing college in a two-tailed test of significance for Spearman Correlation Co-efficient, at 0.05 alpha level. Therefore, the null hypothesis that the use of LCD does not correlate to the type of nursing college was not rejected. It was noted that student nurses strongly agreed that LCD was commonly used in their colleges during the last semester. LCD usage among nurse tutors in the classroom is very common in Malawi and has some advantages as a nurse tutor in Ekwendeni Nursing College stated:

*“At the college, we have got many teaching aids we have the power point presentation, we have the LCD and laptops we have the flip charts and the overhead projectors we also have the writing materials. What is happening nowadays as for me I mostly use the LCD and the laptop sometimes the flip charts when I want to draw something. They are easy to use, it’s very easy to use because you just connect the aid and then you just beam it unlike some of these teaching aids and if you beam it students are able to see it at far angle”.*

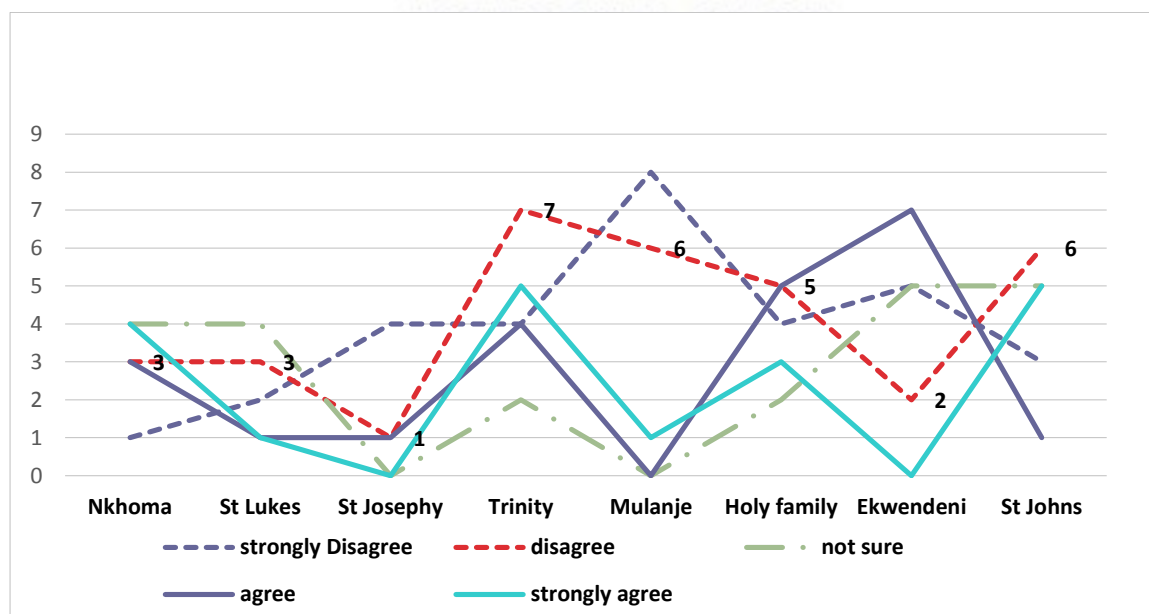
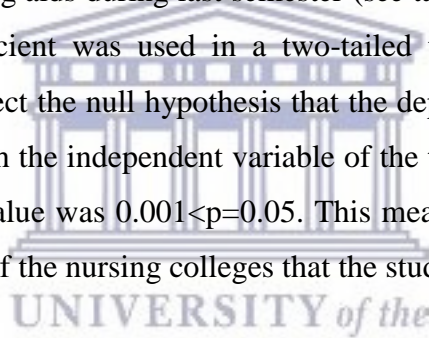
There were mixed feelings on the use of figurative models in different colleges in Malawi as students from Nkhoma Nursing College, Trinity Nursing College and Holy Family Nursing College strongly disagreed that their tutors used the models during clinical teaching in the last semester. However, when the Spearman Correlation Co-efficient was used to compare the use of the models and the type of college, the null hypothesis that the use of figurative models does not correlate to the type of nursing college was rejected as the p-value was  $0.011 < p = 0.05$ . This also suggests that although some colleges do not use the figurative models during teaching, generally the models are used in all colleges as statistically proven. Therefore, the type of the college influences the utilisation of the figurative models as teaching aid.

It is also pleasing to note that use of workbooks or modules was strongly agreed on by students at all colleges. This was also evidenced by spearman correlation co-efficient in a two-sided test of significance analysis. The results showed that it was feasible to reject the null hypothesis that use of workbooks did not correlate to the type of nursing college as the p-value was  $0.007 < p = 0.05$ . This means that the use of workbooks or modules in teaching is common in all nursing colleges in Malawi.

Although, students in all colleges indicated that they have computer laboratories, there was ambivalence towards the use of these computer laboratories. Nkhoma Nursing College and

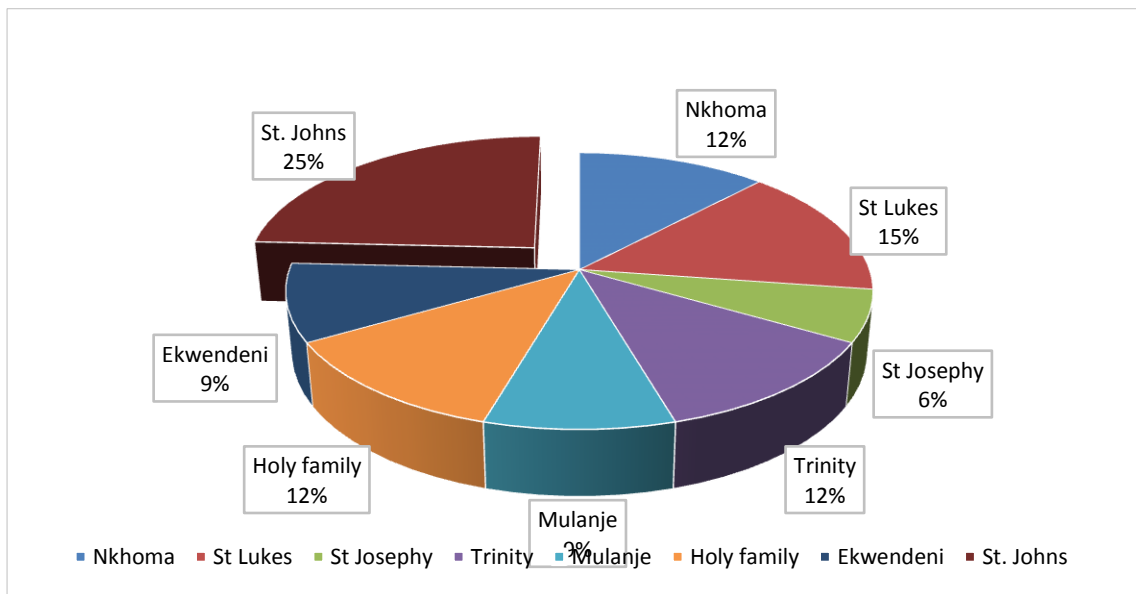
Holy Family Nursing College are among the colleges where some students strongly disagreed that they use the computer laboratory. However, when a two sided test of significance in bivariate analysis was used to compare the dependent variable of the use of computers and the independent variable of the type of college in a Spearman Correlation Co-efficient, it was feasible to reject the null hypothesis that use of computers does not correlate to the type of nursing college as the p-value was  $0.035 < p = 0.05$ . This implies that computers generally available in some colleges during the last semester.

The use of the internet is still a problem in some colleges of nursing in Malawi as nursing students displayed mixed feelings towards the service. Students from Trinity Nursing College, Holy Family Nursing College and St. Johns Nursing College strongly disagreed that they made use of this service during the last semester both in the classroom and at the clinical area. However, most of the students from these colleges agreed that they occasionally made use of the internet as a teaching aids during last semester (see table 5.4). Moreover, when the Spearman Correlation Coefficient was used in a two-tailed test of significance bivariate analysis, it was feasible to reject the null hypothesis that the dependent variable of use of the internet does not correlate with the independent variable of the type of nursing college where students are taught as the p-value was  $0.001 < p = 0.05$ . This means that use of the internet by students depends on the type of the nursing colleges that the student attends.



**Figure 5.7: Distribution of students on use of the internet**

In figure 5.7, it was noted that St. Johns Nursing College, Holy Family nursing college and trinity nursing colleges provided internet services for their students as they strongly agreed on the use thereof during the last semester both in the classroom and at the clinical area.



**Figure 5.8: Distribution of students on use of patients**

In figure 5.8, when the nursing students were asked whether they agree or disagree on the use of patients as a teaching aid at their colleges, 25% of the students at St. Johns nursing College strongly agreed that their tutors used patients as a teaching aid, particularly at the clinical area for learning purposes during the last semester. Nevertheless, only 6% of students in St. Joseph Nursing Colleges strongly agreed that they used a patient during learning in the last semester. However, when the type of college as an independent variable was compared with the use of the patient as a dependent variable in a bivariate analysis, the spearman correlation co-efficient showed a p-value of  $0.088 > p = 0.05$ . This suggests that the null hypothesis that the use of patients as a teaching aid as it does not correlate with the type of the nursing college was accepted. Therefore, the type of college does not influence the utilisation of the patient as the teaching aid.

The students were also ambivalent on the use of the library as a teaching aid. All nursing students from Nkhoma Nursing College strongly disagreed that they had used the library as a learning aid, while students from St. Lukes nursing College and St. Joseph also disagreed that they use library often as a learning aid. However, when spearman Correlation Co-efficient was done in a bivariate analysis with a two-tailed test of significance, the null hypothesis that

use of library does not correlate to type of nursing college was rejected as the p-value was  $0.003 < p = 0.05$ . This means that although some colleges do not use the library very often, the use of the library does correlate to the type of the nursing college.

In the theme of teaching aids, Nurse Tutors also gave many reasons why they enjoy using teaching aids. Using the theme of teaching aids in the clinical category, one tutor said:

*“We like them because they contribute to our teaching; it’s like without teaching aids it’s very difficult to give information to students in the sense that teaching aids help the students to visualize whatever they are learning. So in other words it helps students to make use of the senses in their learning but also teaching aids helps us the teaching becomes very easy because something which you have been explaining students cannot understand very well if there’s no teaching aids in the clinical area... Teaching aids promote understanding and make learning easier. When they see the things, like when you write on the board, they are able to see, to read themselves and understand better, when you show them something, they know what it looks like so they understand better, so its not like they are imagining things but they are able to see and they understand”.*

This is very important as learning is facilitated using different senses, particularly in skill acquisition learning. Another nurse tutor pointed out that:

*“Teaching aids make it easier for me to deliver the content because I would just beam it and every student will see if using LCD. So if maybe I have pictures that I want to show to the students, I will put them on power point, beam them and the students will be able to see unlike when I put it on paper for it to circulate maybe in a class of ninety two students, it will take much of my time. However, the main challenge aaaa... Common one is loss of power. Sometimes when you lose electrical power the computers will go off; it means the whole process is disturbed. So you need to have a backup like incase of loss of power what do I do”.*

Therefore, while nurse tutors appreciate the importance of the teaching aids, they also noted the challenges they face when using these aids such as blackouts which is common in Malawi.

*“If you are using the laptops, the LCDs; they are power dependent. If the power is off then it means you are rendered non-functional because you cannot operate without them. With these other teaching aids that we use sometimes they may not deliver the actual information that you want the students to learn; sometimes the students may also misinterpret them, if you take let’s say a chart put it there and ask maybe students to interpret what they are seeing. People will come up with different information on the same teaching aid, so the interpretation may differ and you make sure that everybody gets the interpretation correctly”.*

These challenges have a negative impact on the flow of information between the tutors and the students.

### **5.1.3 DISTRIBUTION OF STUDENTS' STUDY EXPERIENCE AND TUTORS' WORK EXPERIENCE**

Table 5.5, shows the distribution of the students' study experience and nurse tutors' work experience in relation to the dependent variable of teaching strategies. The use of interviews and field trips when teaching and learning has been found to have a strong correlation between tutors' work experience and students' study experience. There are also mixed reactions among tutors and nursing students on the use of lecture, discussion and case study teaching strategies.

A total of 61% of the nursing tutors who have more than 6 years of work experience strongly agreed that they prefer using the lecture teaching strategy. However, more nurse tutors, who have more than 6 years of experience, were not sure how to use the lecture method. 63.8% of students with more than two years' study experienced strongly agreed that their nurse tutors had used the lecture teaching method in the classroom during last semester. However, using the spearman correlation coefficient in a bivariate analysis, It was feasible to reject the null hypothesis that being a nursing student with more than two years' experience does not correlate to the tutors use of lecture method when teaching during last semester as the p-value was  $0.335 > p=0.05$ . This means that the tutors' choice of the lecture method does not depend on the student's experience.

Furthermore, 66% of the nurse tutors who have worked more than 6 years strongly agreed that they had used discussion during classroom and clinical teaching. Less than 1% of the nurse tutors strongly disagreed that they had used lecture methods when teaching in Malawi. Even when the spearman correction coefficient in a bivariate analysis with a two-tailed test of significance, in a no missing data, it was feasible to reject the null hypothesis that use of lecture teaching strategy does not correlate to work experience of the tutor. This was done in favour of the alternative hypothesis and dependent variable, the use of lecture as a teaching

strategy, which strongly correlated to nurse tutors' work experience as the p-value was  $0.009 < p = 0.05$ . This means that use of lecture teaching strategy does strongly correlate to nurse tutors' work experience.

When the nurse tutors were questioned on the theme of teaching strategy during the in-depth interview on why they use discussion as a teaching strategy, a nurse tutor from Holy Family Nursing College stated:

*“Discussion also it promotes thinking, so when you involve them in the discussion, you probe more from them, they bring up their ideas and then you conclude. Since you are discussing with them, they actively participate and then they bring in the ideas the way they understand the topic”.*

This also indicates that students actively participate in the lesson if a discussion is used as a teaching strategy.

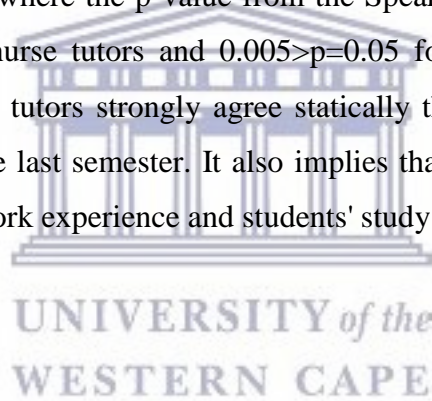
In Table 5.5, 65.5% of the nurse tutors who more than 6 years of work experience agreed that they had used role-play as a teaching strategy during last semester in the classroom. However, only 48.1% of the students who have more than two years' experience agreed that their tutors had used role-play as a teaching strategy during the last semester. Moreover, there was only a borderline correlation in the Spearman Correction Coefficient in bivariate analysis using two tailed test of significance as the p- value after comparing use of role-play and the nurse tutors' work experience was  $0.053 \geq p = 0.05$ . To expound this discrepancy, corrections were made when the dependent variable of the use of role-play was compared with the independent variable of nurse tutors' work experience as the p- value was  $0.023 > p = 0.05$ .

The result of spearman Correlation Coefficient in the bivariate analysis for nursing students on dependent variable of the use of discussion as a teaching strategy in comparison with the independent variable of the students' study experience, showed no correlation because the p-value was  $0.396 > p = 0.05$ . Furthermore, there was a strong correlation between the independent variable of the tutors' work experience ( $0.033 < p = 0.05$ ) and the dependent variable of nurse tutors use of discussion as a teaching strategy in the same bivariate analysis. This expounded the student-tutor discrepancy in use of these teaching strategies. A total of 66.7% (32)  $n=48$  of the nurse tutors who have more than 6 years of work experience agreed that they use case study as a teaching strategy during teaching the students both in the



classroom and at the clinical area. However, 33.3% (16) n=48 of the nurse tutors who have less than 5 years of work experience also agreed that they use a case study during teaching both in class and at the clinical area. Even when the bivariate analysis was used in a Spearman correlation coefficient in a two-tailed test of significance, it was feasible to reject the null hypothesis as the p-value was  $0.015 < p = 0.05$ . This indicates that nurse tutors' work experience does strongly correlate to the use of case studies during teaching both in class and at the clinical area. Therefore, nurse tutors' work experience influences the use of case study as a teaching strategy in nursing in Malawi (see table 5.5 below).

Both students and nurse tutors strongly agreed on the use of field trips (mobile clinic) as a teaching strategy. This is because 68.8% of tutors with more than 6 years experienced agreed and 77.8% of students with more than two years' study experience also agreed on the tutors' use of the field trip as a teaching strategy. Even in the bivariate analysis, there was a strong correlation in both equations where the p-value from the Spearman Correlation Co-efficient were  $0.010 > p = 0.05$  for the nurse tutors and  $0.005 > p = 0.05$  for the nursing students. This means that both students and tutors strongly agree statically that they used field trips as a method of teaching during the last semester. It also implies that use of field trips or clinical trips depends on the tutors' work experience and students' study experience respectively.



**Table 5.5: DISTRIBUTION OF TUTORS' WORK EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON USE OF TEACHING STRATEGY**

TEACHING STRATEGY VARIABLE	TUTORS' WORK EXPERIENCE					P-VALUE	STUDENTS' STUDY EXPERIENCE					
	N=82		6 and more yrs		Total		N=129		More than two yrs		total	P-VALUE
	1-5years		n	%	n(%)		Two year		n	%	N(%)	p-value
<b>Use of Lecture method</b>						<b>0.009</b>						<b>0.335</b>
Strongly disagree	0	0.0%	4	100.0%	4(100)		1	20.0%	4	80.0%	5	
Disagree	5	71.4%	2	28.6%	7(100)		2	50.0%	2	50.0%	4	
Not sure	6	30.0%	14	70.0%	20(100)		4	57.1%	3	42.9%	7	
agree	6	30.0%	14	70.0%	20(100)		26	47.3%	29	52.7%	55	
Strongly agree	21	39.0%	25	61.0%	46(100)		21	36.2%	37	63.8%	58	
<b>Use of Discussion</b>						<b>0.033</b>						<b>0.396</b>
Strongly disagree	0	0.0%	1	100.0%	1(100)		1	33.3%	2	66.7%	3	
Disagree	0	0.0%	2	100.0%	2(100)		2	40.0%	3	60.0%	5	
Not sure	2	100.0%	0	0.0%	2(100)		5	62.5%	3	37.5%	8	
agree	13	48.1%	14	51.9%	27(100)		19	44.2%	24	55.8%	43	
Strongly agree	17	34.0%	33	66.0%	50(100)		27	38.6%	43	61.4%	70	
<b>Use of Interview teaching</b>						<b>0.032*</b>						<b>0.035*</b>
Strongly disagree	7	36.8%	12	63.2%	19(100)		10	37.0%	17	63.0%	27	
Disagree	7	41.2%	10	58.8%	17(100)		6	21.4%	22	78.6%	28	
Not sure	4	36.4%	7	63.6%	11(100)		14	48.3%	15	51.7%	29	
agree	9	39.1%	14	60.9%	23(100)		18	52.9%	16	47.1%	34	
Strongly agree	5	41.7%	7	58.3%	12(100)		6	54.5%	5	45.5%	11	
<b>Use of Case-study</b>						<b>0.015</b>						<b>0.998</b>
Strongly disagree	0	0.0%	3	100.0%	3(100)		2	50.0%	2	50.0%	4	
Disagree	0	0.0%	1	100.0%	1(100)		1	16.7%	5	83.3%	6	
Not sure	3	60.0%	2	40.0%	5(100)		5	71.4%	2	28.6%	7	
agree	13	52.0%	12	48.0%	25(100)		23	39.7%	35	60.3%	58	
Strongly agree	16	33.3%	32	66.7%	48(100)		23	42.6%	31	57.4%	54	
<b>Use of Field Trip</b>						<b>0.010*</b>						<b>0.005*</b>
Strongly disagree	4	17.4%	19	82.6%	23(100)		8	22.2%	28	77.8%	36	
Disagree	5	45.5%	6	54.5%	11(100)		10	43.5%	13	56.5%	23	
Not sure	4	44.4%	5	55.6%	9(100)		9	45.0%	11	55.0%	20	
agree	5	31.3%	11	68.8%	16(100)		11	52.4%	10	47.6%	21	
Strongly agree	0	0	0	0	0		16	55.2%	13	44.8%	29	

This is an SPSS table in bivariate analysis comparing the tutors' work experience and students' study experience against different teaching strategies for nurse tutors in Malawi. The cut Point of the bivariate analysis was 0.05 power value. The analysis was generated from spearman correlation coefficient in a two-tailed test significance, excluding missing data

#### **5.1.4 DISTRIBUTION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TEACHING AIDS**

When the nurse tutors' work experience was compared with the teaching aids such as the use of poster (Table 5.6) in a bivariate analysis, it was noted that the p-value from spearman correlation coefficient was  $0.046 < p < 0.05$ . This means that use of posters correlated to tutors' work experience during teaching both in the classroom and at the clinical area. This is a true reflection of the tutors' perception as it was also noted that 63.2% of the tutors strongly agreed that they had used posters during teaching as a teaching aid during the last semester. However, this is different from the students' perspective as the p-value was not statistically significant at  $0.101 > p > 0.05$  when the independent variable of student study experience was compared with the use of posters. This means that although the use of posters depends on tutors' work experience, the same use of posters does not depend on student study experience.

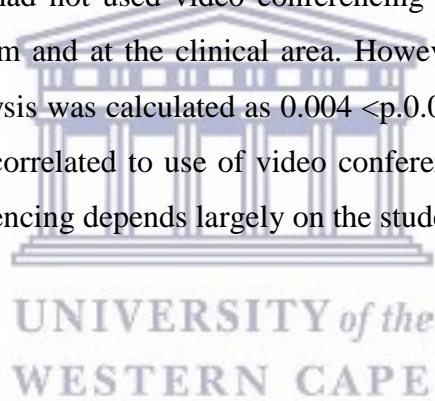
It has also to be pointed out that use of manuals or modules was found to be closely related to the nurse tutors' work experience. This was because it was feasible to reject the null hypothesis that the independent variable of nurse tutors' work experience does not correlate to the dependent variable as the p-value was  $0.040 < p < 0.05$ . This means that the spearman correlation coefficient favoured the alternative hypothesis that the independent variable of nurse tutor's work experience is strongly correlated with the dependent variable of the use of modules when teaching both in the classroom and at the clinical area. However, this was not the case with students as the p-value, when compared with the use of teaching modules and student study experience was  $0.887 > p = 0.05$ . This means that the researcher did not reject the null hypothesis that use of teaching modules is not correlated to student study experience and that the use of teaching modules does depend on student study experience.

There was a border-line correlation between nurse tutors' work experience and the use of the internet as the p-value in the spearman correlation coefficient was  $0.05 = p = 0.05$ . This indicated that use of the internet in nursing colleges depends on the work experience of the nurse tutors (Table 5.6). This is a true reflection as the frequency figures also revealed that 57.1% of the nurse tutors with more than 6 years of work experience strongly agreed that they had used the internet during the last semester both in the classroom and at the clinical area during teaching.

However, 70.8% of the students with more than two years of study experience strongly disagreed on the use of the internet as a teaching aid in their colleges. Even the spearman correlation coefficient revealed that there is no statistical significant between student study experience and the use of internet in nursing colleges in Malawi. This indicated that students do not make significant use of the internet as a source of learning.

A total of 67.7% of the more experience nurse tutors indicated that they strongly disagree on the use of video conferencing as a teaching aid both in the classroom and at the clinical area. It was also found that there was no statistical significance between the use of video conferencing and nurse tutors' work experience as the p-value was  $0.197 > p0.05$ . This means that use of video conferencing does not depend on the nurse tutors' experience.

Furthermore, a total of 70.3% of the students with more than two years of study experienced strongly disagreed that they had not used video conferencing as a teaching aid during last semester both in the classroom and at the clinical area. However, the spearman correlation coefficient in a bivariate analysis was calculated as  $0.004 < p0.05$ . This indicates that student study experience is strongly correlated to use of video conferencing (Table 5.6). Therefore, the utilisation of video conferencing depends largely on the student study experience.



**TABLE 5.6: DISTRIBUTION OF TUTORS' WORK- EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON AND TUTORS' CHOICE OF TEACHING AIDS**

CHOICE OF TEACHING AIDS VARIABLES	TUTORS' WORK EXPERIENCE				Total n(%)	P-VALUE	STUDENTS' STUDY EXPERIENCE N=129				total N(%)	P-VALUE p-value
	1-5years		6 and more yrs				Two year		More than two yrs			
<b>Use of posters</b>						<b>0.046</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>		<b>0.347</b>
Strongly disagree	1	12.5%	7	87.5%	8(100)		7	30.4%	16	69.6%	23	
Disagree	7	77.8%	2	22.2%	9(100)		6	37.5%	10	62.5%	16	
Not sure	2	66.7%	1	33.3%	3(100)		10	62.5%	6	37.5%	16	
agree	10	37.0%	17	63.0%	27(100)		14	35.9%	25	64.1%	39	
Strongly agree	12	34.3%	23	65.7%	35(100)		17	48.6%	18	51.4%	35	
<b>Use of figurative Models from clinical Laboratory</b>						<b>0.009</b>						<b>0.101</b>
Strongly disagree	0	.0%	7	100.0%	7(100)		3	16.7%	15	83.3%	18	
Disagree	7	77.8%	2	22.2%	9(100)		5	55.6%	4	44.4%	9	
Not sure	2	25.0%	6	75.0%	8(100)		10	52.6%	9	47.4%	19	
agree	9	45.0%	11	55.0%	20(100)		14	35.9%	25	64.1%	39	
Strongly agree	14	36.8%	24	63.2%	38(100)		22	50.0%	22	50.0%	44	
<b>Use of manual or module guides</b>						<b>0.040</b>						<b>0.887</b>
Strongly disagree	2	28.6%	5	71.4%	7(100)		1	11.1%	8	88.9%	9	
Disagree	2	22.2%	7	77.8%	9(100)		6	54.5%	5	45.5%	11	
Not sure	3	60.0%	2	40.0%	5(100)		11	52.4%	10	47.6%	21	
agree	13	54.2%	11	45.8%	24(100)		22	37.9%	36	62.1%	58	
Strongly agree	12	32.4%	25	67.6%	37(100)		14	46.7%	16	53.3%	30	
<b>Use of internet when teaching</b>						<b>-0.050</b>						<b>0.085</b>
Strongly disagree	6	33.3%	12	66.7%	18(100)		7	29.2%	17	70.8%	24	
Disagree	8	40.0%	12	60.0%	20(100)		9	34.6%	17	65.4%	26	
Not sure	4	44.4%	5	55.6%	9(100)		11	47.8%	12	52.2%	23	
agree	8	38.1%	13	61.9%	21(100)		14	46.7%	16	53.3%	30	
Strongly agree	6	42.9%	8	57.1%	14(100)		13	50.0%	13	50.0%	26	
<b>Use of Video conference</b>						<b>0.197</b>						<b>0.004*</b>
Strongly disagree	10	32.3%	21	67.7%	31		11	29.7%	26	70.3%	37	
Disagree	8	33.3%	16	66.7%	24		7	26.9%	19	73.1%	26	
Not sure	7	63.6%	4	36.4%	11		9	40.9%	13	59.1%	22	
agree	5	41.7%	7	58.3%	12		21	67.7%	10	32.3%	31	
Strongly agree	2	50.0%	2	50.0%	4		6	46.2%	7	53.8%	13	

This is a bivariate table from SPSS where spearman correlation coefficient was used to compare nurse tutors' work experience and different teaching aids. the p-value was set at 0.05 ie 95% confidence level.in a two-tailed test of significance .

## 5.2.0 DISTRIBUTION OF STUDENTS' AND TUTORS' INTERACTION WHEN TEACHING

In both nurse tutors and students' questionnaires, the variable of the nurse tutors' interactions was measured using both the tutors and students' perspectives in a five ranked Likert scale. There were 41 items that focused on tutors' interactions. The Cronbach's alpha, which is the reliability statistics, was determined to be 0.909. Generally, students are dissatisfied with nurse tutors' interaction during teaching. This is the same for nurse tutors, who clearly indicated dissatisfaction with the students' behaviour both in class and at the clinical area.

In table 4.9, when the students were asked whether nurse tutors are sometimes rude to them when teaching in the classroom, 24.8% (32) n=129 of the students disagreed. 17% (22) n=129 of the students agreed or were not sure that the nurse tutors are rude when teaching both in the classroom and at the clinical area. However, 46.3% (38) n=82 of the nurse tutors strongly disagree that students are rude when teaching both in the classroom and at the clinical area. Almost 47.4% (9) n=19 of the nursing students at Holy Family Nursing College agreed that their nurse tutors are rude to them when teaching both in the classroom and the clinical area. At St. Johns, 45% (9) n=20 of the students agreed or were not sure that the nurse tutors are rude when teaching both in the classroom and at the clinical area. Thus, it is evident that in some colleges, students are in agreement about the rudeness of the nurse tutors when teaching. However, students were afraid to elucidate on the tutors' rudeness. The following was said by a student in Nkhoma Nursing College who was questioned on the theme of student and tutor interaction during the focus group:

*"We students are at the receiving end..., we are supposed to say yes to everything that our madam says. If we argue or show dissatisfaction, we can fail the course...., this has happen in our class, we know, so don't ask more on this".*

This suggests that while students perceive nurse tutors as being rude, they had some difficulty explaining why due to the fear of what might happen to them. It also suggests that they even fear each other, as some would report others to the tutor with the result that they would fail the course. However, the students at Ekwendeni Nursing expressed the most fear, where 63.2% (12) n=19 of the student were either not sure or agreed to rudeness by nurse tutors. Only at St. Johns did the students have a different view, as 50% (10) n=20 said they disagree that their tutors are rude at times when teaching both in the classroom and at the clinical area.

But when spearman correlation coefficient was used to compare the independent variable of the type of college where nurse tutors teach and the dependent variable of being rude, the null hypothesis that nurse tutors do tend to be rude when teaching in class was rejected as the p-value was  $0.079 > p = 0.05$ . This was in favour of the alternative hypothesis that nurse tutors do not tend to be rude to students when teaching both in class and at the clinical area (see table 5.9).

However, this contrasts with what nurse tutors have to say on the interaction with students from the same nursing College as one of the nurses that were interviewed during in-depth needs assessment said:

*“Students say am a good tutor because there is that interaction between myself and the students. The information I give them through teaching they get the information. Sometimes I give jokes while teaching because this way the student can relax, and students can remember the joke and in the process remember information, which you were teaching them. But I maintain distance though because when you mix with students they sometimes take it for granted that you are chatting with them forgetting you want to help them. Because if you do it anyhow they think you are colleagues in class; so that distance should be there. They should know that I am a tutor, am there to help them not to do any other business apart from teaching...It’s effective when you as a teacher stand in whatever you believe. Because if you show them that you are too loose; more especially these female students for me a male nurse. They will stop regarding you as a tutor, but any other colleague in their class. In so doing whatever you teach them they will not understand very well. That’s why I talked of social distance at first”.*

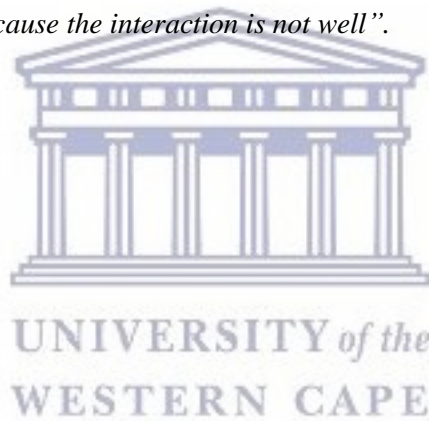
This clearly shows that nurse tutors interact with students to a certain degree, yet maintain a social distance. This limit is set to avoid students treating the nurse tutors as colleagues in the profession.

When the concept of talkativeness was analysed, it was noted that 59.09% (13)  $n=22$  of the students at Trinity Nursing College agreed that their nurse tutors tend to be talkative when they are teaching in the classroom. Furthermore, 52.6% (10)  $n=19$  Of the students in Ekwendeni Nursing College also agreed that their tutors tend to be talkative when interacting and teaching in the classroom (see table 5.9). However, some nurse tutors are hesitant to talk to students as they fear they will lose the students’ respect. This was echoed by a nurse tutor from Ekwendeni Nursing College who, in response to questions on the theme of teaching interaction under the priori code, “talkativeness”, she said:

*“I think the challenge is if you are not careful to assess the behavior of the students during talking it’s what I said that it will move from the professional part of it to a personal relationship where sometimes the students become over confident they can easily over ride you and even quarrel”.*

Therefore, some nurse tutors become louder and more talkative as a defensive mechanism in order to maintain their dignity on certain issues during teaching.

Furthermore, some nurse tutors expounded on the advantages of good interaction with students in the classroom as a nurse tutor from Holy Family Nursing colleges noted that:  
*“The advantage is that it improves the students’ skills and attitude towards the nursing profession; it improves students’ skills and attitude towards nursing profession but also it helps the students achieve their goals because instead of having difficulties with the tutor they concentrate on their studies. Students concentrate on their studies instead of concentrating on the interaction; when there is a bad interaction between a tutor and a student normally the student would start moving away from the studies to the interaction now because the interaction is not well”.*



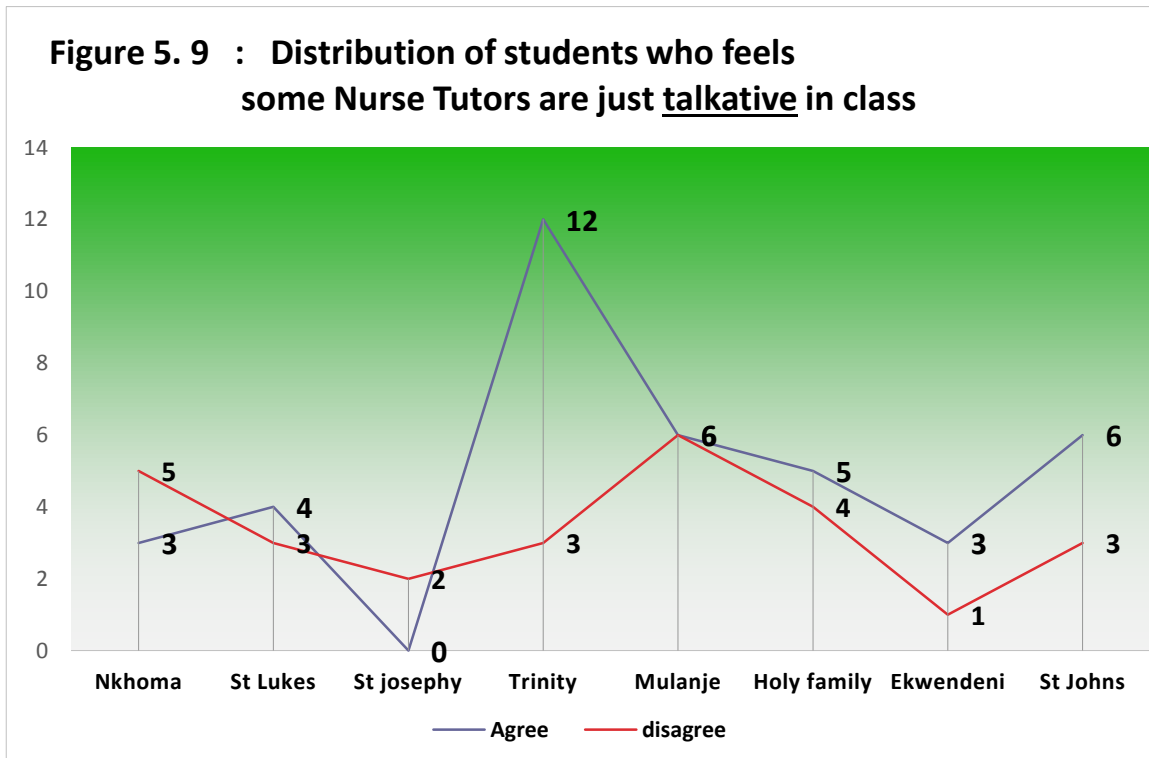


**TABLE 5.7: DISTRIBUTION OF STUDENTS' AND TUTORS' INTERACTION IN DIFFERENT COLLEGES**

VARIABLE	Co-variates	In which college do you teach or Learn																TOTAL	
		Nkhoma		St. Lukes		St Joseph		Trinity		Mulanje		Holly family		Ekwendeni		St. Johns			
TUTOR/students		tut	stud	tut	stud	tut	stud	Tut	stud	tut	stud	tut	stud	tut	stud	tut	stude	tutor	stude
<b>Tend to be rude to student in class</b>	Strongly agree	1	1	0	1	0	0	0	1	2	4	1	0	1	2	1	1	5	12
	Agree	0	3	1	3	0	1	1	4	0	2	0	5	2	3	0	6	4	27
	Not sure	4	2	1	2	1	0	2	2	1	3	2	4	1	7	2	3	14	29
	Disagree	5	4	1	3	1	0	0	7	3	4	5	7	4	3	2	4	21	32
	Strongly disagree	6	5	2	3	2	4	2	2	4	2	7	3	7	4	8	6	38	29
<b>p-value= 0.079-t</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>
<b>Tend to be talkative in Class when irritated</b>	Strongly agree	2	1	0	1	0	0	0	1	1	2	0	2	1	1	1	2	5	10
	Agree	0	3	0	4	0	0	0	12	1	6	0	5	3	3	1	6	5	39
	Not sure	2	4	1	4	1	2	1	5	1	3	1	3	2	7	2	4	11	32
	Disagree	5	5	2	3	0	2	2	3	3	3	6	6	4	3	1	3	23	28
	Strongly disagree	7	2	2	1	3	2	2	1	4	1	7	3	5	5	8	5	38	20
<b>p-Value= 0.009-t</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>
<b>Look aggressive to students</b>	Strongly agree	1	0	0	2	0	1	0	2	0	4	2	2	1	1	1	5	5	17
	Agree	1	0	1	3	0	3	0	8	2	4	2	6	0	2	1	5	7	31
	Not sure	5	2	1	2	0	0	2	5	4	4	3	4	4	6	0	5	19	28
	Disagree	3	9	1	4	0	1	3	5	0	1	4	4	4	6	2	1	14	31
	Strongly disagree	6	4	2	2	4	1	0	2	4	2	3	3	6	4	9	4	37	22
<b>p-Value=0.083-t</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>
<b>tutors Look arrogant to student</b>	Strongly agree	0	0	1	1	0	0	0	1	1	4	0	3	0	3	0	1	2	13
	Agree	0	0	0	1	0	1	0	5	4	6	0	3	0	5	1	8	5	29
	Not sure	9	6	2	2	2	2	2	8	2	2	4	4	4	6	2	3	27	33
	Disagree	1	5	1	6	0	1	0	4	0	1	4	6	5	4	1	3	12	30
	Strongly disagree	6	4	1	3	2	2	3	4	3	2	6	3	6	1	9	5	36	24
<b>p-Value=0.052-t</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>
<b>tutors are always cheerful to students</b>	Strongly agree	9	5	1	3	2	3	1	5	7	6	10	5	7	6	6	8	43	41
	Agree	5	8	4	6	2	3	3	14	2	7	3	11	7	13	4	6	30	68
	Not sure	2	2	0	2	0	0	1	2	0	1	1	2	0	0	2	4	6	13
	Disagree	0	0	0	2	0	0	0	0	0	1	0	1	1	0	0	1	1	5
	Strongly disagree	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	1	2	2
<b>p-Value=0.025-t</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>

This is a frequency SPSS generated table with Spearman Correlation Coefficient at 95% confidence level, for all the 8 nursing colleges

The five ranked Likert scale was adapted into two with agree and disagree as the last options in an effort to standardise the students' perceptions towards nurse tutors' talkativeness in the classroom. This clearly showed that 54.5% (12) n=22 of the students in Trinity Nursing College agree that nurse tutors are talkative both in the classroom and at the clinical area. Mulanje Nursing College had the most students that disagreed that the nurse tutors are just talkative in class when teaching as the frequency was 40% (6) n=15 (see figure 5.9).



**Figure 5.9: Distribution of students on tutors' talkativeness**

Generally, almost 55.03% (71) n=129 of all students in all nursing Colleges were concerned about the talkativeness of their nurse tutors. Furthermore, when Spearman Correlation Coefficient was used to compare the independent variable of type of the College where nurse tutors teach and the dependent variable of talkativeness, the null hypothesis that the type of the college where nurse tutors teach does not correlate to being talkative was rejected. This was in favour of the alternative hypothesis that the type of the nursing college highly correlated to nurse tutors' talkativeness as the p-value was  $0.009 < p = 0.05$ . This means that nurse tutors tend to be talkative when teaching in nursing colleges in Malawi. Students from Trinity nursing College also pointed out that some nurse tutors come across as aggressive when interacting and teaching in the classroom as 68.2% (15) n=22 of the student either agreed or strongly agreed about the

aggressiveness of their tutors when interacting with students both in the classroom and at the clinical area. Mulanje Nursing College had the highest student interaction expressions on tutors' aggressiveness when teaching as it was noted that 80.0% (12) n=15 of the students strongly agreed that their nurse tutors' appear aggressive when interacting and teaching in the classroom. At St. Johns Nursing College, 75% (15) n=20 of the students agreed that their tutors appear aggressive when interacting and teaching in class. However, in general, 58.9% (76) n=129 of the students agreed that their tutors in these colleges tend to be aggressive when teaching. This is an alarming figure considering the professional etiquette of nurses who are supposed to be humble and polite towards both students and patients. However, the null hypothesis could not be rejected when a Spearman Correlation Coefficient when type of the college was compare to nurse tutors' aggression as the p-value was  $0.083 > p = 0.05$ . This means that the type of college does not correlate to nurse tutors' aggressiveness. Therefore, the type of the college does not influence tutors' aggressiveness.

It was also amazing to note that 58.1% (75) n=129 of the student in all nursing colleges strongly agreed or agreed that nurse tutors tend to be arrogant to students when interacting or teaching in class. A high number of students at Mulanje Nursing College felt that their nurse tutors tend to be more arrogant when interacting in class as 80.0% (12) n=15 of the students strongly agreed that their tutors were arrogant when teaching in the classroom. There was a border-line correlation in a spearman correlation coefficient analysis, as the p-value was found to be  $0.052 \geq p = 0.05$ . This suggests that the type of the college that nurse tutors teach is related to the nurse tutors' arrogance when teaching in class.

The priori code "arrogant" emerged under the theme "tutor / student interaction challenges". In this regard, one of the nurse tutors from Trinity stated that:

*"Challenges are there.... like one of the challenge some students they are rude, they are already rude and they are involved in deviant behaviors. Some students because of maybe the increased in take; -some students when they join the profession, they are already rude and sometimes difficult to control, in the end they end up even failing. So maybe they just came to the profession because there is nothing they can do outside, so that is one of the challenges that is there in interaction with the students. Some challenges are that students run away from the clinical area, they run away from the clinical area because of the bad interaction with the tutors".*

In this case it is clear that nurse tutors and students are at loggerheads and accuse each other of misbehaviour during teaching and learning.

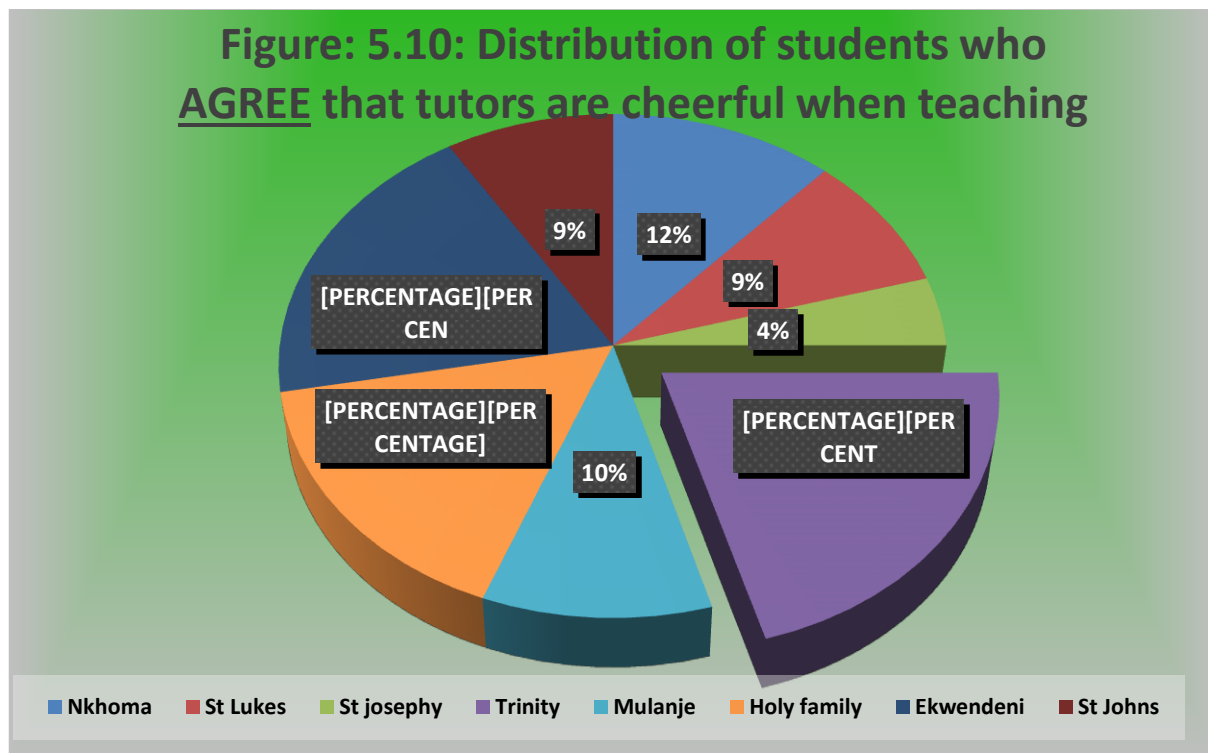
Students were also asked whether their nurse tutors are cheerful when teaching them in the classroom and at the clinical area. It was noted that 84.5% (109) n=129 of the students agreed that their tutors are cheerful when teaching. A total of 30% of the students at St. Johns nursing college strongly disagreed that their nurse tutors are cheerful when teaching both in the classroom and at the clinical area. Generally, after using the spearman correlation coefficient in a two sided test of bivariate analysis, the null hypothesis that the independent variable of type of the college does not correlate to the dependent variable of tutors' cheerfulness was rejected as the p-value was  $0.025 < p = 0.05$ . This suggests that the alternative hypothesis that the type of college where nurse tutors teach highly correlates to tutors being cheerful both in the classroom and at the clinical area. In this case, it is very important to note that students feel nurse tutors should show cheerfulness when teaching and interacting with them as this improved their learning and understanding of the instruction material. However, nurse tutors themselves strongly agreed that they are always cheerful to students both in the classroom and at the clinical area as 89.2% strongly agreed that they have been cheerful (see table 5.9).

When the students were asked whether nurse tutors listen attentively before they answer their questions, there were differences among the students from the various colleges. 31.6% (6) n=19 of the students from Ekwendeni Nursing College disagreed that their nurse tutors listen to their questions attentively while 30% (4) n=13 of the St Lukes Nursing College concurred with the Ekwendeni Nursing Students that their tutors do not listen attentively when teaching both in the classroom and at the clinical area. However, 100% (16) n=16 of the students in Nkhoma nursing college strongly agreed that their nurse tutors are cheerful when teaching both in the classroom and at the clinical area.

The variable of respectfulness was also measured against the students to gauge their nurse tutors. 36.3% of the students in Trinity Nursing College strongly disagreed that nurse tutors tend to respect students when teaching and interacting both in the classroom and at the clinical area (see figure 5.10).

The 21% of the students who agreed that their nurse tutors are cheerful were from Trinity Nursing College while the 19% of students who agreed that nurse tutors are respectful during teaching were from Nkhoma Nursing College.

Even when a bivariate analysis was used in a spearman Correlation coefficient test, the null hypothesis that the type of he college does not correlate to nurse tutors being respectful to students both in the classroom and at the clinical area was not rejected as the p- value was  $0.085 > p = 0.05$ . This suggests that there is no correlation between the type of the college where nurse tutors interact with students and being respectful when teaching in the classroom and at the clinical area. Thus, the type of the college where nurse tutors teach does not influence the interaction of cheerfulness of the nurse tutors to students in Malawi.

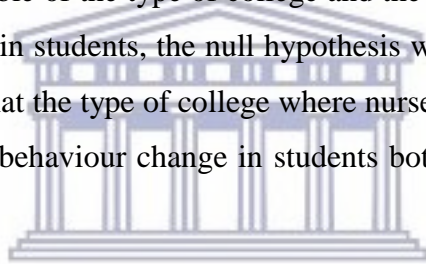


**Figure 5.10: Distribution of students on tutors' cheerfulness**

Students were also asked to say whether nurse tutors are honest on student counselling on academic issues. 35% (7) n=20 of the St. Johns nursing College students strongly disagreed that their nurse tutors are honest when counselling on academic issues. A total of 27.3% (6) n=22 students from Trinity nursing college strongly disagreed that their nurse tutors are honest when counselling them both in the classroom and at the clinical area. However, 66.6% (10) n=15 of

the nursing students at Mulanje college strongly agreed that their nurse tutors are honest when counselling both in class and at the clinical area.

It was surprising to note that 36.8% (7) n=19 of the student from Ekwendeni Nursing College disagreed that their nurse tutors are role models for behaviour change both in the classroom and at the clinical area. Moreover, 30.7% (4) n=13 of students from St Lukes also strongly disagreed that their tutors are role models for behaviour change in the classroom and at the clinical area. It should also be mentioned that 27.3% (6) n=22 of the students from Trinity Nursing College strongly disagreed that their tutors are role models in behaviour change both in the classroom and at the clinical area. This suggests that one third of all students interviewed strongly disagreed that their nurse tutors are role models for behaviour change. This is of some concern as these nurse tutors are well trained in their teaching job and all of them have a minimum degree of nursing as a qualification. However, when spearman correlation coefficient was used to compare the independent variable of the type of college and the dependent variable of being a role model for behaviour change in students, the null hypothesis was not rejected as the p-value was  $0.078 > p = 0.05$ . This means that the type of college where nurse tutors teach cannot influence them to become role models for behaviour change in students both in the classroom and at the clinical area.



UNIVERSITY of the  
WESTERN CAPE

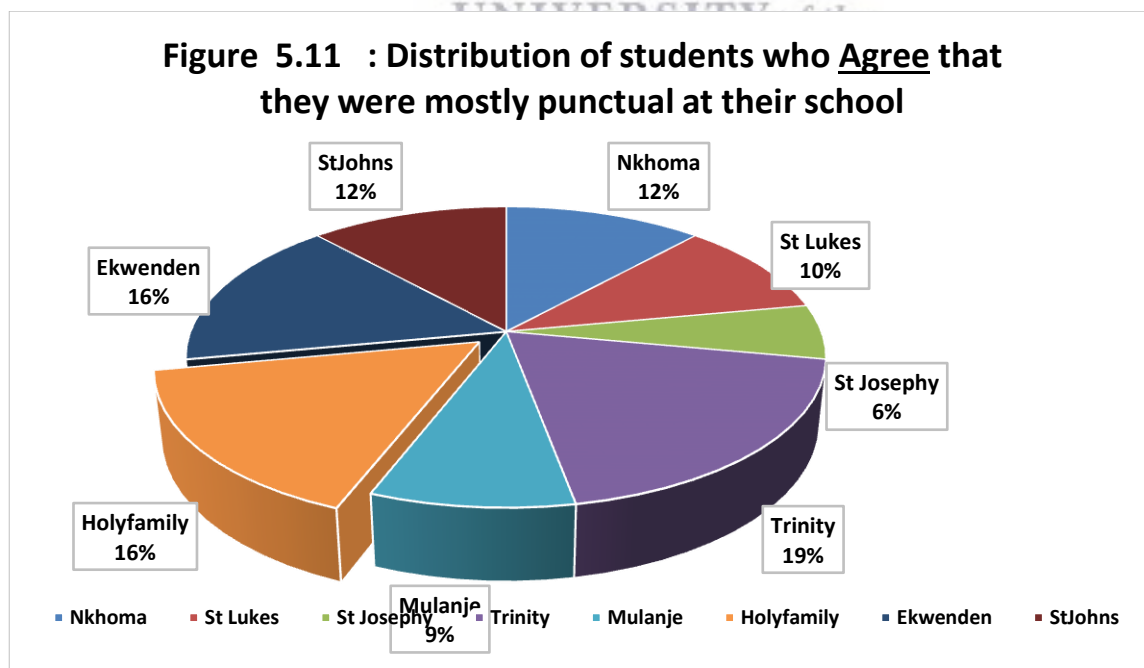
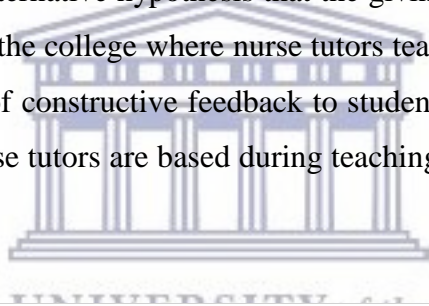
Being a role model means being friendly and accommodating to students and as one of the nurse tutors from Mulanje Nursing College pointed out in the theme of interaction under the priori code of “*being friendly*”:

*“They said my classes are very interactive, I am friendlier to them, I don’t shout at them. So they feel free, if they have questions they ask, they even come to my office when the lesson is over. Even when we meet outside the campus they ask me about something which they didn’t understand in class and am accommodative, I can give them answers right there. So, because of that students tend to like my courses. They tell me like one student one told me “you know you are different, the way you teach unlike others, they just come and just talk, you are even afraid to ask those questions. But with you we can ask you questions and you give us answers. So you are better than others, your topic is delivered better”.*

The nurse tutors’ politeness when approaching students was also measured by student in all colleges when they interact both in the classroom and at the clinical area. 42% (8) n=19 of students from Ekwendeni Nursing College strongly disagreed that their nurse tutors are polite when approaching them during teaching both in the classroom and at the clinical area, while

27.3% (6) n=22 of the students from Trinity Nursing College also strongly disagreed that their nurse tutors are polite when approaching the students when interacting both in the classroom and at the clinical area.

The variable of “giving constructive feedback” was tested on both students and lectures. 46.6% (7) n=15 of the students from Nkhoma Nursing College disagreed that nurse tutors in their college give constructive feedback during interaction both in the classroom and at the clinical area, while 66% of the students in St. Joseph Nursing College strongly disagreed that their nurse tutors give constructive feedback both in the classroom and at the clinical area. However, when the spearman correlation coefficient was tested to compare the independent variable of type of the college and the dependent variable of giving of constructive feedback to students, the null hypothesis that giving of feedback by nurse tutors does not correlate to the type of college where nurse tutors teach and interacting with students was rejected as the p-value was  $0.001 < p = 0.05$ . This was done in favour of the alternative hypothesis that the giving of feedback by nurse tutors strongly correlated to the type of the college where nurse tutors teach. Therefore, it is clear in all nursing colleges that the giving of constructive feedback to students by nurse tutors depends on the type of the college where nurse tutors are based during teaching both in the classroom and at the clinical area.



**Figure 5.11: Distribution of students on tutors’ punctuality**

Tutors were also asked separately about their “punctuality” in class and Trinity featured prominently as they agreed that they are always punctual during teaching both in the classroom and at the clinical area. However, St. Joseph nurse tutors did not agree as only 6% of the tutors agreed (see the figure 5.11).

When the students were asked whether their nurse tutors are punctual both in the classroom and at the clinical area, 26.3% (5) n=19 Of the students in Holy Family Nursing College disagreed that their tutors are always punctual when coming to the classroom. Generally, in all colleges only 24% (31) n=129 of the students disagreed that their nurse tutors are punctual when coming to the classroom and at the clinical area. But when the Spearman correlation coefficient was used to compare the independent variable of type of the college to the dependent variable nurse tutors punctuality in a bivariate analysis, the null hypothesis that the type of the college does not correlate to nurse tutors punctuality was not rejected as the p-value was  $0.088 > p = 0.05$ . This indicates that punctuality of the nurse tutors does not depend on the type of the nursing college where nurse tutors teach.

A total of 40% (6) n=15 of the students at Nkhoma Nursing College strongly disagreed that their nurse tutors promote “tolerance and understanding” in students, while 22.7% (5) n=22 of the students in Trinity Nursing College disagreed that their nurse tutors promote tolerance and understanding during teaching both in the classroom and at the clinical area. However, when the Spearman correlation coefficient was used to compare the independent variable of type of the nursing college and the dependent variable of promotion of tolerance and understanding in students by nurse tutors, it was noted that tutors do not promote tolerance and understanding as the p-value of  $0.090 > p = 0.05$ . In this case the null hypothesis was not rejected. Therefore, nurse tutors’ promotion of tolerance on students is not influenced by the type of the nursing college where nurse tutors teach in Malawi.

A total of 80% (12) n=15 of the students from Nkhoma Nursing College disagreed that nurse tutors are risk takers when teaching both in the classroom and at the clinical area, while 45% (9) n=20 of the students in St. Johns nursing college disagreed that nurse tutors are risk takers during teaching. However, generally 48.8% (63) n=129 of the students disagree that nurse tutors are risk takers during teaching. Even the Spearman correlation coefficient test in a bivariate analysis showed no correlation between the type of the college that nurse tutors teach at and



being a risk taker as the p-value was  $0.092 > p = 0.05$ . This means that nurse tutors being risk takers does not depend on the type of the nursing college where they are teaching.

When the nurse tutors were questioned during in-depth interviews on the theme of tutor-student interaction under the category of how they make students open and interact in the classroom, a nurse tutor from Nkhoma Nursing Colleges pointed that:

*“Well, you know students how they think, like I already said teachers are the ones that have the authority in this class maybe they are the only people that are supposed to speak in this class we don't just sit, and listen, in class we interact with them like that they talk, we talk, they talk at the end of the day they are able to be open enough to you even issues outside academics and staff like that. Because they know you are flexible you can listen to them and they will also stop looking at you as i know it all because they know that they can also tell you something that you don't know. I feel the student that I mean if you are able to interact with the students like I said I think they are able also to maybe ask us a question if they feel like, you don't have to teach when you are in a bad mood. So I think also they elevated my mood which is important because if you are not happy when the student it also has an impact on the way you deliver your content sometimes maybe you can just rush through because you don't like them after all you want to rush and get out of it”.*

Students were also asked if they perceive that nurse tutors focus on the student as a whole and not just particular health issue in interactions when teaching both in the classroom and at the clinical area. A total of 53.3% (8)  $n=15$  of the students at Nkhoma Nursing College disagreed that their tutors focus on the student as a whole and not just on the particular health issue, while at St. Lukes Nursing College, 46.2% (6)  $n=13$  of the students strongly disagreed that their nurse tutors focus on the student as a whole and not just the particular health issue. 45.5% (10)  $n=22$  of the students at Trinity Nursing College disagreed that their nurse tutors lecture the entire class period when teaching both in the classroom and at the clinical area. Furthermore, 26.6% (4)  $n=15$  of the students at Mulanje Nursing College strongly disagreed that their nurse tutors lecture the entire class period when teaching. The bivariate analysis using spearman correlation coefficient in a two-tailed test of significance produced a p-value of  $0.088 > p = 0.05$ . This means that nurse tutors` lecturing during the entire class period does not necessarily depend on the type of the college where the nurse is teaching.

Altogether 46.6% (7)  $n=15$  of the students at Nkhoma nursing College disagreed that their nurse tutors were willing to explore attitudes, values and beliefs during interaction both in the classroom and at the clinical area. However, generally, in all nursing colleges, only 27.1% (35)

n=129 of the students who were interviewed disagreed that their nurse tutors have the willingness to explore attitudes, values and beliefs when interacting both in the classroom and the clinical area. This was confirmed by the bivariate analysis where spearman correlation coefficient was used in a two-tailed test of significance. The p-value obtained was  $0.089 > p = 0.05$ . This means that nurse tutors' willingness to explore attitudes, values and beliefs does not depend on the type of college where nurse tutors teach.

A total of 46.2 (6) n=13 students at Nkhoma Nursing College strongly disagreed that their nurse tutors' support for equity, human rights and honesty both in the classroom and at the clinical area. However, 77.3% (17) n=22 of the students at Trinity Nursing College strongly agreed that their nurse tutors' support for equity, human rights and honesty when interacting both in the classroom and at the clinical area. When a bivariate analysis was used in a spearman correlation coefficient with a two-tailed test of significance, the p-value was 0.015. This suggests that the independent variable of type of the college does highly correlate to the dependent variable of tutors' support for equity, human rights and honesty during teaching. This means that tutors' support for equity and human rights does depend on the type of the college where nurse tutors teach in Malawi.

Students had divergent views when asked to state their willingness to take responsibility for their own behaviour during interaction both in the classroom and at the clinical area. A total of 53.8% (7) n=13 of the students from St Lukes Nursing College strongly disagreed that they are willing to take responsibility for their own behaviour during learning both in the classroom and at the clinical area, while 60% (9) n=15 of the students at Nkhoma Nursing College strongly disagreed that they are willing to take responsibility for their own behaviour during learning both in the classroom and at the clinical area. Generally, in all nursing colleges it was noted that 32.6% (42) n=129 of all students interviewed in this study disagreed that they are willing to take responsibility for their own behaviour both in the classroom and at the clinical area. Moreover, there was no correlation in a bivariate correlation coefficient between the type of college and the students' willingness to take responsibility for their own behaviour as the p-value was  $0.092 > p = 0.05$ .

St Lukes of Nursing College had the highest number of students who disagreed on whether nurse tutors display a sense of care and social support to students as the frequency was 53.8% (7) n=13. while 72.2% (16) n=22 of the nursing students at Trinity Nursing College clearly agreed

that nurse tutors do display a sense of care and social support. Generally, 67.4% of all students interviewed perceived that nurse tutors in their colleges display a sense of care and social support. When a bivariate analysis was used in a Spearman correlation coefficient at a two-tailed test of significance, the p-value was  $0.083 > p = 0.05$ . This suggests that nursing students' willingness to take responsibility for their own behaviour does not depend on the type of the college where the student is learning both in the classroom and at the clinical area.

When nurse tutors were interviewed on the benefit of good interaction with the students during teaching, a nurse from St. Joseph Nursing College pointed out that:

*"...first thing that I benefited from good interaction with students is motivation, because at first I didn't know that what I am doing is good to the students but when I started having the compliments through their papers, through their case studies, even through what they say, through their teachers I knew that ooh! Yes with good interaction you have a stable mind in other words psychologically you are stable because if you are not interacting well with the students you always think that maybe the students are talking of this about me, maybe they are not even talking about you they are not labeling you but because when we interact well we don't have that in mind but because you are interacting well even if they are labeling you, you don't have that in mind the other thing is that whenever you go for disciplinary issues I have noticed that whenever disciplinary measure I can give to the students the same thing that somebody does the same person who is not open to the students as if they are given a big one if I can take a phone from a student that student will not think that I have done something wrong somebody takes a phone from the same student it will be a story in the hostel it will be a song in the class it will be a song in the clinical area and even if you reprimand the student the student will take it easy".*

Therefore, motivation, self-belief and courage are the main benefits that can easily be found when there is good nurse tutor–student interaction during teaching both in the classroom and at the clinical area. 75% (15)  $n=20$  of the students from St. Johns Nursing College strongly agreed that their nurse tutors show respect for the knowledge, attitudes and beliefs of students during teaching both in the classroom and at the clinical area. However, 46.6% (7)  $n=15$  of the students at Nkhoma Nursing College strongly disagreed that their tutors show respect for their knowledge, attitudes and beliefs. Generally, when all the responses were analysed, it was noted that when the bivariate analysis was used in a Spearman correlation coefficient with a two-tailed test of significance to compare the dependent variable respect for knowledge, attitudes and beliefs by the nurse tutors and a predictor variable type of nursing college, the p-value was  $0.094 > p = 0.05$ . This suggests that there is no correlation between the type of college where nurse tutors teach and the nurse tutors' respect for students' knowledge, attitude and beliefs both in the

classroom and at the clinical area. 53.3% (8) n=15 of the students from Nkhoma Nursing college disagreed that their nurse tutors show respect for adolescents and their freedom of choice, while 42.1% (8) n=19 of students from Ekwendeni Nursing college disagreed that their nurse tutors show respect for the adolescent and their freedom of choice both in the classroom and at the clinical area. Generally, 36.4% (47) n=129 of all students from the various nursing colleges who participated in this study strongly disagreed that their nurse tutors respect adolescents and their freedom of choice. Moreover, when a bivariate analysis was done in a Spearman Correlation Coefficient at a two-tailed test of significance, the p- values was  $0.094 > p = 0.05$ . This indicates that the type of Nursing College cannot influence nurse tutors' respect for adolescents and their freedom of choice.

### **5.2.1 DISTRIBUTION OF TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TUTORS' AND STUDENTS' INTERACTION**

The concept of tutors' work experience was divided into two categories. The first category was comprised of tutors with work experience of 1 to 5 years, meaning they have limited work experience, while the second category was comprised of tutors with 6 or more years of work experience, meaning they have extensive experience in student instruction. This classification was based on mastery of curriculum and other teaching instructions both in the classroom and at the clinical area. Student study experience was also categorised into two, namely those students with 1-2 years of study experience and therefore having limited learning experience, and those with more than two years of study experience, thus having a more extensive learning experience (See table.4.10).

A total of 60.5% (26) n=43 of the nurse tutors with more than 6 years of work experience strongly agree that they are cheerful to the students both in the classroom and at the clinical area. Only 39.5% of the tutors with less than 5 years of work experience strong agreed that they were cheerful to students both in the classroom and at the clinical area. When nurse tutors' work experience was compared to the dependent variable of cheerfulness to the student in a bivariate analysis using Spearman Correlation Coefficient with a two-tailed test of significance, the p-value was  $0.001 < p = 0.05$ . This means that the null hypothesis that nurse tutors' experience does not correlate to tutors' cheerfulness was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience does correlate to tutors' cheerfulness to students.

This means that nurse tutors' cheerfulness depends on her or his work experience. However, when student study experience was compared to nurse tutors' cheerfulness, both in the classroom and at the clinical area, there was no correlation in the spearman correlation coefficient as the p-value was  $0.646 > p = 0.05$ . This indicates that the students did not feel that the tutors are always cheerful to them. Although this statistic is not significant, it was clear that 64.7% (44) n=68 of those students who have more than two years of study experience strongly agreed that tutors are always cheerful both in class and at the clinical area.

Cheerful interaction between students and nurse tutors enables students to better understand the course and to pass with high grades. This is what a nurse tutor from St. Joseph Nursing College said:

*“They are relaxed, they can approach you on any issues, they can ask you on things relating to their academic performance, and usually if the interaction is within the teaching/learning, you see that they understand issues better and pass examinations”.*

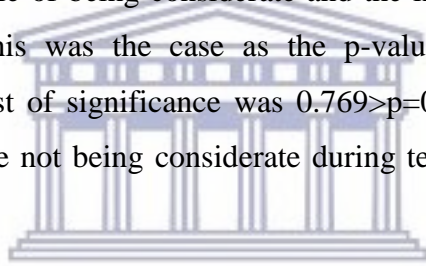


**Figure 5.12** Second year students from Nkhoma Nursing College doing group discussion from class work

**5.8: DISTRIBUTION OF TUTORS' WORK EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON TUTORS-STUDENT INTERACTION**

VARIABLES	TUTORS' WORK EXPERIENCE				Total n (%)	p-value	STUDENTS' STUDY EXPERIENCE N=129			total n (%)	P-VALUE p-value
	1-5years		6 and more yrs				Two year		More than two yrs		
	n	%	n	%	n (%)	n	%	N	%	n (%)	0.646
<b>Always been cheerful to students</b>											
Strongly disagree	1	50.0%	1	50.0%	2(100)	1	50.0%	1	50.0%	2	
Disagree	0	.0%	1	100.0%	1(100)	2	40.0%	3	60.0%	5	
Not sure	3	50.0%	3	50.0%	6(100)	7	53.8%	6	46.2%	13	
Agree	11	36.7%	19	63.3%	30(100)	24	35.3%	44	64.7%	68	
Strongly agree	17	39.5%	26	60.5%	43(100)	20	48.8%	21	51.2%	41	
<b>Very academically sociable in class &amp; Clinical area</b>											<b>0.053*</b>
Strongly disagree	1	50.0%	1	50.0%	2(100)	2	50.0%	2	50.0%	4	
Disagree	0	.0%	5	100.0%	5(100)	6	54.5%	5	45.5%	11	
Not sure	0	.0%	5	100.0%	5(100)	6	42.9%	8	57.1%	14	
Agree	15	48.4%	16	51.6%	31(100)	26	36.6%	45	63.4%	71	
Strongly agree	16	36.4%	28	63.6%	44(100)	14	48.3%	15	51.7%	29	
<b>Mostly considerate to student</b>											<b>0.769</b>
Strongly disagree	0	.0%	2	100.0%	2(100)	1	50.0%	1	50.0%	2	
Disagree	2	50.0%	2	50.0%	4(100)	7	53.8%	6	46.2%	13	
Not sure	6	60.0%	4	40.0%	10(100)	5	33.3%	10	66.7%	15	
Agree	16	36.4%	28	63.6%	44(100)	29	39.2%	45	60.8%	74	
Strongly agree	8	36.4%	14	63.6%	22(100)	12	48.0%	13	52.0%	25	
<b>Very reflective in teaching</b>											<b>0.251</b>
Strongly disagree	0	0.0%	0	0.0%	0(0)	1	50.0%	1	50.0%	2	
Disagree	1	50.0%	1	50.0%	2(100)	2	33.3%	4	66.7%	6	
Not sure	6	54.5%	5	45.5%	11(100)	4	30.8%	9	69.2%	13	
Agree	14	32.6%	29	67.4%	43(100)	33	41.2%	47	58.8%	80	
Strongly agree	11	42.3%	15	57.7%	26(100)	14	50.0%	14	50.0%	28	
<b>Motivate my student to work hard</b>											<b>0.193</b>
Strongly disagree	0	.0%	2	100.0%	2	1	25.0%	3	75.0%	4	
Disagree	0	0	0	0	0	3	42.9%	4	57.1%	7	
Not sure	5	83.3%	1	16.7%	6	5	55.6%	4	44.4%	9	
Agree	11	42.3%	15	57.7%	26	26	34.7%	49	65.3%	75	
Strongly agree	16	33.3%	32	66.7%	48	19	55.9%	15	44.1%	34	
<b>At times Look arrogant to student</b>											<b>0.018*</b>
Strongly disagree	1	25.0%	3	75.0%	4	8	33.3%	16	66.7%	24	
Disagree	3	75.0%	1	25.0%	4	10	33.3%	20	66.7%	30	
Not sure	9	39.1%	14	60.9%	23	11	33.3%	22	66.7%	33	
Agree	11	34.4%	21	65.6%	32	17	58.6%	12	41.4%	29	
Strongly agree	8	39.0%	11	61.0%	19	8	61.5%	5	38.5%	13	

Another interaction challenge related to the nurse tutors' consideration towards nursing students. 63.6% (28) n=44 of the nurse tutors with more than 6 years' work experience strongly agreed that they are considerate to students during teaching instructions both in the classroom and at the clinical area. However, only 52% (13) n=25 of the students with more than two years' study experience strongly agreed that their nurse tutors are considerate to when teaching and interacting both in the classroom and at the clinical area. In a bivariate analysis, using spearman correlation coefficient in a two-tailed test of significance with the independent variable of nurse tutors' work experience in comparison with the dependent variable of consideration towards nursing students, the p-value the was  $0.034 < p = 0.05$ . This means that there is a strong correlation between nurse tutors' work experience and being considerate to students. This means that the dependent variable tutors being considerate to students during teaching depends on the independent variable of nurse tutors' work experience. Although there was correlation on nurse tutors' data, there was no correlation between the dependent variable of being considerate and the independent variable of nurse-student study experience. This was the case as the p-value in a spearman correlation coefficient with two-tailed test of significance was  $0.769 > p = 0.05$ . This means that for the students, the nurse tutors were not being considerate during teaching both in the classroom and at the clinical area.



There was also ambivalence from both the students and the nurse tutors when the variable of being reflective in teaching was presented to both the students and tutors. 67.4% (29) n=43 of the nurse tutors with more than 6 year of work experience agreed that they have been reflective in teaching the students both in the classroom and at the clinical area, while only 32.6% (14) n=43 of the nurse tutors with less than 5 years of work experience agreed that they are very reflective in teaching and interacting with students both in the classroom and at the clinical area. However, only 58.8% (47) n=80 of the students with more than two years study experience agreed that their nurse tutors were reflective in teaching both in the classroom and at the clinical area.

When the spearman correlation coefficient was used in a bivariate analysis with two-tailed test of significance, the null hypothesis that nurse tutors' work experience does not correlate to tutors' reflectiveness in teaching students was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience is highly correlated to tutors' reflectiveness in teaching students as the p-value was  $0.028 < p = 0.05$ . This means that nurse

tutors' reflectiveness in teaching students depends on the nurse tutors' work experience during any academic interactions both in the classroom and at the clinical area. There was no correlation in another equation when the student study experience was compared to tutors' reflectiveness in teaching as the p-value was  $0.251 > p = 0.05$ . This suggests that reflectiveness in teaching by the nurse tutors does not depend on the student study experience (see table 5.10).

The concept of motivation as a challenge of interaction for students and nurse tutors was also measured to both students and nurse tutors. 66.7% (32) n=48 of the nurse tutors with more than 6 years of work experience agreed that they motivate their students to work hard both in the classroom and at the clinical area, while 33.3% (16) n=48 of the nurse tutors who had less than 5 years of work experience agreed that they motivate students to work hard both in the classroom and at the clinical area. This was not the case with students as 65.3% (49) n=75 of the students with more than two years of study experience agreed that their tutors motivate them to work hard both in the classroom and the clinical area. When Bivariate analysis was used to compare the predictor variable of nurse tutors' work experience and the dependent variable of motivating students to work hard, there was a borderline correlation in a Spearman correlation coefficient with a two-tailed test of significance as the p-value was  $0.051 \leq p = 0.05$ . This means that nurse tutors' motivation of their students to work hard depends on the nurse tutors' work experience. However, nursing students perceived the elements of motivation differently. This is because when the predictor variable student study experience was compared to nurse tutors' motivation of students, there was no correlation as the p-value was  $0.193 > p = 0.05$ . This means that student study experience does not influence nurse tutors' motivation of students to work hard both in the classroom and at the clinical area (see table 5.10).

The concept of arrogance of the nurse tutors towards students was perceived as a strong challenge to interaction in both students' and nurse tutors' data both in the classroom and at the clinical area. 65.6% (21) n=32 of the nurse tutors with more than 6 years of work experience agreed that some tutors are occasionally arrogant towards students, while 34.4% (11) n=32 of nurse tutors with less than 5 years of work experience also agreed that occasionally, the nurse tutors are arrogant towards students both in the classroom and at the clinical area and 66.7% (20) n=30 of the students with more than two years of study experience strongly disagreed that nurse tutors are occasionally arrogant towards students. It



was also surprising that 41.4% (12) n=29 of the students with more than two years of study experience strongly agreed that nurse tutors are arrogant towards students. When bivariate analysis was used to compare the predictor of variable nurse tutors' work experience and the dependent variable of occasional arrogance towards students, the null hypothesis that nurse tutors' work experience does not correlate to the dependent variable of occasional arrogance towards students was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience was highly correlated to arrogance towards students during teaching as the p-value was  $0.022 > p = 0.05$ . This indicated that the element of arrogance towards nurse students by nurse tutors was influenced by the nurse tutors' work experience. This was also in line with the bivariate analysis applied to student data. As the result, the spearman Correlation Coefficient in a two-tailed test of significance showed that there is a strong correlation between the independent variable of student study experience and the dependent variable of occasional arrogance towards students as the p-value was  $0.018 < p = 0.05$ . These results clearly show that the element of arrogance towards students by the tutors in all nursing college is a challenge as tutor–student interaction depends upon the student study experience both in the classroom and at the clinical area.

Although the students perceive arrogance from the nurse tutors and it has been found to be having a high statistical significance, during in-depth interviews, nurse tutors denied being arrogant and appraise their communications with the students during teaching. For example, a nurse tutor with nine years of experience from Nkhoma Nursing College said:

*“I think I don't normally create an environment which is threatening to the students. I teach by allowing them to be free and able to ask for clarification or ask any questions they have. And when they do, I would respond to them positively unlike maybe shouting at them or threatening them or giving them the punishment that you go and read, unless when am also not sure of the thing then I would say, go and read, and I would also consult and come back to you. So in so doing I would say they are the things that also help the students to feel free whenever am teaching them’.*

In this case, there is still a discrepancy between students and nurse tutors on the teaching interactive behaviour, such as being arrogant during teaching.

Another variable that was measured under the challenges of interaction is open-mindedness of nurse tutors towards students' needs. Some 65.1% (28) n=43 of the nurse tutors with more

than 6 years of work experience agreed that they are open-minded to students' needs both in classroom and at the clinical area. A total of 34.9% (15) n=43 of the nurse tutors with less than 5 years of work experience agreed that they are open-minded to students' needs both in the classroom and at the clinical area. In a bivariate analysis using the spearman correlation Coefficient in a two-tailed test of significance, when the predictor variable of nurse tutors' work experience was compared to the dependent variable of tutors' open-mindedness to students' needs, the null hypothesis for this comparison was rejected as the p-value was  $0.020 < p = 0.05$ . This suggests that there is a strong correlation between nurse tutors' work experience and nurse tutors' open-mindedness to students' needs. This means that nurse tutors' open-mindedness to students' needs, depends on the nurse tutors' work experience. However, students' perceptions were different from those of the tutors. This is because when the predictor variable of student study experience was compared to the dependent variable of nurse tutors' open-mindedness to student needs, the null hypothesis that the predictor variable does not correlate to the dependent variable was not rejected. This means that nurse tutors' open-mindedness to students' needs are not influenced by the student study experience.

It should be pointed out that the concept of compassion towards students by nurse tutors was strongly correlated to both the predictor variables of nurse tutors' work experience and students' study experience respectively. This is because in both equations of spearman correlation coefficients, the outcome of the p-values was  $0.048 < p = 0.05$  for the nurse tutors' data and  $0.016 < p = 0.05$  for the students' data respectively. This indicates that nurse tutors' compassion towards students as a challenge to interaction both in the classroom and at the clinical area is influenced by both the nurse tutors' work experience and students' study experience respectively.

One nurse tutor with three years of work experience at Nkhoma nursing College expounded on the use of compassion in teaching students as a priori code under the theme of interaction, and said:

*"I think there's inner satisfaction and inner joy; self-satisfaction. Inner satisfaction is coming from self-satisfaction where you have impacted something in somebody who did not know it and you are assured that you have transformed the total person because you have given him the new information and you are able to get the feedback that yes I've taught this person something. That gives me joy to*

*say I've discharged something and I've got something back; what I expected because when you teach you expect students to understand. So that gives back the self-satisfaction".*

This indicates that good interaction creates inner self-satisfaction and joy among nurse tutors which promotes teaching in Malawi nursing colleges.

Another challenge of student interaction was on advocating for students' welfare. 60.5% (26) n=43 of the nurse tutors with more than 6 years of work experience agreed that nurse tutors advocate for students' welfare both in the classroom and at the clinical area, while 39.5% (17) n=43 of the nurse tutors with less than 5 years of work experience agreed that they advocate for students' welfare both in the classroom and at the clinical area. In a bivariate analysis using the spearman correlation coefficient, with a two-tailed test of significance the p-value was  $0.002 < p = 0.05$ . This means that there is a strong correlation between nurse tutors and their advocacy of student's welfare. However, when the same spearman correlation coefficient was used to compare the predictor variable of student study experience and the dependent variable of advocacy of student welfare by nurse tutors, there was no correlation as the p-value was  $0.353 > p = 0.05$ . This suggests that the advocacy of students' welfare by nurse tutors is not influenced by the students' study experience.

A further challenge to student-tutor interaction that was measured in this study was respect by nurse tutors when engaging with students. 57.4% (27) n=47 of the nurse tutors with more than 6 years of work experience agreed that they tend to be respectful when engaging with students both in the classroom and at the clinical area, while 42.6% (20) n=47 of the nurse tutors with less than 5 years of work experience also agreed that they tend to be respectful when engaging with students both in the classroom and at the clinical area. Using the bivariate analysis in spearman correlation coefficient with two-tailed test of significance, the p-value after comparing the independent variable of nurse tutors' work experience and the dependent variable of being respectful when engaging with students was  $0.036 < p = 0.05$ . This suggests that tutors being respectful when engaging with students is highly influenced by the nurse tutors' work experience. However, the students' data showed that there was no correlation between student study experience as a predictor variable and the dependent variable of being respectful when engaging with students as the p-value was  $0.0356 > p = 0.05$ . This implies that nurse tutors' behaviour of being respectful when engaging with students is not influenced by the students' study experience (see table 5.10).

The provision of enough information and notes to students was also perceived as another interaction challenge between students and nurse tutors in Malawi nursing colleges. 61.7% (29) n=47 of the nurse tutors with more than 6 years of work experience agreed that they provide enough information and notes to students both in the classroom and at the clinical area, while 38.3% (18) n=47 of the nurse tutors with more than 6 years of work experience also agreed that they provided the students with enough information and notes. Even when the spearman correlation coefficient was used in a bivariate analysis, with a two-tailed test of significance to compare the independent variable of nurse tutors' work experience and the dependent variable of provision of sufficient information and notes to students, the p-value was  $0.020 < p = 0.05$ . This means there is a strong correlation between nurse tutors' work experience and the provision of sufficient information and notes to students both in the classroom and at the clinical area. This indicates that provision of sufficient information and notes to students depends on the nurse tutors' work experience.

Furthermore, 63.2% (43) n=68 of the students with more than 2 years study experience agreed that their nurse tutors provide sufficient information and notes both in the classroom and at the clinical area. In addition, 36.8% (25) n=68 of the nursing students with less than two year of study experience also agreed that their tutors provide sufficient information and notes both in the classroom and at the clinical area. However, when the spearman correlation coefficient was used in a two-tailed test of significance, the p-value was  $0.342 > p = 0.05$ . This means that there is no correlation between independent variable of student study experience and the dependent variable of nurse tutors' provision of sufficient information and notes both in the classroom and at the clinical area. However, under the same theme, a nurse from Ekwendeni noted that:

*"...the interaction issue was the problem. It seems when we interact with students we differ some of us when we are with students we are strict too much. We don't even smile we don't even give a joke in class but to me I don't think so, for me, to make the environment good it doesn't mean you should be loose, but you should be able to be flexible".*

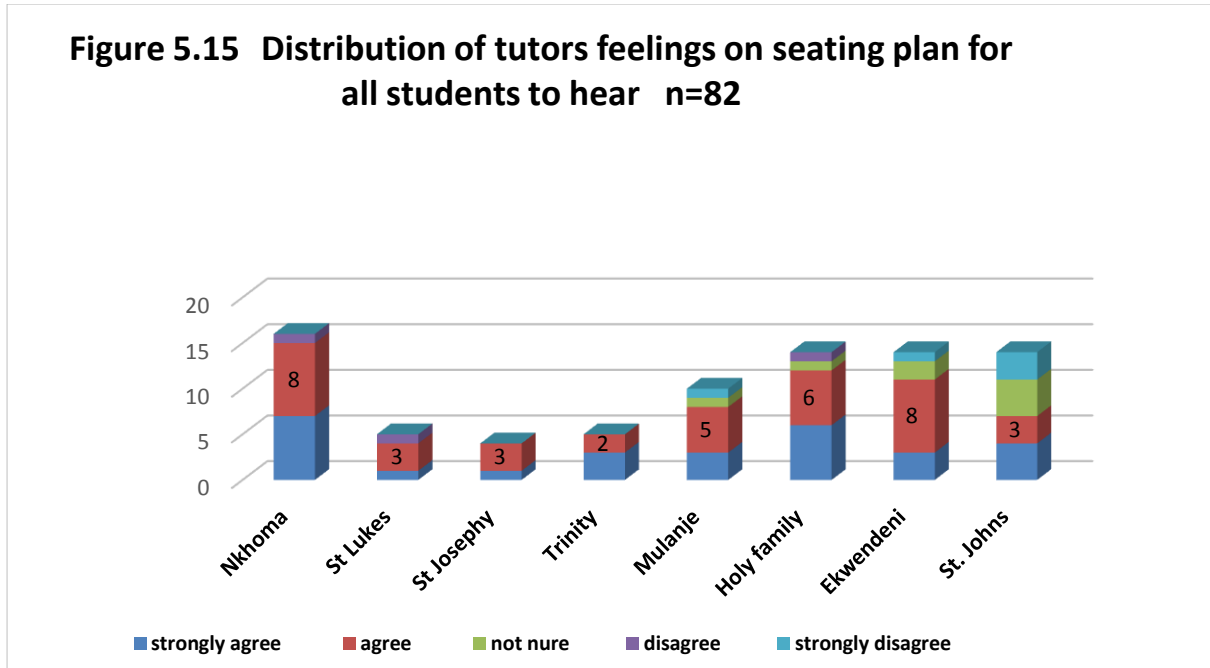


**Figure 5.13: Nurse tutors' deliberations on challenges of student-tutor interaction**

### **5.3.0 DISTRIBUTION OF NURSE TUTORS' COMPETENCE WHEN TEACHING**

In both nurse tutors and students' questionnaires, the variable of nurse tutors' competences when teaching was measured using the tutors' and students' perspectives in a five ranked Likert scale. There were 40 items that focused on tutors' competences. The Cronbach's alpha, which is the reliability statistics, was determined to be 0.945. Generally, students are not impressed with nurse tutors' competences during teaching. This is the same for nurse tutors, who clearly indicated dissatisfaction with the students' competences both in the classroom and at the clinical area.

**Figure 5.15 Distribution of tutors feelings on seating plan for all students to hear n=82**

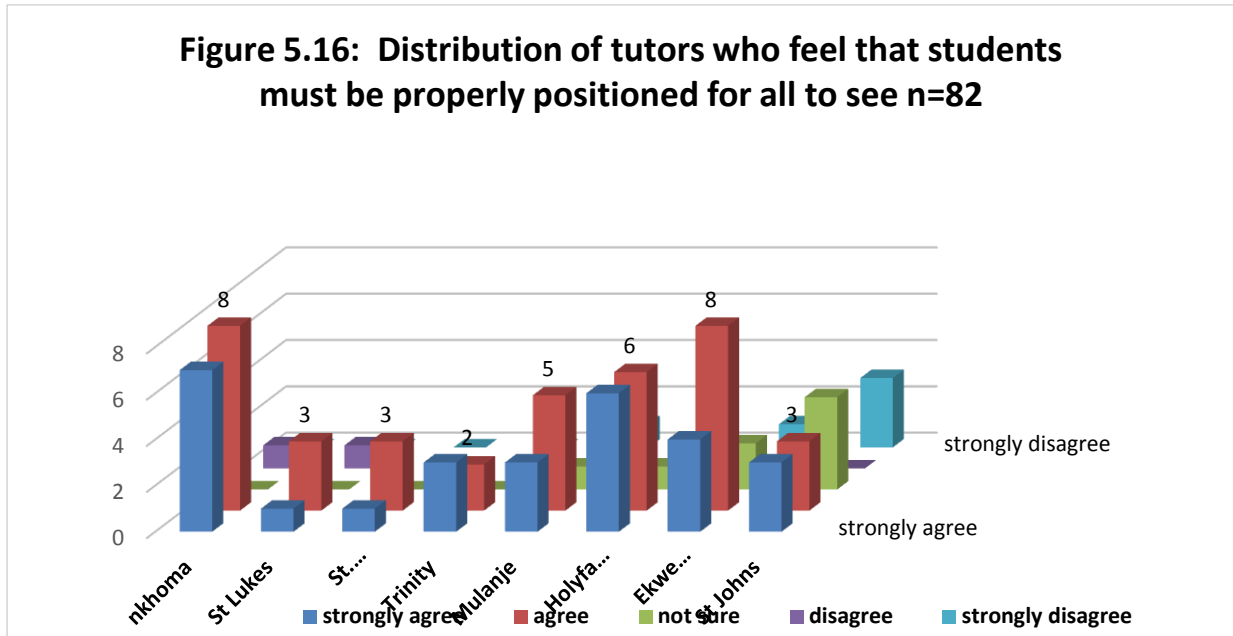


**Figure 5.15: Distribution of tutors' feelings on students' seating plan**

In the figure 5.15 above, the distribution of tutors' feelings towards the type of the seating plan preferred when teaching was analysed. It clearly showed that nurse tutors in different nursing colleges of the country agreed that they prefer to prepare a seating plan for their students in the classroom when teaching. Only a few students who disagreed that their tutors do not plan their seating for them to hear properly. It was only nurse tutors from Holy Family Nursing College and St. Lukes Nursing College who disagreed that they plan the seating arrangements of their students for them to hear properly. Using the spearman correlation coefficient in a correlation coefficient analysis based on a normal approximation, the null hypothesis that the independent variable of the type of the nursing college where nurse tutors teach does not correlate to the type of seating plan was rejected as the p-value was  $0.029 < p < 0.05$ . This was done in favour of the alternative hypothesis that the independent variable of the type of the nursing college in Malawi strongly correlated to the dependent variable of the type of the seating plan for students to hear properly. This means that the choice of seating plan for students to hear depends on the type of the nursing college where nurse tutors teach.

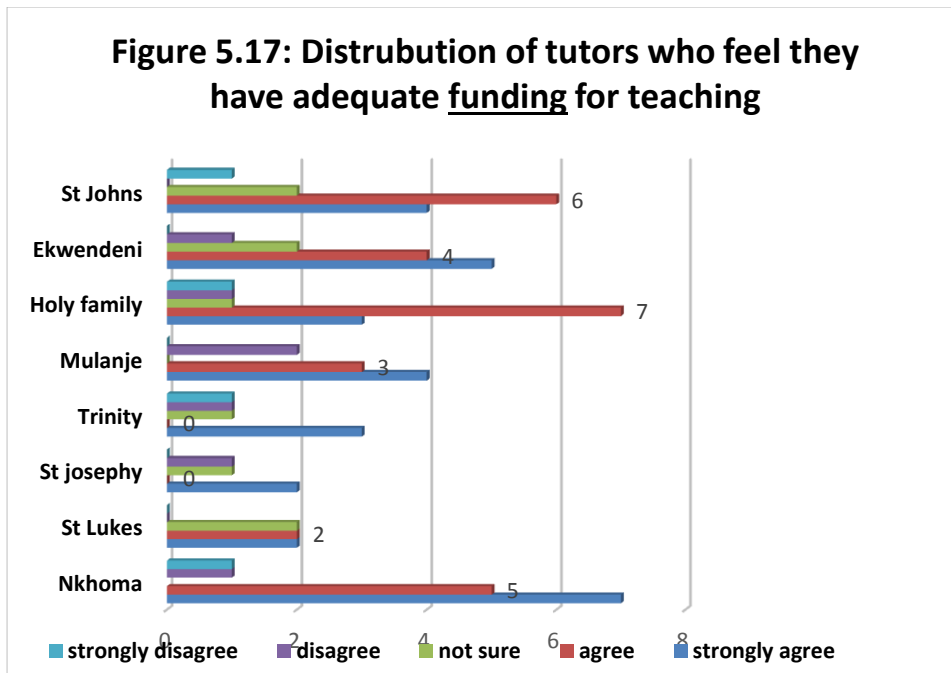
This is also in line with the tutors' perception that students should be properly positioned both in the classroom and at the clinical area for them to see and hear when learning. Based on figure 4.16 below, it is clear that the distribution of the nurse tutors who feel that students

must be well positioned for them to see and hear reflects as a strongly agree in most of the nursing colleges in the country. Ekwendeni Nursing College and Nkhoma nursing college nurse tutors exhibited the highest tendency to strongly agree that their students must be well positioned during teaching for them to see and hear.



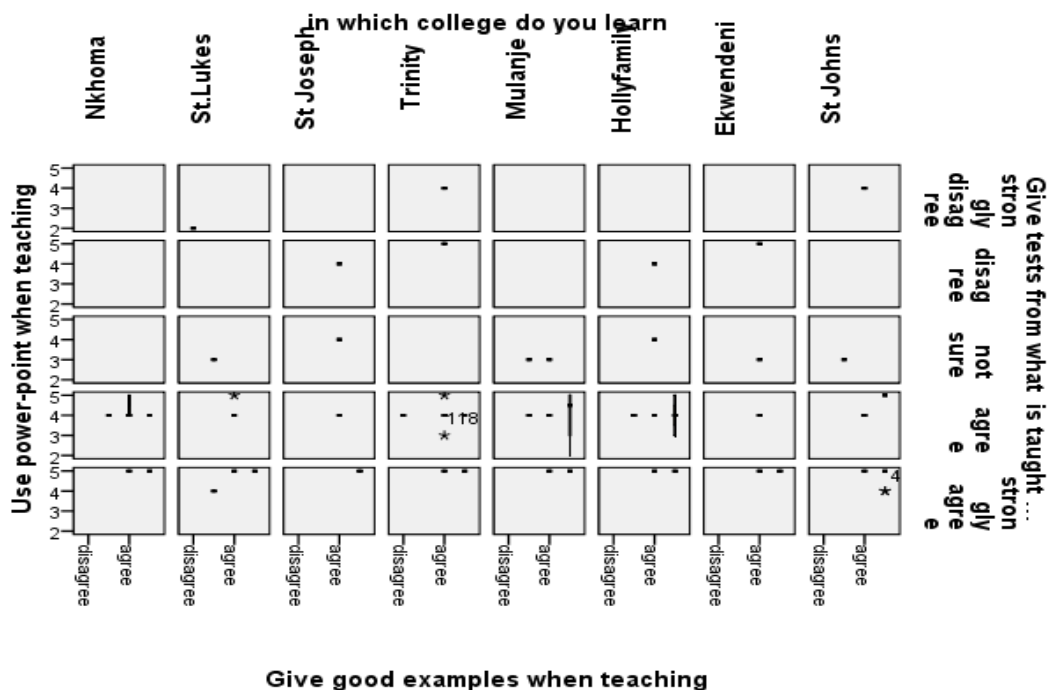
**Figure 5.16: Distribution of tutors' on student's class positions**

The concept of adequate funding in the college was also measured to determine how this influences tutors' competence in teaching both in the classroom and at the clinical area. It was noted that at three nursing colleges, namely Nkhoma, St. Johns and Holy Family, the nurse tutors strongly agreed that their administration provides them sufficient funding for the college to function properly.



**Figure 5.17: Distribution of tutors on adequate college funding**

In figure 5.17, St. Lukes, St. Joseph and Trinity Nursing Colleges clearly showed that their nursing administration does not provide sufficient funding for the nurse tutors to teach competently.



**Figure 5.18: Distribution of students in multiple box plots on competences**

The dependent variables of the use of power point when teaching, giving good examples when teaching, and testing on what is taught in classroom were compared in multiple box



plots with the independent variable type of the nursing college to the students. This was done with the dichotomised options of the students whether they agree and disagree. Based on figure 5.18 above, students in all colleges agreed that the nurse tutors use power point to teach and that they give good examples when teaching including that they give tests on what was taught in the classroom. However, at St. Johns, Trinity and Ekwendeni Nursing Colleges, some students strongly disagree that their tutors use power point, give them good examples when teaching and test them on what was taught in the classroom. Furthermore, Mulanje, Nkhoma and Trinity nursing college had a lot of students who specifically agreed that their nurse tutors use power point and gives good examples when teaching both in the classroom and at the clinical area.

In table 5.12, nurse tutors' competences were classified according to different tutors from different nursing colleges. Nurse tutors' competency on the provision of adequate instructional time to students was measured using spearman correlation coefficient. The independent variable type of the college where nurse tutors teach was compared to the provision of adequate instructional time to students. The outcome showed that there is borderline correlation between the two variables as the null hypothesis could be rejected. This was in favour of the alternative hypothesis that the type of nursing college correlates to the provision of adequate instructional time to students by nurse tutors in Malawi nursing colleges as the p-value was  $0.050 \geq p = 0.05$ . This means that nurse tutors' provision of adequate instructional time to students depends on the college where the nurse tutors teach. This is a true reflection of the tutors' perceptions as 54.8% (45) n=82 of the nurse tutors from all the nursing colleges strongly agreed that they do provide adequate instructional time to students. However, students' perceptions differed in that 45.2% (52) n=129 of the students agreed that their tutors provide adequate instructional time to students during teaching both in the classroom and at the clinical area. Ekwendeni and Mulanje nursing colleges nurse tutors also agreed that they do provide the instructional time to students.

Apart from the instructional time, students were also asked on the priori code of effectiveness during teaching. A nurse tutor from Ekwendeni Nursing Colleges pointed out that:

*"I am effective because this comes now from the evaluation of the students which is done in class that is theory, depending on the type of assessments that you give either group or individual presentations, or individual exams so from that you can tell again if the students have understood. Again there is a*

*clinical component depending on what topic you are teaching so this exam can come from the theoretical part of it and can also come from skill part of it. So the scores that the students get at least guides you that's why maybe we tend to do two if the course is to do with the skill as well as the knowledge. You also consider the fact that sometimes the student may not understand but is able to memorize can still do well so in that again you must have that skill to differentiate what type of student is this one. Who just memorize; paste or is able to analyse whatever he has done and is able to write how he has understood and is able to do the skill according to what is supposed to be done. So a variety of evaluation methods will actually help you to assess whether the students have understood or not”.*

Therefore, the effectiveness of nurse tutors is determined through student assessment. If the pass rate of students is high, it attests to the fact that the nurse tutor is performing well during teaching both in the classroom and at the clinical area.

Another important competency which was measured among students and nurse tutors is offering and describing the objectives when teaching. Using the spearman correlation coefficient to compare the type of nursing college as the independent variable and offering and describing good objectives when teaching students as the dependent variable based on normal approximation under ordinal by ordinal variables, the null hypothesis that the type of the college does not correlate to the tutors offering and describing of the objectives was rejected. This is because the alternative hypothesis that type of the nursing colleges is correlated to nurse tutors' competency on offering and describing the objectives was favoured and accepted as the p-value was  $0.040 < p = 0.05$ . This implies that the type of nursing college strongly correlates to the tutors' offering and describing of the objectives during teaching to students both in the classroom and at the clinical area. This is a true reflection of the tutors' perceptions as 56% (46) n=82 of the nurse tutors strongly agreed to the offering and describing the objectives during teaching both in the classroom and at the clinical area.

It was also strongly agreed by nurse tutors that they tend to vary teaching strategies when teaching both in the classroom and at the clinical area (see table 4.12). 46.3% (38) n=82 of the nurse tutors strongly agree that they vary the teaching strategy when teaching students. In the spearman correlation coefficient in a normal approximation, the p-value was  $0.005 < p = 0.05$ . This means that the type of college where nurse tutors teach influences the

tutors' varying of the teaching strategies when teaching both in the classroom and at the clinical area.

Another teaching competency that was examined in the spearman correlation coefficient was the use of good examples when nurse tutors are teaching. When the independent variable of the type of college was compared to the dependent variable of the use of good examples when teaching, with the normal approximation, the p-value was  $0.063 > p = 0.05$ . This suggests that the null hypothesis that the type of college does not correlate to the use of good examples by nurse tutors when teaching in both the classroom and at the clinical area was accepted. This then implies that the type of college does not influence the use of good examples when teaching by nurse tutors both in the classroom and at the clinical area.

The nurse tutors' competency of asking questions when teaching was also measured using the spearman correlation coefficient in normal approximation. The p-value after comparing the type of nursing college and asking of questions by nurse tutors during teaching was  $0.07 > p = 0.05$ . This means that there is no correlation between the type of college and asking of questions by nurse tutors when teaching both in the classroom and at the clinical area.

Furthermore, the concept of providing active lecturing to students was measured to nurse tutors to check their level of competency. A total 45% (37)  $n=82$  of the nurse tutors strongly agreed that they provide active lecturing to students when teaching both in the classroom and at the clinical area while 90% (9)  $n=10$  of the nurse tutors in Mulanje nursing college agreed that they provide active lecturing to their students. Using the spearman correlation coefficient to compare the type of college as an independent variable with the provision of active lecturing to students as the dependent variable with the normal approximation and where ordinal variable was compared to ordinal variable, the p-value was  $0.024 < p = 0.05$ . This suggests that there is a strong correlation. It means that the type of college influences the nurse tutors in the provision of active lecturing in both the classroom and at the clinical area.

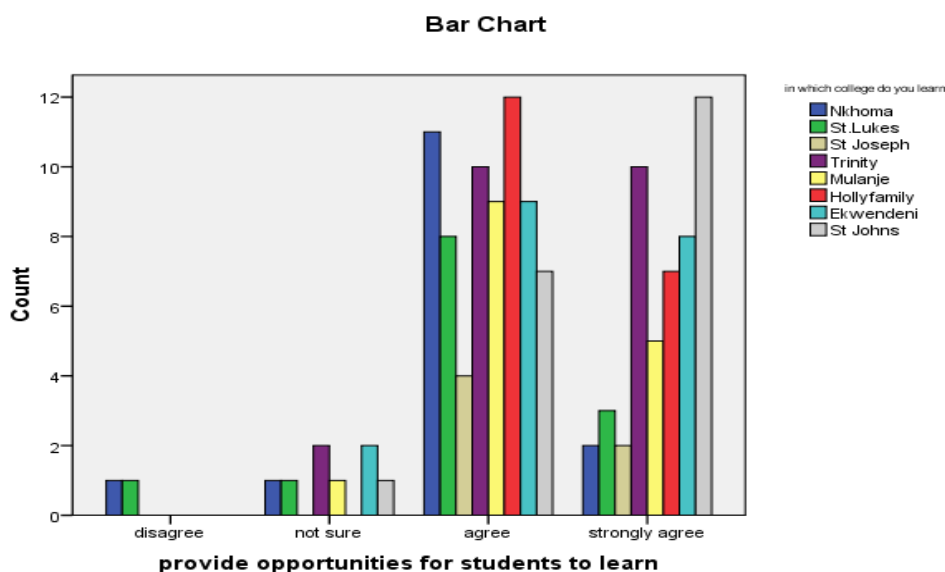
A nurse tutor from St. Joseph Nursing College noted that active lecturing is measured when there a good lesson plan together with a teaching strategy during teaching as she said:

*“For effective delivery of lectures, thus to be an active nurse tutor, you have to prepare in advance; you need to have the lesson plan, the teaching content in advance you have to gather all the necessary materials in advance and during classroom delivery usually you to make sure that the students are at*

*least grasping whatever, you also need to involve them in one way or another. Let's say that combining lecture method with the question and answer method at least to involve them in the lesson; they can do brain storming, at least to make sure that they are within whatever you are teaching so maybe there is need at one point or another after you have done the presentation to make sure that whatever is being covered at that time is grasped by the students”.*

Therefore, it is a combination of good preparation and teaching strategies that define a competent nurse tutor.

The concept of awarding marks in examinations effectively is another nurse tutors' competence that was assessed. A total of 59.8% (49) n=82 of the nurse tutors agreed that they award marks in examinations effectively, while only 36.2% (44) n=129 of the students agreed that nurse tutors award marks in examinations effectively. This means that there is a large discrepancy between nurse tutors and students in the awarding of marks. This also reflected in the spearman correlation coefficient where the p-value when the type of college where nurse tutors teach was compared to awarding of marks in examinations was  $0.027 > p=0.05$ . This suggests that the type of nursing college for the nurse tutors influence how they award marks in examinations effectively. However, in the spearman correlation coefficient when the type of college was compared to the perception of students on the awarding of marks in examination effectively by nurse tutors, the p-value was  $0.452 > p=0.05$ . This indicates that students do not feel that nurse tutors award marks in examinations effectively. This also implies that the type of college does not influence nurse tutors in effectively awarding marks in examinations.



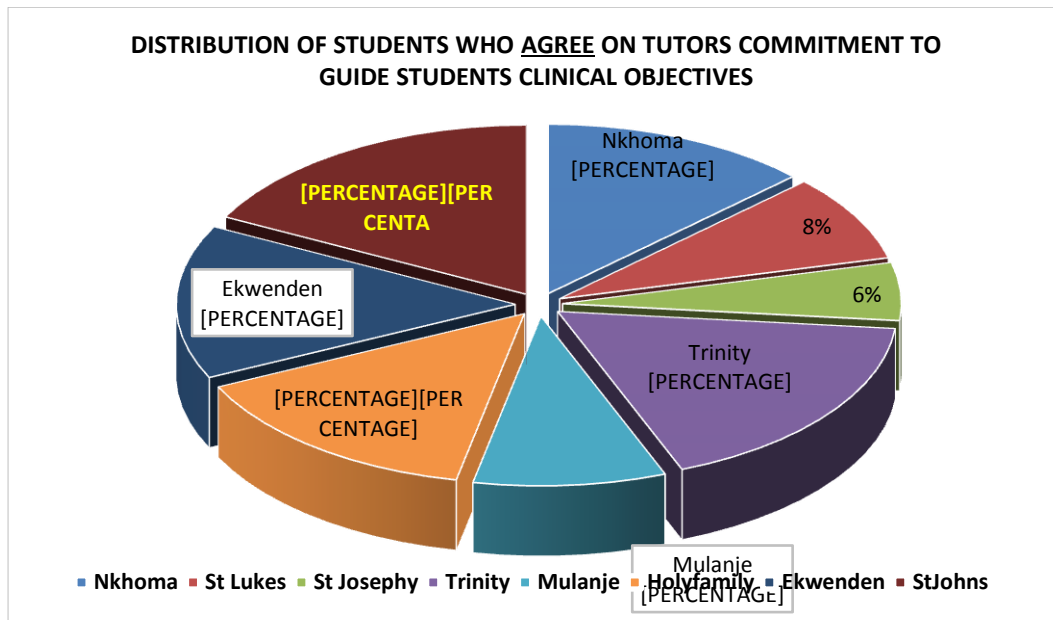
**Figure 5.19: Distribution of students on tutors' provision of opportunities to students**

In figure 5.19, the students' perceptions of the tutors' provision of opportunities to students to learn was measured. Using the spearman correlation coefficient in a normal approximation with ordinal by ordinal variables, the null hypothesis that the type of college does not correlate to the tutors' provision of opportunities to students to learn as perceived by students was rejected. This was in favour of the alternative hypothesis that the type of college correlates to the tutors' provision of opportunities to students to learn as perceived by students as the p-value was  $0,007 < p = 0,05$ . This means that the type of nursing college influences nurse tutors' competency on the provision of opportunities to student to learn both in the classroom and at the clinical area. This was especially true as 54.6% (70)  $n=129$  of the students strongly agreed that nurse tutors indeed offer opportunities to student to learn both in the classroom and at the clinical area. St. Johns Nursing College was the highest among all colleges in terms of students' perceptions on tutors' provision of opportunities to students to learn. One of the nurse tutors from St. Joseph noted that the opportunity to study is provided through the proper process of teaching, for example she said:

*“What I can say is that maybe I cannot judge myself if I am doing the right thing but what I know is that when I go in class using lecture method it means let's say I am using the lecture I am presenting using the power point, I come in class on time, I introduced the topic I explain the information, I ask questions, I respond to students' questions, clarify on areas which they haven't understood. I feel the teaching strategy is effective because I am able to deliver what I have prepared; I give what I had*

prepared. Students are able to respond to questions this shows that students have understood the information I have taught”.

Thus, the use of PowerPoint during teaching, punctuality, good introduction, clarifications during teaching, asking and answering of questions are some of the activities that clarify the better opportunities for student learning.



**Figure 5:20 Distribution of students who agree tutors’ commitment to guide students’ clinical objectives**

In figure 5.20, the nurse tutors’ clinical competency on their commitment to guide students’ clinical objectives was compared between different colleges. It was noticed that 17% (n=129) of the students at St. Johns nursing college strongly agreed that their nurse tutors’ display commitment to guide students on clinical objectives, particularly at the clinical area while 15% (n=129) of the students who agreed that the nurse tutors show commitments to guide them on clinical objectives were from Holy family Nursing College. The lowest number of students who strongly agreed on the tutors’ commitment to guide students on clinical objectives was from St. Joseph Nursing College.

Nurse tutors were found set fair examinations for students after comparing the type of college and the fairness of examinations. In a spearman correlation coefficient with a normal approximation in ordinal-to-ordinal variable comparison, the p-value was  $0.013 < p = 0.05$ . This means that the setting of fair examinations for students by nurse tutors is influenced by the type of college where nurse tutors teach. Even in descriptive frequency analysis it was noted that 52.4% (43) n=82 of the nurse tutors strongly agreed that nurse tutors set fair

examinations for students. However, 58.6% (75) n=129 of the nursing students from different colleges disagree that the nurse tutors set fair examinations for them. (see table 5.13).

Another important competency of nurse tutors for teaching is understanding the module to be taught. 48.8% (40) n=82 of the nurse tutors strongly agreed that they understand the module to be taught to the students during teaching. Using the spearman correlation coefficient, in normal approximation, the p-value was  $0.032 < p = 0.05$ . This indicated that the null hypothesis that the type of the college does not correlate to the nurse tutors understanding of the module to be taught was rejected. This was done in favour of the alternative hypothesis that the type of college strongly correlates to the nurse tutors understanding of the module to be taught. This indicates that the type of college where nurse tutors teach influences the understanding of modules to be taught (see table 5.13).

The concept of self-directed learning was also measured in tutors' competencies during teaching. A total of 53.7% (44) n=82 of the nurse tutors agreed that they provide students with self-directed learning in their colleges, while 29.2% (39) n=129 of the students agreed that they receive self-directed learning. There is also a discrepancy here where 69.8% (91) n=129 of the students disagreed that the nurse tutors provide students with self-directed learning both in the classroom and at the clinical area. Even the Spearman Correlation Coefficient when the type of nursing college was compared to the provision of self-directed learning to students by nurse tutors there was no correlation as the p-value was  $0.08 > p = 0.05$ . This means that nurse tutors' competency of providing self-directed learning to students is not influenced by the type of college where nurse tutors' teach (see table 5.13).

Another nurse tutors' competency that was measured was the resource mobilisation by the nurse tutors for classes and clinical student learning. More than half (53.7%) of the nurse tutors strongly agreed that they satisfy students' learning needs by mobilizing adequate resources for classes both at classroom level and at the clinical area. Similarly, 43.2% (56) n=129 of the students agreed that nurse tutors mobilise learning resources for them both in the classroom and at the clinical area. Even in the spearman correlation coefficient analysis, the null hypothesis that the type of college does not correlate to nurse tutors mobilisation of the resources was not rejected as the p-value was  $0.13 > p = 0.05$ . Therefore, it indicates that the type of nursing college does not influence the nurse tutors mobilisation of resources for students' learning both in the classroom and at the clinical area.

Student learning process satisfaction was also measured as a tutors' competence. A total of 47.6% (39) n=82 of the nurse tutors strongly agreed that they satisfy students' learning processes in the classroom and at the clinical area. A mere 26.6% (34) n=129 of the students agreed that nurse tutors satisfy their learning processes in the classroom. Here again, there is a discrepancy between the perceptions of nurse tutors and students on the concept of satisfying the learning process as 74.4%, n=129 of the students disagreed that they are satisfied with the learning processes offered by nurse tutors and 52.4%, n=82 of the nurse tutors disagreed that they satisfy the students' learning processes. Even the spearman correlation coefficient showed a borderline correlation when the independent variable type of the nursing college was compared to satisfying the students' learning processes by nurse tutors as the p-value was  $0.054 \geq p=0.05$ . This suggests that the type of colleges influences nurse tutors' satisfaction of the students' learning processes.

Another of the nurse tutors' competence that was looked at in the spearman correlation coefficient was nurse tutors assisting students with problem solving. A total of 59.7% (49) n=82 of the nurse tutors agreed that they feel that they assist their students with problem solving. Similarly, 35.6% (46) n=129 of the students felt that nurse tutors do assist them in problem solving. It is clear that 64.4% of the students disagreed that nurse tutors assist them in problem solving. Furthermore, the Spearman Correlation Coefficient in a normal approximation with independent ordinal variable against another dependent ordinal variable comparison, the p-value was  $0.13 > p=0.05$ . This means that there is no correlation between the type of college and the nurse tutors' assistance to students in problem solving both in the classroom and at the clinical area.

Sometimes the theme of competence of the nurse tutors comes in when they walk around the class during teaching and mentioning students by name. A nurse tutor from Ekwendeni nursing college noted under this priori code that:

*"I do make sure that I know my students. By name, so when I am teaching, I walk around the class. I make sure that sitting plan is should accommodate some movement. So I do move from front to back. Sometimes I would stand at the back and be mentioning names of people that are in front so that they wouldn't say because she is at the back then we can start to chat. So I mention the ones in front when I am at the back. And when am in front I mention those at the back by their names. So they know that when am busy chatting she is going to mention my name. So you find that they are always attentive.*



*And I bring in some humour as well, I like chatting. I learnt that if your relationship between you and the students is not good it will definitely affect teaching process and learning process of students”.*

Therefore, accommodating some movement and mentioning students’ names benefits the students’ learning and the nurse tutors’ ability to teaching in Malawi nursing colleges.

Although 43.9% (36) n=82 of the nurse tutors strongly agreed that they tend to be a facilitator rather than a provider on student learning, only 16.2% (20) n=129 of the students agreed that nurse tutors tend to be a facilitator rather than a provider of learning to students. This means that most of the students (83.8%) n=129 disagreed with the competency of the nurse tutors that they tend to be a facilitator rather than the provider. Moreover, the spearman correlation coefficient analysis showed that, when the type of college was compared to nurse tutors’ intention to be a facilitator, the p-value was  $0.22 > p = 0.05$ . It suggests that the type of college where nurse tutors teach does not influence the nurse tutors’ competency as a facilitator rather than a provider both in the classroom and at the clinical area during teaching.



**Table 5.10: DISTRIBUTION OF THE NURSE TUTORS' COMPETENCY**

VARIABLE		In which college do you teach								TOTAL	(p-value)
		Co-variates	Nkhoma	St. Lukes	St. Joseph	Trinity	Mulanje	Holly family	Ekwendeni		
<b>Give self-directed learning to student</b>	Strongly agree	9	0	1	1	4	8	4	2	29	<b>0.08</b>
	Agree	5	4	3	4	5	6	8	9	44	
	Not sure	2	0	0	0	1	0	3	1	7	
	Disagree	0	0	0	0	0	0	0	1	1	
	strongly disagree	0	1	0	0	0	0	0	0	1	
	<b>TOTAL</b>	<b>16</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>82</b>	
<b>Know learning resource mobilization for class</b>	Strongly agree	8	1	1	1	5	7	2	2	27	<b>0.13</b>
	Agree	6	2	3	4	5	6	9	9	44	
	Not sure	2	1	0	0	0	1	3	2	9	
	Disagree	0	1	0	0	0	0	1	0	2	
	<b>TOTAL</b>	<b>16</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>82</b>	
<b>Satisfy student learning process in class</b>	Strongly agree	4	2	1	2	4	8	6	4	31	<b>0.054</b>
	Agree	9	2	2	3	5	4	8	6	39	
	Not sure	3	1	1	0	1	2	1	2	11	
	Disagree	0	0	0	0	0	0	0	1	1	
	<b>TOTAL</b>	<b>16</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>82</b>	
<b>Feel a problem solver</b>	Strongly agree	2	0	1	1	4	4	4	1	17	<b>0.13</b>
	Agree	9	5	3	3	5	8	8	8	49	
	NOT sure	5	0	0	1	1	2	2	4	15	
	Disagree	0	0	0	0	0	0	1	0	1	
	<b>TOTAL</b>	<b>16</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>82</b>	
<b>Tend to be a facilitator rather than a provider</b>	Strongly agree	9	1	2	2	5	7	7	2	35	<b>0.22</b>
	Agree	7	4	1	2	3	6	7	6	36	
	Not sure	0	0	1	1	2	0	1	4	9	
	Disagree	0	0	0	0	0	1	0	1	2	
	<b>TOTAL</b>	<b>16</b>	<b>5</b>	<b>4</b>	<b>5</b>	<b>10</b>	<b>14</b>	<b>15</b>	<b>13</b>	<b>82</b>	

The competence of facilitating dealing with sensitive issues of students by nurse tutors was also assessed among nurse tutors and students. More than half (53.7%) of the nurse tutors agreed that they facilitate dealing with sensitive issues of students. Some 41.2% (53) n=129 of the students in all nursing colleges only agreed that nurse tutors facilitate dealing with sensitive issues to student during teaching both in the classroom and at the clinical area. When an analysis of the spearman correlation coefficient was used to compare the independent variable of the type of nursing college and the facilitation of the dealing of sensitive issues of students as the dependent variable, in a normal approximation where both variables were ordinal in nature, the p-value was  $0.042 < p < 0.05$ . This indicates that there is a strong correlation between the type of college where nurse tutors teach and the facilitation of dealing of the sensitive issues of students during teaching both in class and at the clinical area.

One of the nurse tutors pointed out that dealing with sensitive issues in class depends how to stimulate their interest in the topic and what type of jokes they tell during teaching. For example, a nurse tutor from St. Johns Nursing College pointed out that:

*“Because I think how I introduce the topic I try to stimulate their interest then, like for example I can show...I don’t show the topic in advance though there might be able to know on the timetable but I try to be creative through jokes related to the topic, then when you have gained their interest when presenting I pose questions in between, I employ question and answer and I also just don’t stand on one place I move around the class I have my strategy, when am using the projector its able to scroll down so that once I projected, it shows that we also have breaks in between they don’t stay for 2 hours, one hour they should brake for 5 minutes and come back”.*

Therefore, being creative in telling jokes related to the topic and allowing breaks during the lesson also help to motivate the students during teaching in Malawi nursing colleges.

The concept of using of body language in the classroom during teaching was also assessed on the nurse tutors. A mere 28.7% (35) n=82 of the nurse tutors strongly agreed that they make good use of body language in the classroom during teaching. However, only 23.6% (30) n=129 of the students agreed that nurse tutors good use of the body language in class during teaching. In this condition it is necessary to note that both the students and the nurse tutors generally do not agree on the use of body language in class. However, when the spearman correlation coefficient was used to compare the independent variable of the type of nursing

college and the dependent variable good usage of body language, the p-value was  $0.012 < p = 0.05$ . This indicates that the null hypothesis that independent variable type of the nursing college does not correlate to the dependent variable good usage of body language in class was rejected. This was done in favour of the alternative hypothesis that the type of nursing college does correlate to good usage of body language. Therefore, it is clear that the type of nursing college influences nurse tutors in the use of the body language both in the classroom and at the clinical area.

The nurse tutors' competency of maintaining a good physical proximity to the students was also assessed. Less than half (48.8%) of the nurse tutors agree that they maintain a good physical proximity to students, while only 41.8% (54)  $n=129$  of the students agreed that nurse tutors maintain a good physical proximity to them both in the classroom and at the clinical area. However, 12.5% (2)  $n=16$  of the nursing students at Nkhoma Nursing College disagreed that nurse tutors maintain a good physical proximity to the students both in the classroom and at the clinical area. Furthermore, when the spearman correlation coefficient was used to compare the independent variable type of the nursing college and the dependent variable of maintaining a good physical proximity to the nursing students, the p-value was  $0.069 > p = 0.05$ . This indicates that there is no correlation between the type of the nursing college and the nurse tutors' maintenance of a good physical proximity to the students both in the classroom and at the clinical area. This also implies that the type of the nursing college where the nurse tutors teach does not influence the nurse tutors' good physical proximity to the students both in the classroom and at the clinical area during teaching.

During the in-depth interview the theme of competence under the category of the classroom, the nurse tutors were also questioned on how they evaluate their effort in the utilisation of the teaching strategy. A nurse tutor from St. Joseph pointed out that:

*“Usually after you have presented each and every lesson you have to evaluate the lesson by asking questions; you ask the students some questions pertaining to what has been covered using the teaching strategy. From there you'll be in a position to say the students have understood through this method of teaching or have not understood because if they are able to explain most important facts that you have delivered then it means the students have been listening and they have at least grasped something. But if you ask them questions at the end of the teaching strategy, and they are not able to answer most of the questions then it means the process has not been effective so you need to evaluate each and every method after you have presented it and also you need to evaluate yourself after you*

*have presented. As you are presenting you have to look for the non-verbal queues from students because you will be in a position to say these students are listening; these students are lost; these students need some form of guidance. You need to check the content that you prepared - maybe you have delivered it within the specified time that is also one way of evaluating yourself and even giving the students exams the students, you will decide to give them a test and most of the students pass the exam then it means the delivery of the lecture was successful”.*

Therefore, the effectiveness of the teaching strategy is only evident at the end of the teaching process. If students answer the questions after the teaching adequately, then the teaching strategy may be considered to be effective.

### **5.3.1 DISTRIBUTION OF NURSE TUTORS’ WORK EXPERIENCE AND STUDENTS’ STUDY EXPERIENCE ON TUTORS’ COMPETENCES**

Using bivariate analysis, in the Spearman Correlation Coefficient in a two-tailed test of significance, excluding case pairwise, the independent variable of nurse tutors’ work experience was compared to all the nurse tutors’ competence dependent variables. Moreover, the independent variable of student study experience was also compared to dependent variables from competences of the nurse tutor. Bearing in mind the operational definition of the nurse tutor’s work experience for this study was dichotomised at between 1 and 5 years and more than 6 years of work experience. The students’ study experience was also dichotomised at 1 to 2 years and more than 2 years of student study experience.

In the first comparison, it was noted that 68.2% (15) n=22 of the nurse tutors with more than 6 years of work experience strongly agreed that they provide the students with excellent teaching strategies for practicing skills during class. A total of 53.1% (26) n=49 of the students with less than two years of study experience agreed that the nurse tutors provide excellent strategies for practicing skills during class. However, a greater number of students with more than two years of study experience in the nursing college strongly agreed that nurse tutors provide excellent strategies for practicing skills during class. It should be pointed out that in a Spearman Correlation Coefficient, in a two-tailed test of significance, the null hypothesis that the independent variable of student study experience does not correlate to the dependent variable of nurse tutors provision of excellent strategies for practicing skills during class was rejected. This was due to the alternative hypothesis that the students’ study experience is correlated to the nurse tutors’ provision of excellent strategies for practising

skills during class when teaching students as the p- value was  $0.011 < p = 0.05$ . This implies that student study experience in nursing colleges influences the nurse tutors' provision of excellent strategies for practising skills during class. However, when the same analysis of spearman correlation coefficient was used to compare nurse tutors' work experience and the nurse tutors' provision of excellent strategies for practising skills during class the null hypothesis was not rejected as the p-value was  $0.059 \geq p = 0.05$ . This means that there was a borderline correlation between the two variables in the bivariate analysis. The analysis implies that the nurse tutors' work experience at times influences the provision of excellent strategies for practising skills during classes. This means that the nurse tutors' competence on the provision of excellent strategies for practicing skills during class is very limited.

Another competence that was assessed related to the element that facilitators must be adept at highlighting the key points during teaching both in the classroom and at the clinical area. It was noted that 64% (16)  $n=25$  of the nurse tutors with more than 6 years of work experience strongly agreed that facilitators must be adept at highlighting the key points during teaching of students both in the classroom and at the clinical area. However, 55.3% (21)  $n=38$  of the nursing students with more than two years of study experience also strongly agreed that the facilitator must be adept at highlighting the key points during teaching both in the classroom and at the clinical area. In the bivariate analysis using the spearman correlation coefficient, in a two-tailed test of significance the null hypothesis that the independent variable of nurse tutors' work experience does not correlate to the variable of facilitators must be adept at highlighting the key points during teaching was rejected as the p-value was  $0.037 < p = 0.05$ . This means that the alternative hypothesis that the independent variable of nurse tutors' work experience was correlated to the variable of facilitators must be adept at highlighting the key points during teaching both in class and at the clinical area. This suggests that nurse tutor's work experience influences how adept the facilitators are at highlighting the key points during teaching both in the classroom and at the clinical area. But the students' data did not show any correlation between the independent variable of students' study experience and the dependent variable of facilitators must be adept at highlighting the key points during teaching both in the classroom and at the clinical area, as the p-value was  $0.061 > p = 0.05$ . This means that student study experience is not influencing the adeptness of nurse tutors at highlighting the key points during teaching.

Some 53.6% (15) n=28 of the nurse tutors with more than 6 years of work experience strongly agreed that they make the lesson dramatic enough to be interesting for students during teaching both in the classroom and at the clinical area. Slightly more (57.5% (23) n=40) of the students with more than two years of study experience agreed that nurse tutors make the lesson dramatic enough to be interesting for students both in the classroom and at the clinical area. However, this was not statistically significant in the same bivariate analysis when the independent variable of student study experience was compared to the variable of nurse tutors making the lesson dramatic enough to be interesting during teaching both in the classroom and at the clinical area. This was because the p-value was  $0.204 > p = 0.05$ . This means that students' study experience at nursing colleges does not influence the nurse tutors making the lesson dramatic enough to be interesting during teaching both in the classroom and at the clinical area.

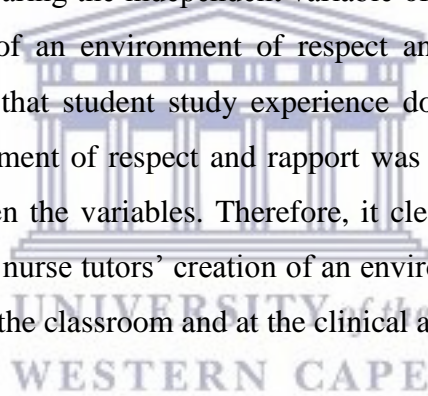


**Table 5.11 DISTRIBUTION OF TUTORS' WORK- EXPERIENCE & STUDENTS' EXPERIENCE ON TEACHING COMPETENCES**

TEACHING COMPETENCY	TUTORS' WORK EXPERIENCE N=82					P- VALUE	STUDENTS' STUDY EXPERIENCE N=129					P- VALUE
	1-5years		6 and more yrs		Total n(%)		Two year		More than two yrs		total N(%)	
<b>stateproblem and ask for ideas</b>	n	%	n	%	N(%)		N	%	n	%	N(%)	<b>0.886</b>
Strongly disagree	1	10.0%	9	90.0%	10(100)		2	28.6%	5	71.4%	7	
Disagree	0	0.0%	1	100.0%	1(100)		9	56.2%	7	43.8%	16	
Not sure	1	33.3%	2	66.7%	3(100)		0	0	0	0	0	
agree	13	38.2%	21	61.8%	34(100)		22	37.3%	37	62.7%	59	
Strongly agree	17	50.0%	17	50.0%	34(100)		21	44.7%	26	55.3%	47	
<b>provide strategy for practicing</b>						<b>0.059</b>						<b>0.011*</b>
Strongly disagree	4	30.8%	9	69.2%	13(100)		7	31.8%	15	68.2%	22	
Disagree	8	57.1%	6	42.9%	14(100)		6	26.1%	17	73.9%	23	
Not sure	3	33.3%	6	66.7%	9(100)		7	33.3%	14	66.7%	21	
agree	10	41.7%	14	58.3%	24(100)		26	53.1%	23	46.9%	49	
Strongly agree	7	31.8%	15	68.2%	22(100)		8	57.1%	6	42.9%	14	
<b>Facilitator must be adept at teasing out the key points</b>						<b>0.037</b>						<b>0.061</b>
Strongly disagree	1	12.5%	7	87.5%	8(100)		2	22.2%	7	77.8%	9	
Disagree	3	50.0%	3	50.0%	6(100)		4	23.5%	13	76.5%	17	
Not sure	8	42.1%	11	57.9%	19(100)		17	45.9%	20	54.1%	37	
agree	11	45.8%	13	54.2%	24(100)		17	44.7%	21	55.3%	38	
Strongly agree	9	36.0%	16	64.0%	25(100)		14	50.0%	14	50.0%	28	
<b>Make the lesson dramatic enough to be interesting</b>						<b>0.008</b>						<b>0.204</b>
Strongly disagree	6	35.3%	11	64.7%	17(100)		6	28.6%	15	71.4%	21	
Disagree	8	57.1%	6	42.9%	14(100)		6	37.5%	10	62.5%	16	
Not sure	0	0.0%	8	100.0%	8(100)		13	48.1%	14	51.9%	27	
agree	13	46.4%	15	53.6%	28(100)		17	42.5%	23	57.5%	40	
Strongly agree	5	33.3%	10	66.7%	15(100)		12	48.0%	13	52.0%	25	
<b>Provide time to research</b>						<b>0.023</b>						<b>0.007*</b>
Strongly disagree	2	16.7%	10	83.3%	12(100)		5	25.0%	15	75.0%	20	
Disagree	9	52.9%	8	47.1%	17(100)		6	26.1%	17	73.9%	23	
Not sure	7	53.8%	6	46.2%	13(100)		12	48.0%	13	52.0%	25	
agree	10	43.5%	13	56.5%	23(100)		16	44.4%	20	55.6%	36	
Strongly agree	4	23.5%	13	76.5%	17(100)		15	60.0%	10	40.0%	25	



Only 46.4% (13) n=28 of the nurse tutors with more than 6 years of work experience agreed that they create an environment of respect and rapport to students during teaching both in the classroom and at the clinical area. A total of 61.7% (37) n=60 of the students with more than two years of study experience agreed that their nurse tutors create an environment of respect and rapport. In a bivariate analysis, using the spearman correlation coefficient, in a two-tailed test of significance, after comparing the independent variable of nurse tutors' work experience and the dependent variable of creation of an environment of respect and rapport during teaching, the p-value was  $0.018 < p = 0.05$ . This means that the null hypothesis that nurse tutors' work experience does not correlate to the creation of an environment of respect and rapport was rejected. This was in favour of the alternative hypothesis that nurse tutors' work experience does correlate to the creation of an environment of respect and rapport. It clearly implies that the nurse tutors' work experience influences the creation of an environment of respect and rapport in nursing colleges in Malawi. This was not the case with the students' data. After comparing the independent variable of student study experience and the variable of the creation of an environment of respect and rapport by nurse tutors to students, the null hypothesis that student study experience does not correlate to the nurse tutors' creation of an environment of respect and rapport was not rejected. This means that there is no correlation between the variables. Therefore, it clearly shows that student study experience does not influence nurse tutors' creation of an environment of respect and rapport during teaching to students in the classroom and at the clinical area.



Another teaching competence that was assessed is nurse tutors' assigning of individual students' presentations. More than half (52.1%) of the students with more than two years study experience agreed that nurse tutors have been assigning individual student presentations, while 58.1% (48) n=82 of the nurse tutors agreed that they have been assigning the individual students' presentations during teaching both in the classroom and at the clinical area. Using a bivariate analysis in a Spearman Correlation Coefficient with a two-tailed test of significance, there was a strong correlation between the independent variable of student study experience and the dependent variable of nurse tutors' assigning of individual students' presentations as the p-value was  $0.005 < 0.05$ . This means that the students' study experience influences the nurse tutors when assigning the individual students' presentations during teaching and learning both in the classroom and at the clinical area.

The competence of lecturing during the entire class period was also compared for both the nurse tutors and the students. A total of 73.9% (17)  $n=23$  of the nurse tutors with work experience of more than 6 years disagreed that they lecture during the entire class period both in the classroom and at the clinical area, while 68.0% (34)  $n=50$  of the students agreed that nurse tutors lecture during the entire class period. When the Spearman correlation coefficient was used to compare the nurse tutors' work experience and the competence of lecturing during the entire class period, the null hypothesis that nurse tutors' work experience does not correlate to lecturing during the entire class period was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience does correlate to lecturing during the entire class period as the  $p$ -value was  $0.044 < p = 0.05$ . This means that nurse tutor's work experience influences lecturing during the entire class period when teaching both in the classroom and at the clinical area. This emerged even stronger when the same Spearman Correlation Coefficient was applied to student study experience and the competence of nurse tutors in lecturing during the entire class period as the  $p$ -value was  $0.000^* < p = 0.05$ . This indicates that the independent variable of student study experience strongly correlates to the dependent variable of lecturing during the entire class period. This suggests that students' study experience influences nurse tutors to lecture during the entire class period.

Another nurse tutors' competence that had significant results in both the students' and nurse tutors' data in the Spearman Correlation Coefficient was the element of students completing self-assessment surveys under the direction of nurse tutors. 60% (18)  $n=30$  of the nurse tutors with more than 6 years of work experience agreed that they had influenced students to complete a self-assessment survey. Some 62.9% (22)  $n=35$  of the students with more than two years of study experience were not sure that the nurse tutors influenced them to complete the self-assessment survey. There was a borderline correlation when the Spearman Correlation Coefficient was used to compare the nurse tutors' work experience and the completion of the self-assessment survey activity by students as the  $p$ -value was  $0.054 \geq p = 0.05$ . This means that nurse tutors' work experience influences the completion of the self-assessment survey activity by students during teaching both in the classroom and at the clinical area. However, there was a strong correlation between students' study experience as the independent variable and the dependent variable of completion of the self-assessment survey activity by students during learning in the classroom and at the clinical area as the  $p$ -value was  $0.013 < p = 0.05$ . This also indicates that students' study experience influences the

nurse tutors to encourage the students to complete the self-assessment survey activity during learning in the classroom and at the clinical area.

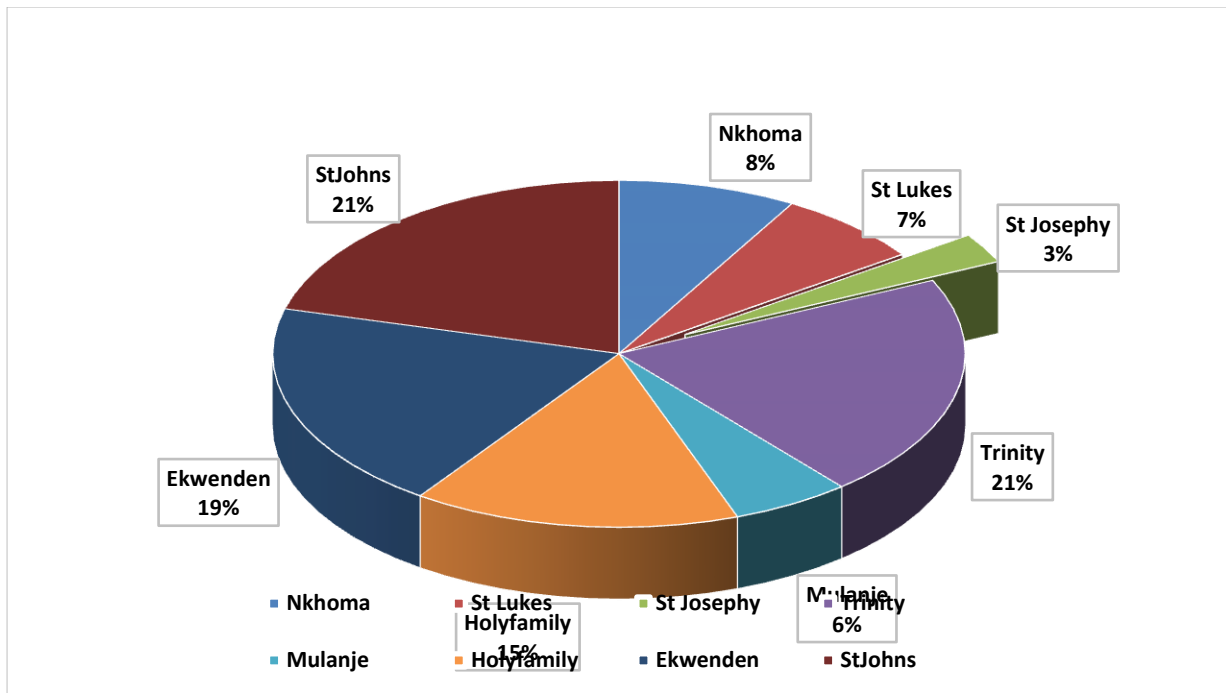
The teaching competence of facilitating brainstorming activity by nurse tutors with their students was also looked at in the analysis. More than half (53.2%) of the nurse tutors with more than 6 years of work experience agreed that they have been facilitating brainstorming activities with their students both in the classroom and at the clinical area. Over half (56.1%) of the students with more than two years' study experience agreed that their tutors have been facilitating brainstorming with them at the colleges. However, when Spearman Correlation Coefficient was used to compare the independent variable of the nurse tutors' work experience and the dependent variable of facilitation of brainstorming activities with students by nurse tutors, the  $p$ -value was  $0.040 < p = 0.05$ . This means that there is a strong correlation between the nurse tutors' work experience and the facilitation of brainstorming with students in nursing colleges during teaching by the nurse tutors. This indicates that nurse tutors' work experience influences facilitation of brainstorming with students by nurse tutors during teaching both in class and at the clinical area.

The nurse tutors' competence of showing a video during the entire class period was also reviewed. Less than half (41.3%) of the nurse tutors with more than six years of work experience agreed that they have shown the students a video for the entire class period during teaching in the classroom. A mere 29.1% (22)  $n=68$  of the nurse students with more than two years of study experience agreed that they have seen their nurse tutors show a video for the entire class period during teaching in the classroom. When the Spearman Correlation Coefficient was used to compare the two variables of the nurse tutors' work experience and the showing of a video to students during the entire class period, the  $p$ -value was  $0.029 < p = 0.05$ . This means that there is a strong correlation between the nurse tutors' work experience and the competence of showing a video to students during the entire class period. However, the bivariate analysis of the students' data also showed that there is a strong correlation between students' study experience and the nurse tutors showing students a video during the entire class period as the  $p$ -value was  $0.000 < p = 0.05$ . This indicates that there is a strong correlation between the independent variable of students' study experience and the dependent variable of showing a video to students during the entire class period.

The competence of nurse tutors on allowing active participation of the students during learning was also assessed. A total of 60.0%(24) n=40 of the nurse tutors with more than 6 years of work experience agreed that they have allowed their students to actively participate in making decisions during teaching in the classroom and at the clinical area. Only 24.5% of the students agreed that they have seen their nurse tutors actively allow them to participate in decision making during teaching both in the classroom and at the clinical area. However, when the Spearman Correlation Coefficient was used to compare the nurse tutors' work experience with allowing students to actively participate in decision making during teaching both in the classroom and at the clinical area, the p-value was  $0.084 > p = 0.05$ . This means that there is no correlation between the two variables. Therefore, it clearly demonstrates that the nurse tutors' work experience does not influence them allowing students to actively participate in decision making both in the classroom and at the clinical area.

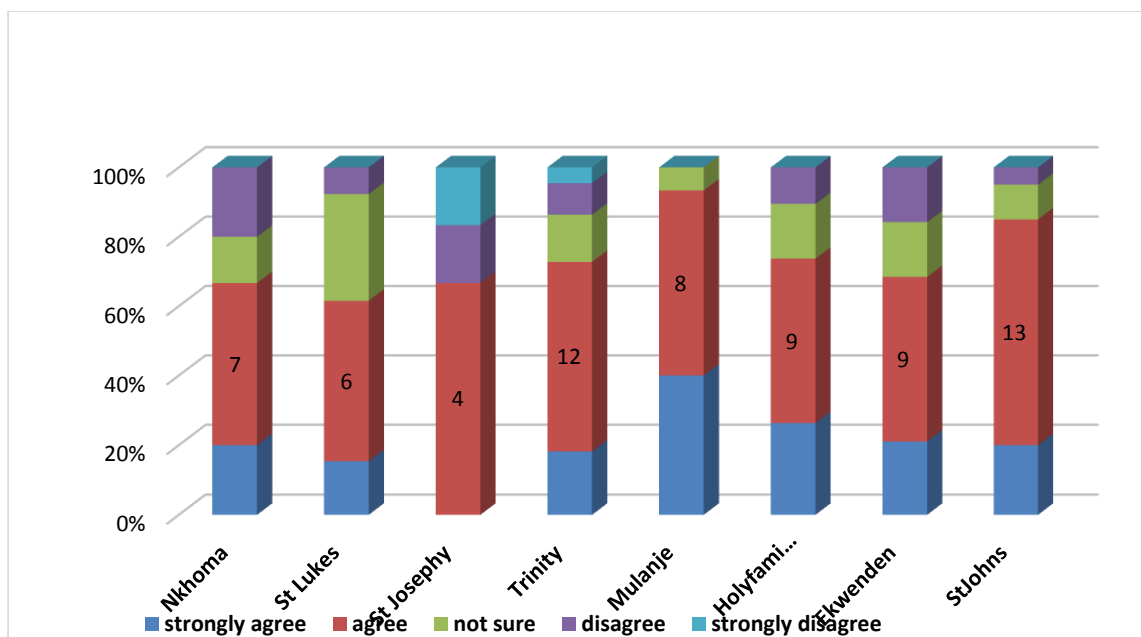
#### **5.4.0: DISTRIBUTION OF NURSE TUTORS' PERFORMANCE WHEN TEACHING**

In both nurse tutors and student questionnaires, the variable of nurse tutors' performance when teaching was analysed using the tutors' and the students' perspectives in a five ranked Likert scale. There were 39 different items that focus on the tutors' performance. The Cronbach's alpha, which is the reliability statistics, was measured and the outcome from the SPSS was 0.954. Generally, both nurse tutors and students are dissatisfied with the nurse tutors' performance during teaching. Similarly, both nurse tutors and students indicated their dissatisfaction with the nurse tutors' performance at the clinical area.



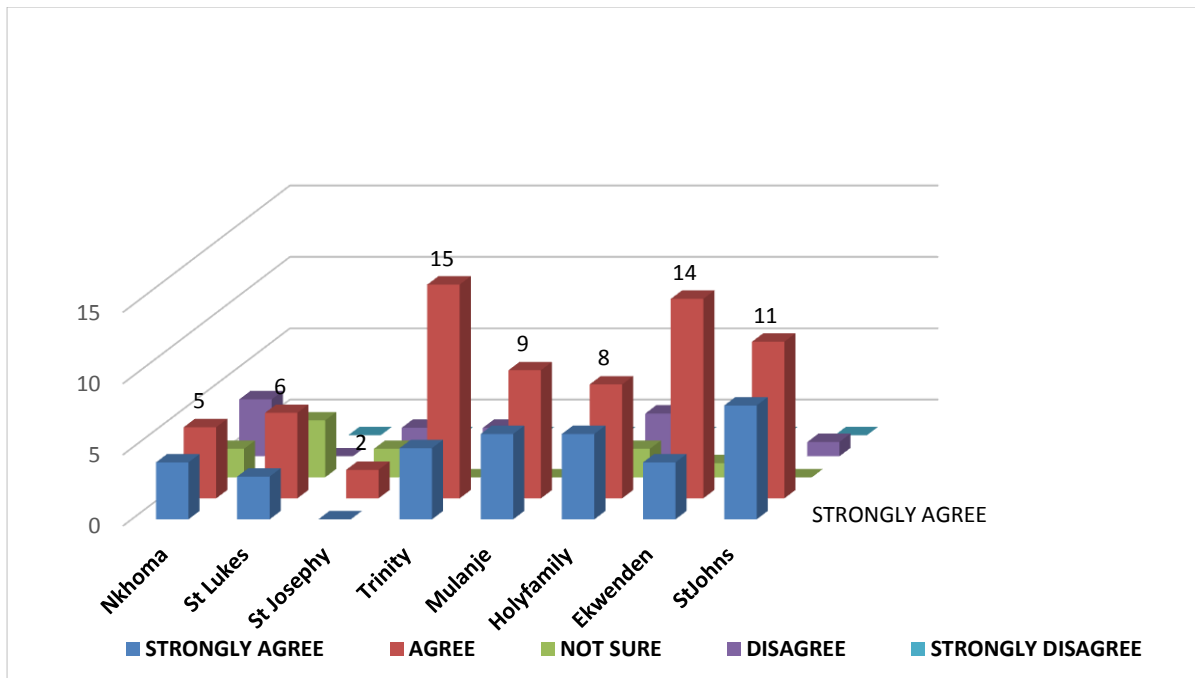
**Figure 5.21: Distribution of students on tutors' sense of care**

In figure, 5.21 above, the performance of nurse tutors in relation to the support and care of students in the classroom and at the clinical area was analysed. Only 21% (27) n=129 of the students from Trinity nursing college and St. Johns Nursing College agreed that nurse tutors display a sense of support and care during teaching both in the classroom and at the clinical area. A mere 19% (24) n=129 of the students from Ekwendeni Nursing College agreed that their nurse tutors display a sense of support and care during teaching both in the classroom and at the clinical area. However, Mulanje nursing College that had the lowest number of students who agreed that their nurse tutors display a sense of support and care during teaching both in the classroom and at the clinical area.



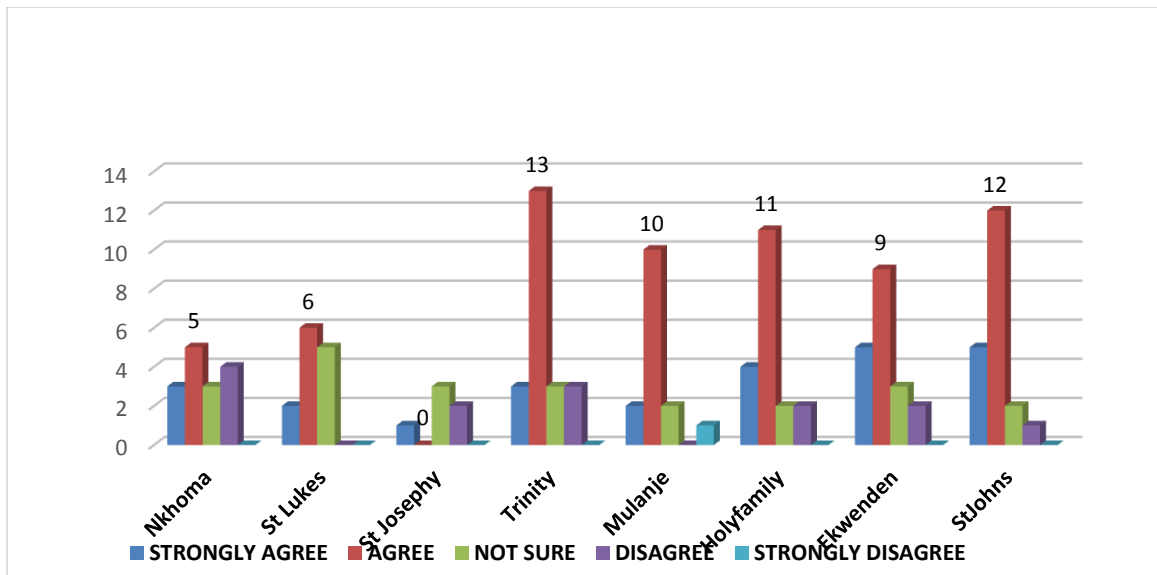
**Figure 5.22: Distribution of students on tutors' clinical interest**

Figure 5.22 illustrates the distribution of students in relation to how they perceive the interest shown by their tutors during clinical learning. A total of 65% (13) n=20 of the students from St. Johns Nursing College strongly agreed that their nurse tutors effectively show interest during clinical learning when teaching. This was followed by Trinity Nursing College, where the data illustrates that 54.5% (12) n=22 of the students agreed that their nurse tutors show interest in the clinical learning of students. Holy Family Nursing College and Ekwendeni Nursing College also revealed a high number of students who agreed that their nurse tutors show interest in the clinical learning of students. However, 48.4% (6) n=13 of the students from St. Lukes Nursing College were not sure whether their nurse tutors show interest in the clinical learning of students. This is of concern as it indicates that students were afraid to speak their minds about their nurse tutors' performance on clinical learning of the students. Generally, 52.7% (68) n=129 of the students from all nursing colleges agreed that they display an interest during clinical student learning. This implies that the performance of students' during clinical learning is very low, which is of concern as this type of learning is paramount to the quality of nurses in the country.



**Figure 5.23: Distribution of students on tutors' procedure demonstration**

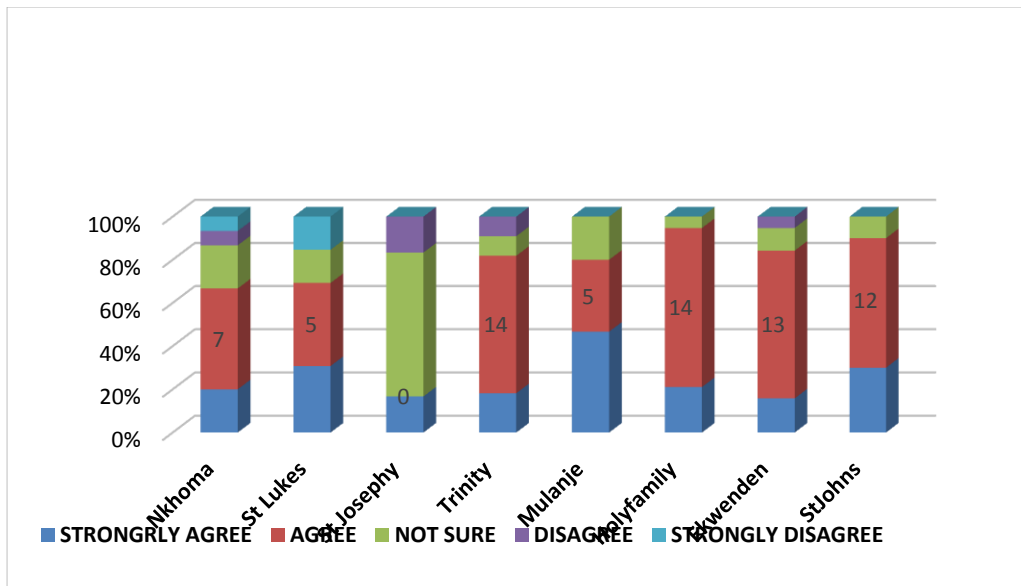
In figure 5.23, the performance of nurse tutors in the area of demonstration of clinical procedures was also assessed in relation to the students. In Trinity nursing college, 68.1% (15) n=22 of the students agreed that their tutors effectively demonstrate clinical procedures during teaching. Almost all the students from Mulanje Nursing College agreed that their nurse tutors effectively demonstrate clinical procedures during teaching, particularly in the clinical area. Furthermore, 73% (14) n=19 of the students from Ekwendeni Nursing College also agreed that their nurse tutors perform effectively during the demonstration of clinical procedures, particularly at the clinical area. Generally, only 54.3% (70) n=129 of the students from all the nursing colleges agreed that their nurse tutors effectively demonstrate clinical procedures both in the classroom and at the clinical area.



**Figure 5.24: Distribution of students on tutors' clinical confidentiality**

Figure 5.24, indicates the distribution of how students perceive nurse tutors influence their clinical confidentiality on patient care. A total of 60% (12) n=20 of the students from St. Johns Nursing College agreed that their nurse tutors influence their clinical confidentiality on patient care at the clinical area, while 59% (13) n=22 of the students from Trinity Nursing College agreed that their nurse tutors influence their clinical confidentiality on patient care. Furthermore, the distribution of students relating to the nurse tutors' influence of students on clinical confidentiality from Nkhoma Nursing Colleges was perceived as a concern as only 33.3% (5) n=15 of the students agreed that the nurse tutors' influence their clinical confidentiality on patient care. Even at St. Joseph Nursing College, although there were only a few students who participated in the study, none of them agreed that their nurse tutors influence them on clinical confidentiality on patient care. Generally, only 51.2% (66) n=129 of the students from different nursing colleges in Malawi agreed that nurse tutors influence students' clinical confidentiality on patient care. This illustrates that the performance of nurse tutors in Malawi on influencing students' clinic confidentiality is limited.

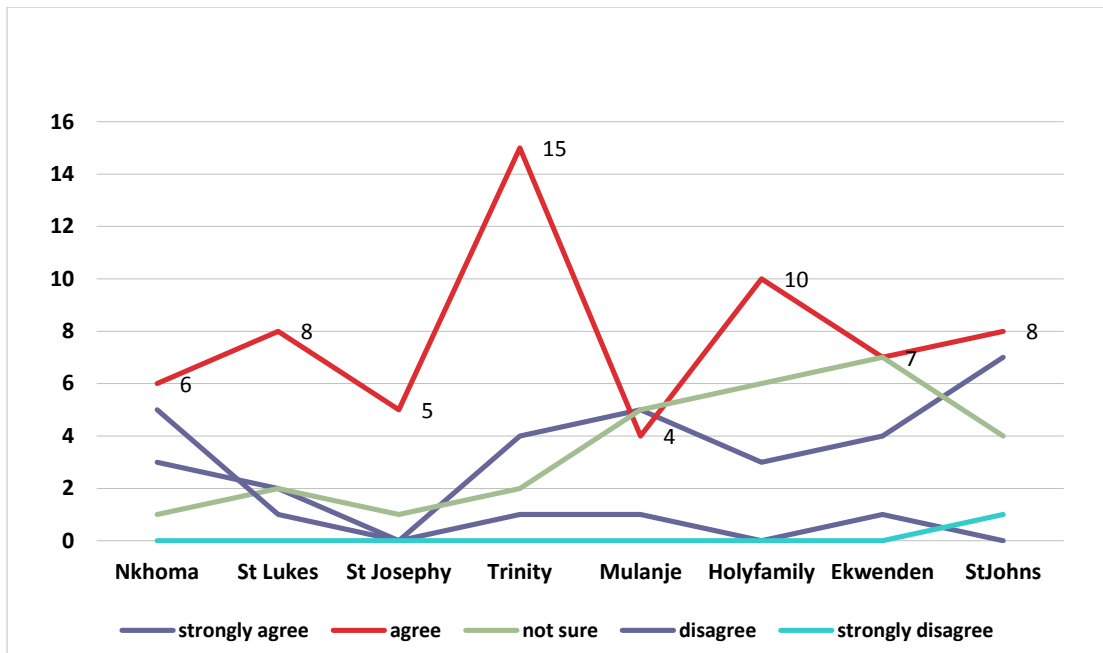




**Figure 5.25: Distribution of students on tutors' practical modelling**

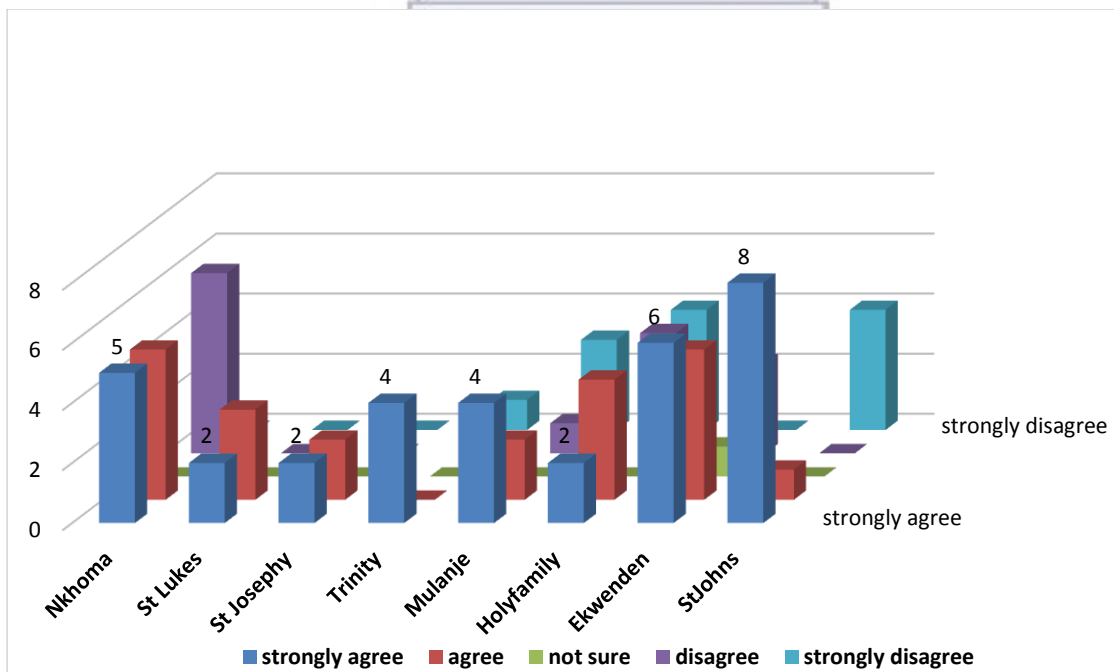
Figure 5.25 presents the distribution of the students on how they perceive their nurse tutors as clinical practice models. A total of 63.6% (14) n=22 of the students from Trinity Nursing College agreed that they view their nurse tutors as clinical practice models, while 73% (14) n=19 of the students from Holy family agreed that their nurse tutors serve as clinical practice models. Furthermore, 46.7% (7) n=15 of the students from Nkhoma Nursing College agreed that their nurse tutors serve as clinical practice models. At St. Lukes, only 38.3% (5) n=13 of the students agreed that their nurse tutors serve as clinical practice models and demonstrate clinical expertise. In general, only 54.3% (70) n=129 of the students from different colleges agreed that their nurse tutors serve as clinical practice models and demonstrate clinical expertise.

The teaching performance of the nursing tutors on gender sensitive was also analysed for both the students and nurse tutors. Results indicated that 68% (15) n=22 of the students from Trinity Nursing College agreed that nurse tutors are gender sensitive during teaching (see figure 5.26).



**Figure 5.26: Distribution of students on tutors' gender sensitivity**

More than half (52.6%) of the students from Holy Family nursing college also agreed that their nurse tutors are gender sensitive when teaching both in the classroom and at the clinical area. It should be noted that 58.1% (75) n=129 of the students agreed that nurse tutors are gender sensitive and understand the gender roles and sexual differences of the students.



**Figure 5.27: Distribution of tutors of use of portfolio**

In figure 5.27, nurse tutors were also assessed on the use of the nursing portfolio as a clinical assessment tool. A total of 61% (8) n=13 of the nurse tutors at St. Johns Nursing College strongly agreed that they use the nursing portfolio to evaluate students in the clinical area. At Nkhoma Nursing College, 31.3% (5) n=16 of the nurse tutors strongly agreed that they use the nursing portfolio to evaluate nursing students, particularly at the clinical area. However, at Holy Family it emerged that many nurse tutors do not make use of the nursing portfolio as only 14.3% (2) n=14 of the nurse tutors agreed that they use the nursing portfolio for student assessment and evaluation at the clinical area.

#### **5.4.1 DISTRIBUTION OF THE NURSE TUTORS AND STUDENTS ON TUTORS' PERFORMANCE IN DIFFERENT COLLEGES**

In Table 5.16, the performance of the nurse tutors in the classroom was assessed, particularly on their ability to act as a guide as opposed to dominating the group. Less than 43.7% (7) n=16 of the nurse tutors in Nkhoma Nursing school agreed that they have the ability to act as a guide as opposed to dominating the group in the classroom, while in the same college, 46.7% (7) n=15 of the students agreed that their nurse tutors have the ability to act as a guide as opposed to dominating the group. At Ekwendeni nursing college, 40% (6) n=15 of the nurse tutors agreed that they act as a guide to students rather than dominating in the group, while 42.1% (8) n=19 of the students in Ekwendeni Nursing College agreed that nurse tutors act as guide rather than dominating the group. Generally, 48.8% (40) n=82 Of the nurse tutors from different colleges agreed that they act as a guide to students rather than dominating the group. Moreover, 47.8% (61) n=129 of the students from different nursing colleges agreed that their nurse tutors act as a guide rather than dominating during teaching both in the classroom and at the clinical area.

Nurse tutors' performance was assessed based on the appropriateness of personnel with professional attitudes and practices to facilitate the use of teaching strategies. A total of 68.4% (13) n=19 of the students from Holy Family Nursing College agreed that their college has appropriate personnel with professional attitudes and practices to facilitate teaching and student learning in the classroom and at the clinical area. Half (50%) of the students from St. Johns Nursing College also agreed that their college has appropriate personnel with professional attitudes and practices to facilitate student learning. while 61.5% (8) n=13 of the nurse tutors from St. Johns nursing College further agreed that their college has appropriate

personnel with professional attitudes and practices to facilitate student learning both in the classroom and at the clinical area. In general, 53.7% (44) n=82 of the nurse tutors agreed that their respective colleges have appropriate personnel with professional attitudes and practices to facilitate students' learning. Moreover, 56.6% (73) n=129 of the students also agreed that their colleges have appropriate personnel with good professional attitudes and practice to facilitates student learning both in class and at the clinical area.

On the theme of nurse tutors' performance under the category of the classroom, when the nurse tutors were questioned on how they feel about the process of teaching from their personal viewpoint, a nurse tutor from St. Joseph noted that:

*"I think I am good, I think I am a good teacher. Because one, is the feedback I get from my students and from the assessments on my own topics or my own courses. I find that students do well on my courses. And maybe also from other members of staff, they give me good feedback to say I am a good teacher. Most of the times, we do get feedback from the students. So they would hear the students talking about me and talking good things about my teaching. And even on the assessments because we do the assessments together, you find that the course that I taught students are doing well. Even if I am not the one who gave them the questions; I deliver the content so someone uses that content I delivered maybe to formulate questions and give the students, you find that the students are doing well showing that learning really did take place...though ... I cannot judge because I haven't gone into most of my friends' classes to check on how they are doing or how they are teaching but I feel what I do is also better".*

The performance of nurse tutors was evaluated through the students' personal feedback and the student teaching assessment both in the classroom and at the clinical area.

VARIABLE	TUTOR/student	Co-variates	In which college do you teach or Learn																TOTAL	
			Nkhoma		St. Lukes		St. Joseph		Trinity		Mulanje		Holly family		Ekwendeni		St. Johns		tutor	stude
			tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stude		
<b>Ability to act as a guide as opposed to dominating the group</b>	strongly agree	7	3	2	2	0	1	2	5	4	5	8	2	1	2	2	4	<b>26</b>	<b>24</b>	
	agree	7	7	3	6	3	2	2	10	4	4	5	13	6	8	10	11	<b>40</b>	<b>61</b>	
	not sure	2	4	0	4	1	2	1	4	2	4	0	3	5	7	1	3	<b>12</b>	<b>31</b>	
	disagree	0	1	0	0	0	1	0	3	0	2	1	1	2	2	0	1	<b>3</b>	<b>11</b>	
	strongly disagree	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	<b>1</b>	<b>2</b>	
	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Inadequate attention to related strategies that maximise success</b>	strongly agree	6	2	1	1	0	1	3	0	3	4	3	3	5	3	4	4	<b>27</b>	<b>18</b>	
	agree	2	3	3	4	0	2	0	4	3	5	6	8	4	2	6	5	<b>24</b>	<b>33</b>	
	not sure	7	7	1	5	2	1	0	8	3	5	2	6	3	10	3	7	<b>21</b>	<b>49</b>	
	disagree	1	3	0	2	0	2	1	8	1	1	3	2	3	4	0	3	<b>9</b>	<b>25</b>	
	strongly disagree	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	1	<b>1</b>	<b>4</b>	
	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Appropriate personal and professional attitudes and practices</b>	strongly agree	5	2	2	1	2	1	1	4	3	3	5	4	4	3	4	4	<b>26</b>	<b>22</b>	
	agree	8	10	3	8	2	3	2	13	5	8	8	13	8	8	10	10	<b>44</b>	<b>73</b>	
	not sure	3	2	0	3	0	1	0	5	1	4	1	1	1	5	1	5	<b>7</b>	<b>26</b>	
	disagree	0	0	0	0	0	1	2	0	1	0	0	1	2	3	0	0	<b>5</b>	<b>5</b>	
	strongly disagree	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	<b>0</b>	<b>3</b>	
	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Willingness to take responsibility for their own behaviour</b>	strongly agree	3	2	0	3	0	1	2	3	3	4	4	3	5	4	2	6	<b>19</b>	<b>26</b>	
	agree	10	4	4	3	3	3	3	13	5	5	9	13	3	11	8	9	<b>45</b>	<b>61</b>	
	not sure	2	6	1	4	1	1	0	4	2	4	1	2	2	3	2	2	<b>11</b>	<b>26</b>	
	disagree	1	2	0	2	0	1	0	2	0	2	0	1	4	1	1	0	<b>6</b>	<b>11</b>	
	strongly disagree	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	3	<b>1</b>	<b>5</b>	
	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	

**TABLE 5.12: DISTRIBUTION OF THE NURSE TUTORS AND STUDENTS ON TUTORS' PERFORMANCE IN DIFFERENT COLLEGES**

Another concept under teaching performance of the nurse tutors was the willingness to take responsibility for their own classroom and clinical behaviour during teaching (see table 4.16). A total of 62.5% (10) n=16 of the nurse tutors at Nkhoma Nursing College agreed that they are willing to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. Moreover, 64.3% (9) n=14, of the nurse tutors at Trinity Nursing College also agreed that they have a willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. More than half (59%) of the students at the same Trinity Nursing College also agreed that their nurse tutors have a willingness to take responsibility for students and their own behaviour during teaching both in class and at the clinical area. Generally, 54.9% (45) n=82 of the nurse tutors throughout all nursing colleges in Malawi agreed that are willing to take responsibility during teaching both in the classroom and at the clinical area. Only 47.3% (61) n=129 of the students throughout the nursing colleges in Malawi agreed that their nurse tutors are willing to take responsibility during teaching both in the classroom and at the clinical area.

A total of 79% (15) n=19 of the students at Holy Family Nursing College strongly agreed that their tutors are committed to setting ethical, moral and behavioural standards during teaching both in the classroom and at the clinical area. However, at Mulanje Nursing College, only 53% (8) n=15 of the students agreed that their nurse tutors are committed to setting ethical, moral and behavioural standards during teaching both in the classroom and at the clinical area. Furthermore, 51.2% (42) n=82 of the nurse tutors in all nursing colleges agreed that they are committed to setting ethical, moral, and behavioural standards during teaching both in the classroom at the clinical area. Generally, 58.1% (75) n=129 of the nursing students from all the nursing colleges agreed that their nurse tutors are committed to setting ethical, moral and behavioural standards. However, it is also worth noting that 38.4% of students from St. Lukes Nursing College disagreed that that their nurse tutors are committed to setting ethical, moral and behavioural standards during teaching both in the classroom and at the clinical area.

The teaching performance of nurse tutors in relation to guiding clinical students on resource mobilisation was examined during the analysis. Just over half (53.3%) of the nurse tutors at Ekwendeni Nursing College agreed that they guide nursing students on clinical resource mobilisation during teaching at the clinical area, while 63.1% of the students from

Ekwendeni Nursing College also agreed that the nurse tutors guide students on clinical resource mobilisation. In addition, 50% of the students from St. Joseph agreed that the nurse tutors guide students on clinical resource mobilisation during teaching in the clinical area. Generally, 56% (46) n=82 of the nurse tutors from all nursing colleges agreed that they guide the nursing students on resource mobilisation both in the classroom during procedural demonstration and at the clinical area. In addition, 56.5% (73) n=129 of the students from different colleges of nursing agreed that nurse tutors guide nursing students on resource mobilisation during teaching, particularly in the clinical area. This means that both students and nurse tutors agree that the performance of nurse tutors on resource mobilisation is generally acceptable during teaching both in the classroom and at the clinical area.

The teaching performance of the nurse tutors in the clinical area in relation to communication with students was also analysed during the study. Three quarters (75%) of the nurse tutors from Nkhoma Nursing College agreed that they communicate with their students clearly at the clinical area during teaching, while only 33% of the students from the same college of Nkhoma Nursing College agreed that nurse tutors communicate clearly at the clinical area during teaching. At St. Johns, 61.5% of the nurse tutors agreed that they communicate with the students about clinical issues clearly during teaching. However, only 45% of the students from St. Johns Nursing College agreed that nurse tutors clearly communicate with them about clinical issues. Generally, 52.4% (43) n=82 of the nurse tutors strongly agreed that they clearly communicate with students about clinical area issues. Similarly, 51.1% of the nursing students from different nursing colleges agreed that their tutors communicate clearly on issues in the clinical area during teaching. Therefore, this indicated that nurse tutors and students in Malawi nursing Colleges generally agreed that nurse tutors perform moderately in relation to communication of the clinical issues in the clinical area.

Nurse tutors are also aware of nursing students' clinical learning needs as 54.8% (45) n=82 of the nurse tutors from different nursing colleges agreed on this. Just over half (53.5%) of the students from different colleges agreed that nurse tutors are aware of their clinical learning needs during teaching both in the classroom and at the clinical area. However, at St. Lukes 30.7% of the nursing students disagreed that their nurse tutors are aware of their clinical learning needs during teaching. This is of concern as nurse tutors are supposed to be not only aware of students' needs, but also to effectively teach students at the clinical area. Less than half (46.6%) of the students from Nkhoma nursing college disagreed that their nurse tutors

are aware of the students' learning needs during teaching both in the classroom and at the clinical area, While only 30.7% of students from St. Lukes Nursing College disagreed that their nurse tutors are aware of the students' learning needs during teaching in both the classroom and at the clinical area. Therefore, the performance of nurse tutors on awareness of students' learning needs is limited among nurse tutors in Malawi.

The enthusiasm of the nurse tutors on the issuing clinical instructions to students was also assessed. This was done to check the level of performance of nurse tutors on the issuing of clinical instructions to students. Analysis showed that less than half (46.6%) of the students from Nkhoma Nursing College disagreed that nurse tutors are enthusiastic when issuing clinical instructions to students. Moreover, 36.3% of the nursing students from Trinity also disagreed that nurse tutors are enthusiastic when issuing clinical instructions to students. At Ekwendeni Nursing College, 26.3% of the students disagreed that nurse tutors are enthusiastic when issuing clinical instructions to students. Therefore, this suggests that the performance of the nurse tutors the issuing of clinical instructions to the nursing students is very limited at all nursing colleges in the country.

In table 5.17, the nurse tutors' role in helping students to perform skills in accordance to ward policy is presented. Only 43.8% of the nurse tutors in Nkhoma Nursing College agreed that they help the students to perform skills in accordance to ward policy during clinical teaching. This is in contrast to the 73.3% of the students at the same nursing college who agreed that nurse tutors in this college help them to perform skills in accordance to ward policy. At Holy Family Nursing College, 35.7% of the nurse tutors agreed that they help students to perform in accordance to ward policy. However, 73.6% of the students agreed that their nurse tutors help them during teaching in the clinical area in accordance to the ward policy. Generally, 45.1% (37) n=82 of the nurse tutors from different nursing colleges in Malawi agreed that they help nursing students to perform at the clinical area in accordance to the ward nursing policy. It is encouraging to note that 60.5% (78) n=129 of the nursing students agreed that the nurse tutors help the nurse students in the different colleges to perform at the clinical area in accordance to the ward policy.

Provision of ongoing feedback to students by nurse tutors for growth during teaching both in the classroom and at the clinical area was also assessed. 80% of the nurse tutors in St. Lukes Nursing College agreed that they provide ongoing feedback to nursing students during



teaching for growth both in the classroom and at the clinical area. However, Only 38.5% of the nursing students from the same college agreed that their nurse tutors provide ongoing feedback to the students during teaching both in the classroom and at the clinical area.

The concept of formulating questions to stimulate further inquiry by students during teaching by nurse tutors was also analysed. Less than half (43.7%) of the nurse tutors from Nkhoma Nursing College agreed that they formulate questions to stimulate further inquiry by students during teaching, while 40% of the students from Nkhoma Nursing College agreed that nurse tutors in their college formulate questions to stimulate further inquiry during teaching both in the classroom and at the clinical area. Three quarters (75%) of nurse tutors at St. Joseph agreed that they formulate questions to stimulate further inquiry by students during teaching. However, only 33.3% of the students from St. Joseph Nursing College agreed that their nurse tutors formulate questions that stimulate further inquiry by students. Generally, 52.4 (43) n=82 of the nurse tutors from the different nursing colleges agreed that they formulate questions that stimulate further inquiry when teaching the nursing students in both the classroom and at the clinical area, while just over half (55%) of the students from the different nursing colleges agreed that their nurse tutors formulate questions that stimulate them for further inquiry. This implies that the performance of nursing tutors on formulating questions is above average in all nursing colleges in Malawi.

Half of the nurse tutors (50%) from Nkhoma Nursing College agreed that they alleviate students' stress in the clinical area during teaching. However, only 25% of the students from Nkhoma Nursing College agreed that their nurse tutors alleviate their stress in the clinical area during teaching. Moreover, 64.2% of the nurse tutors from Holy Family Nursing College agreed that they alleviate students' stress in the clinical area during teaching. However, Only 26.3% of the students from Holy Family Nursing College agreed that they alleviate students' stress during teaching. Generally, 48.8% (40) n=82 of the nurse tutors from different nursing colleges agreed that they alleviate the students' stress in the clinical area during teaching, while 45.7% (59) n=129 of the students from the different nursing colleges in Malawi agreed that their nurse tutors alleviate students' stress during teaching both in the classroom and at the clinical area. This therefore suggests that nurse tutors' performance on student stress management during teaching in class and at the clinical area is below standard.

Critical thinking facilitation for students by nurse tutors at the clinical area received mixed responses from both students and nurse tutors. Half of the nurse tutors from Mulanje Nursing College agreed that they facilitate critical thinking of their students during teaching both in the classroom and at the clinical area. However, 60% of the nursing students from Mulanje Nursing College agreed that their nurse tutors facilitate critical thinking of the students in the clinical area during teaching. A total of 40% of the nurse tutors in Ekwendeni Nursing College agreed that they facilitate critical thinking of their students during teaching both in the classroom and at the clinical area. However, 57.8% of the students from the same college also agreed that their nurse tutors facilitate critical thinking during teaching particularly at the clinical area.



VARIABLE	TUTOR/student	Co-variates	In which college do you teach or Learn																TOTAL	
			Nkhoma		St. Lukes		St. Joseph		Trinity		Mulanje		Holly family		Ekwendeni		St. Johns		tutor	stude
			tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stude	tutor	stude
<b>Help student perform skills in accordance with ward policy</b>	strongly agree	9	3	1	2	3	1	3	3	4	8	9	3	7	3	7	6	43	<b>29</b>	
	agree	7	11	4	8	1	3	2	16	5	5	5	14	7	10	6	11	37	<b>78</b>	
	not sure	0	0	0	0	0	2	0	1	0	2	0	0	1	5	0	3	1	<b>13</b>	
	disagree	0	1	0	0	0	0	0	2	1	0	0	0	0	1	0	0	1	<b>4</b>	
	strongly disagree	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0	<b>5</b>	
<b>0.006t/ 0.005st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Provide ongoing feedback to the student for growth</b>	strongly agree	6	3	1	2	1	1	2	3	4	4	6	3	6	2	7	4	7	<b>22</b>	
	agree	7	8	4	5	3	3	3	18	5	8	7	11	5	12	4	13	4	<b>78</b>	
	not sure	2	1	0	1	0	2	0	0	0	3	0	2	4	2	2	2	2	<b>15</b>	
	disagree	1	2	0	3	0	0	0	1	0	0	1	2	0	1	0	1	0	<b>10</b>	
	strongly disagree	0	1	0	2	0	0	0	0	1	0	0	1	0	0	0	0	0	<b>4</b>	
<b>0.07t/ 0.069st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>13</b>	<b>129</b>	
<b>Moved group actively in positive direction</b>	strongly agree	7	2	0	1	1	1	2	3	5	4	7	2	3	2	3	3	28	<b>18</b>	
	agree	5	9	5	6	2	2	3	15	3	9	7	14	9	11	6	16	40	<b>82</b>	
	not sure	4	2	0	4	1	1	0	2	1	2	0	1	3	3	3	1	12	<b>16</b>	
	disagree	0	2	0	2	0	2	0	2	1	0	0	1	0	3	1	0	2	<b>12</b>	
	strongly disagree	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	<b>1</b>	
<b>0.1t /0.085st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Formulated questions to stimulate further inquiry</b>	strongly agree	6	3	2	3	0	0	2	6	4	6	7	3	4	0	3	5	28	<b>26</b>	
	agree	7	6	3	6	3	2	3	12	5	5	6	14	6	14	10	12	43	<b>71</b>	
	not sure	3	5	0	3	1	3	0	0	0	3	1	1	4	5	0	2	9	<b>22</b>	
	disagree	0	1	0	0	0	0	0	4	1	1	0	1	1	0	0	1	2	<b>8</b>	
	strongly disagree	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	<b>2</b>	
<b>0.05st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	

**TABLE 5.13: DISTRIBUTION OF THE NURSE TUTORS AND STUDENTS ON PERFORMANCE IN DIFFERENT NURSING COLLEGES**

Another important area where the teaching performance of nurse tutors was checked was on providing students with opportunities for personal practice at the clinical area. Only 40% of the nurse tutors from St Luke Nursing College agreed that they provide students with opportunities for personal practice in the clinical area during teaching. Less than half (46.2%) of the students from the same St. Luke Nursing College agreed that their nurse tutors provide them with opportunities for personal practice during teaching at the clinical area. At St. Joseph Nursing College, 80% of the students disagreed that their nurse tutors provide them with opportunities to practice in the clinical area during teaching. Half of the nurse tutors in the same college agreed that they provide their students with opportunities to practice in the clinical area. In general, 47.5% (39) n=82 of the nurse tutors from the different nursing colleges strongly agreed that they provide the nursing students with opportunities to practice in the clinical area during teaching. Only 26.4% (34) n=129 of the students from the different nursing colleges strongly agreed that their nurse tutors provide them with opportunities to practice in the clinical area during teaching. Therefore, it is clear that nurse tutors' performance in the provision of students with opportunities to practice in the clinical area is low in Malawi nursing colleges.

Nurse tutors' ability to fit training to the skills level of the students was another teaching performance that was assessed. Just over half (56.2%) of the nurse tutors at Nkhoma Nursing College agreed that they fit the training material to the skills level of the students, while 46.6% of the students from the same college agreed that their nurse tutors fit the training material to the skills level of their students during teaching both in the classroom and at the clinical area. Conversely, 40% of the students from Nkhoma Nursing College disagreed that nurse tutors fit their training material to the skills level of their students during teaching. At St. Johns Nursing College, 46.1% of the nurse tutors agreed that they fit the training material to the skills level of their students during teaching. A total of 70% of the students agreed that their nurse tutors fit the training material to the skills level of their students during teaching. Generally, after asking the question at all eight nursing colleges, 53.7% (44) n=82 of the nurse tutors from all the colleges agreed that they always fit the training material to the skills level of their students during teaching both in the classroom and at the clinical area. Just over half 55% (71) n=129 of the nursing students from all the nursing colleges in Malawi agreed that their nurse tutors fit the training material to their skills level during teaching. Therefore, the performance of the nurse tutors in Malawi on fitting the training material to the skills

level of their students during teaching is high as both the students and the nurse tutors agree that they perform this activity.

Apart from fitting the training, some nurse tutors under the same theme of nurse tutors' performance pointed out that they must also be goal oriented when teaching, for example a nurse tutor from St. Joseph Nursing College noted that:

*"Maybe I would say people say I am goal oriented and since I am goal oriented I don't allow people to do other things apart from the things I want them to do; if I am goal oriented then it means we have to meet the objectives you have set. And I make sure that people work in the limit to achieve those objectives; let's say maybe you have been assigned to do certain amount of work and you set limits. By such .... such time I want this one to be complete and you have to make sure that at such time that job or that work is complete. And if people are not working accordingly then you have to make a proper follow up and make sure that you facilitate that process. When am talking to the student am audible enough the student are able to get what am saying".*

If nurse tutors are goal oriented they can provide quality services to the student, thereby promoting health in the clinical area. When this assertion was analysed, only 25% of the nurse tutors in Trinity Nursing College agreed that they pair the experienced skills-based health education providers with the new students at the clinical area. A total of 54.5% of the nursing students agreed that their nurse tutors pair them with experienced skills-based health education providers. Half of the nurse tutors from St. Johns Nursing College disagreed that they pair the experienced skills-based health education providers with their new students in the clinical area. Only 20% of the students from St. Johns Nursing College disagreed that their nurse tutors pair them to the experienced skills-based health education providers in the clinical area. Generally, 46.3% (38) n=82 of the nurse tutors from all eight nursing colleges in Malawi agreed that they pair the nursing students to the experienced skills-based health education providers in the in clinical area, while 48% (62) n=129 of the students from all these colleges agreed that their nurse tutors pair them to the experienced skills-based health education providers during teaching in the clinical area. This clearly indicates that nurse tutors do pair nursing students to the qualified health education providers who would help in the clinical training for quality care and development of the students on clinical skills.

Only 40% of the nurse tutors in Mulanje Nursing College agreed that they consult with stakeholders in their nursing curriculum implementation. However, only 26.6% of the students in Mulanje Nursing College agreed that their nurse tutors consult with stakeholders during the implementation of the nursing curriculum in the college. A total of 66.6% of the

nurse tutors from Ekwendeni Nursing College agreed that they consult with stakeholders during the implementation of the nursing curriculum. However, only 36.8% of the nursing students from this college agreed that their nurse tutors consult with stakeholders during the implementation of the curriculum. Generally, 41.5% (34) n=82 of the nurse tutors from all eight nursing colleges agreed that they consulted with stakeholders during the implementation of the curriculum, while less than half (48.8%) of the nursing students from these colleges agreed that their nurse tutors consulted with stakeholders during the implementations of the curriculum. From the data above, it is clear that nurse tutors' levels of performance in consultation with stakeholders during implementation of the curriculum is low. However, bivariate analysis was used to compare the independent variable of the type of college where the nurse tutors teach and the dependent variable of the nurse tutors' consultation with stakeholders. The null hypothesis that the type of nursing college does not correlate to nurse tutors' consultation with stakeholders was not rejected. This is because the p-value was  $0.063 > p = 0.05$ . This suggests that the type of college does not correlate to nurse tutors' consultation with stakeholders during teaching. The result indicates that nurse tutors' consultation with stakeholders does not depend on the type of college where the nurse tutors teach.

The nurse tutors' performance on encouraging teamwork among students was also assessed. A total of 64.2% of the nurse tutors from Holy Family Nursing Colleges agreed that they encourage teamwork among students during teaching both in the classroom and at the clinical area, while 63.2% of students from this college agreed that their nurse tutors encourage teamwork among students during teaching both in the classroom and at the clinical area. Three quarters (75%) of the nurse tutors from St. Joseph Nursing College agreed that they encourage teamwork among students during teaching, while, 66.6% of the nursing students from the same college agreed that their nurse tutors encourage them on teamwork during teaching both in the classroom and at the clinical area. In addition, at St. Johns Nursing College, 53.8% of the nurse tutors agreed that they encourage teamwork among nursing students during teaching. Half of the nursing students from St. Johns Nursing College also agreed that their nurse tutors encourage them to make use of teamwork during teaching both in the classroom and at the clinical area. After analysing the data from all eight nursing colleges, 52.4% (43) n=82 of the nurse tutors from all these colleges agreed that they encourage teamwork among nursing students at their respective colleges during teaching. Just over half (51.9%) of the students from all eight nursing colleges agreed that their nurse tutors

encourage them to make use of teamwork during teaching both in the classroom and at the clinical area. Therefore, nurse tutors' teaching performance levels on encouraging teamwork among students during teaching is high in Malawi nursing colleges. However, when bivariate analysis was used to compare the independent variable of the type of college where the nurse tutors teach and the dependent variable of nurse tutors' encouragement of teamwork among students, the null hypothesis that type of the nursing college does not correlate to nurse tutors' encouragement of teamwork was rejected. This is because the p-value was  $0.033 < p = 0.05$ . This suggests that the type of college highly correlates to nurse tutors' encouragement of teamwork among students during teaching. The result indicates that nurse tutors' encouragement of teamwork among students is dependent on the type of college where the nurse tutors teach.

One nurse tutor from Nkhoma Nursing College stated during the in-depth interviews under the theme of nurse tutors' performance that:

*"My presentation I don't go there proposing like am too senior to the students. I really make sure that I humble myself before my students so that I am closer to their level, so that they understand what I am telling them because many students we teach they have a degree of low self-esteem. We are teaching nurse NMTs; nurse mid-wife technician, so you look at somebody and with a degree or masters and in my case to them they only look at your masters not what you are teaching so if you are not careful you don't deliver anything they just look at you as somebody with a lot of pride so by the end of the day they will only pick any comment you say they will rate, because she is much educated this is why she is saying so; they will rate you with academic status or your financial status if they know you. So, I really make sure that I just deliver the content without offending my students and if I happened that I offended them I say sorry so that by the end of the day they don't grasp that negative comment but they keep the main message".*

Therefore, being respectful to students during teaching despite having a high qualification promotes teamwork, thereby increasing the interest and performance of the nurse tutor.

The issue of whether nurse tutors work in the educational clinical environment was also evaluated. It was noted that 80% of the nurse tutors from Nkhoma Nursing College agreed that they work in the educational clinical environment during teaching in the clinical departments, while only 52.6% of the students from this college agreed that nurse tutors work in the educational clinical environment. A total of 60% of the nurse tutors from Mulanje Nursing College agreed that they work in the educational clinical environment in the hospital, while 48% of the students agreed that their nurse tutors work in the educational clinical environment of the hospital. Just over half (54.6%) of the students from different nursing

colleges agreed that their nurse tutors operate in the educational clinical environment in the hospital. This implies that nurse tutors' performance in the educational clinical working environment is high. Even in the bivariate analysis, using the spearman correlation coefficient to compare the type of college where the nurse tutors teach and nurse tutors work in the educational clinical environment, the p-value was  $0.026 < p = 0.05$ . This means that there is a strong correlation between the type of nursing college where the nurse tutors teach to the nurse tutors work in the educational clinical environment. Therefore, the type of the nursing college influences the nurse tutors work in the educational clinical environment.

Another area where the teaching performance of the nurse tutors was assessed was on the use of clinical assessment and evaluation strategies of the students with hospital staff. A total of 53.3% of the nurse tutors in Ekwendeni Nursing College use the students' clinical assessment and evaluation strategies with clinical staff in the hospital, while fewer nursing students (47.4%) from this college agreed that their nurse tutors use their clinical assessment and evaluation strategies with clinical staff at the hospital. A total of 60% of the nurse tutors from Trinity Nursing College also agreed that they use the students' clinical assessment and evaluation strategies with staff at the hospital, while 63.6% of the students from this college agreed that their nurse tutors use their clinical assessment and evaluation strategies with staff at the hospital. Less than half (46.3%) of the nurse tutors from all eight nursing colleges agreed that they use students' clinical assessment and evaluation strategies with clinical staff in the hospital, while 58.9% (76)  $n=129$  of the students from these colleges agreed that their nurse tutors use their clinical assessment and evaluation strategies with clinical staff at the hospital. A bivariate analysis was used in a spearman correlation coefficient, to compare the independent variable type of the nursing college and the dependent variable of use of students' clinical assessment and evaluation strategies with clinical staff. The outcome of the p-value was  $0.19 > p = 0.05$ . This means that the null hypothesis that type of the college does not correlate to the nurse tutors use of students' clinical assessment and evaluation strategies with clinical staff was accepted. Therefore, the type of nursing college does not influence nurse tutors use of the students' clinical assessment and evaluation strategies with the clinical staff.

Nurse tutors were also questioned on how they generally perform with students in the clinical area, and under this category, one nurse tutor said:



*“I’ve said that students usually have a duty roster and you have to make sure that everybody is following the duty allocation. Secondly these students are supposed to have objectives for the day so you make sure that you check whatever the student has planned to do from their objectives. And from your own plans, you also identify tasks that have to be done together with the students depending also on the ward that you are working. So you still have to work hand in hand to identify appropriate clients and patients with the students because sometimes they may not know clients or patients to choose. So, you have to facilitate that learning process by choosing the system to choose appropriately or with the actual teaching usually when I need to teach them according to the deadlines that they have. and also mainly when you arrive in the ward, first of all you meet the students you have to discover before you start if everybody and everything is ok then after you have gone through objectives then you also select some things that you want to do then after you have achieved whatever you had planned for the day before you close you also meet the group and discuss what they have learnt that day how best they could do those things and how they plan to improve so you work with them and giving them the necessary feedback”.*

Therefore, facilitation of clinical student objectives and the selection of appropriate patients for student learning enhances the teaching performance of the nurse tutors in the clinical area.

Nurse tutors’ participation in the curriculum design and evaluation of the nursing programme was also assessed to evaluate the teaching performance. Half of the nurse tutors from Mulanje nursing College agreed that they participate in the curriculum design and evaluation of the nursing programme outcomes at the college. However, only 13% of the nursing students from this college agreed that their nurse tutors participate in curriculum design and evaluation of the nursing programme outcomes at the college. Only 38.4% of the nurse tutors from St. Johns Nursing College agreed that they participate in the curriculum design and evaluation of the nursing programme outcomes at the college, while a total of 46.5% of the students from St. Johns Nursing College also agreed that their nurse tutors participate in the curriculum design and evaluation of the nursing programme outcomes at the college. Only 36.6% (30) n=82 of the nurse tutors from the eight nursing colleges assessed agreed that they participate in the curriculum design and evaluation of the nursing programme outcomes at these colleges, while 48% (62) n=129 of the students from the eight nursing colleges agreed that their nurse tutors participate in the curriculum design and evaluation of the nursing programme outcomes at these colleges. Bivariate analysis was used in a spearman correlation coefficient. This was done to compare the independent variable type of the type of college and the dependent variable of nurse tutors’ participation in curriculum design and evaluation of the nursing programme outcome. The p-value from the model showed  $0.085 > p = 0.05$ . This suggests that the null hypothesis that the type of college does not correlate to the participation of nurse tutors in curriculum design and evaluation of the nursing programme outcomes was

not rejected. This means that there is no correlation between the type of the college and the participation in the curriculum design and evaluation of the nursing programme outcomes by the nurse tutors at the college. Therefore, the type of college where nurse tutors teach does not influence nurse tutors' participation in the curriculum design and evaluation of the nursing programme outcomes in Malawi nursing college.

Another teaching performance of the nurse tutors which was assessed was functioning as a change agent and leader in the clinical area. A total of 60% of the nurse tutors at Trinity Nursing College agreed that they function as a change agent and leader to students at the clinical area, while 63.6% of the students at the same college agreed that their nurse tutors function as change agents in the clinical area during teaching. A total of 40% of the nurse tutors from St Luke Nursing College agreed that they function as a change agent in the clinical area during teaching, while almost 53.8% nursing students agreed that their nurse tutors in this college function as change agents during teaching in the clinical area. However, half of the nurse tutors from different nursing colleges in Malawi agreed that they function as change agents when teaching students in the clinical area, just over half (55%) of the students from the different colleges in the country agreed that their nurse tutors function as change agents during teaching in the clinical area. This means that nurse tutors' performance on change agents to students during teaching in the clinical area is above average in Malawi. Using spearman correlation coefficient in a bivariate analysis to compare the type of nursing college and the functioning of nurse tutors as a change agent, the null hypothesis was rejected. This means that the alternative hypothesis that the type of college where nurse tutors work correlates to the functioning of the nurse tutors as change agents was accepted as the p-value was  $0.038 < p = 0.05$ . This indicates that type of the nursing college influences nurse tutors to function as change agents to students during teaching in the clinical area.

As a **change agent**, nurse tutors must be exemplary not only in their performance, but also in knowledge level. One of the nurse tutors from St. Johns Nursing College under this priori code stated that:

*"I pay attention to the students when they have problems in the clinical area. The features that make me effective and change agent is that because I like studying, so I would go and search for information before deliver it to the students. So when I go to class, I am well conversant with the topic, so if a student asks me a question I will be able to answer them or I will be able to give them right information. So that's what makes me to be effective and the fact that I do incorporate some interaction in my lecture, it makes the students interested*

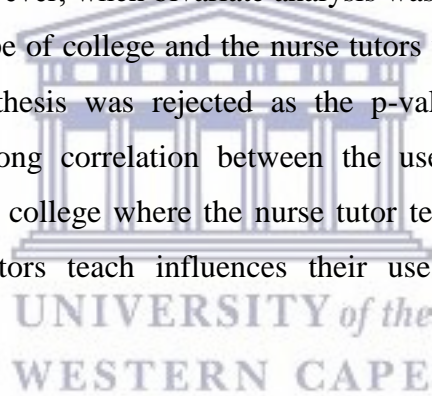
*to learn more. I speak louder; I don't sit when I am teaching so that I am able to observe the students who are sleeping? Who is not attentive at that particular time."*

This indicates that nurse tutors need to be close to student and solve their problems if the concept of change agent is to be met both in the classroom and at the clinical area.

The performance of the nurse tutors in the laboratory was also measured to determine whether it was effective. A total of 87.5% of the nurse tutors from Nkhoma Nursing College agreed that they work effectively in the laboratory with students to improve their skills, while 60% of the students from the same college agreed that their nurse tutors work effectively in the laboratory with students to improve their skills. A total of 60% of the nurse tutors from Mulanje Nursing College also strongly agreed that they work effectively with their students in the laboratory to improve their nursing skills, while only 33.3% of the students from this college agreed that their nurse tutors work effectively with them in the laboratory to improve their skills. A total 73.3% of the nurse tutors in Ekwendeni Nursing College agreed that they work effectively with the nursing students in the laboratory to improve their nursing skills. Generally, just over half (52.4%) of the nurse tutors from the eight nursing colleges agreed that they work effectively with the students in the laboratory to improve their skills. A total of 55% (71) n=129 of the nursing students from the different nursing colleges in the country agreed that their nurse tutors work effectively with them in the laboratory to improve their skills. This suggests that nurse tutors' performance of working effectively with students in the laboratory is above average and it helps to improve the students' clinical skills. However, when the spearman correlation coefficient was used to compare the type of the nursing college and the nurse tutors' effectiveness when working with students in the laboratory, the outcome of the p-value was  $0.054 \leq p = 0.05$ . This suggests that there is a borderline correlation between the type of nursing college and the nurse tutors' effectiveness in working with students in the laboratory. This indicates that the type of nursing college where the nurse tutors work influences the effectiveness of the work of the nurse tutors in the laboratory with students.

The teaching performance of the nurse tutors on the use of essay questions for students' assessment during examinations was also evaluated. Just over half (53.8%) of the nurse tutors in St. Johns Nursing College disagreed that they use essay questions during student examinations in the classroom or at the clinical area, while only 25% of the students from the same college disagreed that nurse tutors use essay questions during examinations both in the

classroom and at the clinical area. Half of the nurse tutors in St. Joseph Nursing College disagreed that they use essay questions during examinations both in the classroom and at the clinical area, while 50% of the students from this college also disagreed that their nurse tutors use essay questions during examinations. 33.3% of the nurse tutors from Mulanje Nursing College disagreed that they use the essay questions during the examinations in the classroom and at the clinical area, while only 27% of the students from the same college also disagreed that that their nurse tutors use essay questions during examinations. A total of 57.3% (45) n=82 of the nurse tutors from the eight different nursing colleges agreed that they use essay questions during examinations with the students both in the classroom and at the clinical area. Around 65.8% (85) n=129 of the students from different nursing colleges agreed that their nurse tutors use essay questions during the examinations both in the classroom and at the clinical area. This suggests that the performance of the nurse tutors on the use of essays during examinations is relatively high although there is an official use of objective questions from the nurses' council. However, when bivariate analysis was used in spearman correlation coefficient to compare the type of college and the nurse tutors use of essay questions during examinations, the null hypothesis was rejected as the p-value was  $0.027 < p < 0.05$ . This indicates that there is a strong correlation between the use of essay questions during examinations and the type of college where the nurse tutor teaches. Therefore, the type of college where the nurse tutors teach influences their use of essay questions during examinations.



In table 5.18, the use of short answer questions on student assessment is evaluated. A total of 56.3% of the nurse tutors from Nkhoma Nursing College agreed that they use short answer questions during student examinations, while 40% of the students from the same college agreed that their nurse tutors use short answer questions during examinations both in the classroom and at the clinical area. A total of 60% of the nurse tutors from Mulanje Nursing College agreed that they use of short answer questions during student examinations, while 53.3% of the students agreed that their nurse tutors use short answer questions during examinations. Generally, 78% (64) n=82 of the nurse tutors from different nursing colleges agreed that they use the short answer questions during student examinations both in the classroom and at the clinical area, while (76.4%) of the nursing students from different nursing colleges in Malawi agreed that their nurse tutors use short answer questions during examinations both in the classroom and at the clinical area. This means that the performance

of nurse tutors on the use of short answer questions during student examinations is high at Malawi nursing colleges (see table 5.18).

In addition, when the bivariate analysis was used in a spearman correlation coefficient to compare the type of nursing college and the utilisation of short answer questions by the nurse tutors, the null hypothesis was not rejected as the p-value was  $0.069 > p = 0.05$ . This indicates that there is no correlation between the type of college and the nurse tutors' utilisation of the short answer questions during examinations in the nursing colleges. Therefore, the nurse tutors' utilisation of short answer questions is not influenced by the type of nursing college where the nurse teaches.



VARIABLE	TUTOR/student	Co-variates	In which college do you teach or Learn																TOTAL	
			Nkhoma		St. Lukes		St. Joseph		Trinity		Mulanje		Holly family		Ekwendeni		St. Johns		tutor	stude
			tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stud	tut	stude	tutor	stude
<b>Use of Short answer items on assessment</b>	strongly agree	3	6	3	1	2	2	4	5	6	8	6	4	2	4	6	9	32	<b>39</b>	
	agree	9	6	2	8	1	2	0	13	1	4	5	7	12	11	2	9	32	<b>60</b>	
	not sure	0	2	0	2	0	1	0	1	0	1	0	5	0	2	0	2	0	<b>16</b>	
	disagree	3	1	0	0	1	1	0	2	0	1	2	2	1	0	0	0	7	<b>7</b>	
	strongly disagree	1	0	0	2	0	0	1	1	3	1	1	1	0	2	5	0	11	<b>7</b>	
<b>0.044t/ 0.069st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Use of Multiple-choice items on assessment</b>	strongly agree	8	9	5	4	3	3	3	7	8	9	8	5	9	8	9	8	53	<b>53</b>	
	agree	4	6	0	8	0	3	0	11	0	5	3	9	6	9	1	8	14	<b>59</b>	
	not sure	0	0	0	1	0	0	0	1	0	1	0	3	0	2	0	3	0	<b>11</b>	
	disagree	3	0	0	0	1	0	0	2	1	0	2	2	0	0	0	0	7	<b>4</b>	
	strongly disagree	1	0	0	0	0	0	1	1	1	0	1	0	0	0	3	1	7	<b>2</b>	
<b>0.019t / 0.086st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>81</b>	<b>129</b>	
<b>Use of Projects on assessment</b>	strongly agree	4	5	1	1	3	2	3	1	3	6	6	1	3	2	4	5	27	<b>23</b>	
	agree	6	8	1	5	0	4	0	2	2	1	5	6	5	7	1	5	20	<b>38</b>	
	not sure	0	0	0	3	0	0	0	4	0	5	0	7	0	4	0	5	0	<b>28</b>	
	disagree	4	1	2	1	0	0	0	6	1	1	2	3	4	3	1	2	14	<b>17</b>	
	strongly disagree	2	1	1	3	1	0	2	9	4	2	1	2	3	3	7	3	21	<b>23</b>	
<b>0.057st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	
<b>Use of Portfolios on assessment</b>	strongly agree	0	1	0	1	0	0	1	1	3	7	4	0	0	1	4	7	12	<b>18</b>	
	agree	6	3	0	2	0	3	0	2	1	1	4	2	3	4	0	6	14	<b>23</b>	
	not sure	0	2	0	6	0	2	0	6	0	4	0	10	1	5	0	3	1	<b>38</b>	
	disagree	5	7	3	1	2	0	0	7	2	1	4	5	5	4	1	4	22	<b>29</b>	
	strongly disagree	5	2	2	3	2	1	4	6	4	2	2	2	6	5	8	0	33	<b>21</b>	
<b>0.005t / 0.027st</b>	<b>TOTAL</b>	<b>16</b>	<b>15</b>	<b>5</b>	<b>13</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>22</b>	<b>10</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>15</b>	<b>19</b>	<b>13</b>	<b>20</b>	<b>82</b>	<b>129</b>	

**TABLE 5.14: DISTRIBUTION OF THE NURSE TUTORS AND STUDENTS ON PERFORMANCE IN DIFFERENT NURSING COLLEGES**

Another teaching performance of the nurse tutors which was measured using the descriptive analysis was the use of multiple-choice items in student assessment. Half of the nurse tutors at Nkhoma Nursing College strongly agreed that they use multiple-choice items during student assessment both in the classroom and at the clinical area, while a total of 60% of the students from this college strongly agreed that their nurse tutors use multiple-choice items in student assessment both in the classroom and at the clinical area. At Mulanje Nursing College, 80% of the nurse tutors strongly agreed that they use multiple-choice items during student assessment both in the classroom and at the clinical area, whereas 60% of the students from this college strongly agreed that their nurse tutors use multiple-choice items during assessment both in the classroom and at the clinical area. At St. Johns Nursing College, 69.2% of the nurse tutors strongly agreed that they use multiple-choice items during student assessment both in the classroom and at the clinical area, while only 40% of the students from this college strongly agreed that their nurse tutors use multiple-choice items during student assessment both in the classroom and at the clinical area. A total of 64.6% (53) n=82 of the nurse tutors from the eight nursing colleges strongly agreed that they use multiple-choice items during student assessment both in the classroom and at the clinical area, while only 45.7% (59) n=129 of the nursing students from the various nursing colleges strongly agreed that their nurse tutors use multiple-choice items during student assessment both in the classroom and at the clinical area. This means that the performance of the nurse tutors on the use of multiple-choice items during student assessment is high at most nursing colleges in Malawi. Bivariate analysis was used to compare the independent variable of the type of the nursing college and the dependent variable of nurse tutors use of multiple-choice items during student assessment. The outcome in the spearman correlation coefficient was  $0.019 < p = 0.05$ . This indicates that there is a strong correlation between the type of nursing college and the nurse tutors use of multiple-choice items during student assessment. Therefore, the type of college where the nurse tutors teach influences the use of multiple-choice items during student assessment both in the classroom and at the clinical area.

During in-depth interviews, the nurse tutors were questioned on the reasons for students' low grades in their classes during assessment. A nurse tutor from Ekwendeni Nursing College pointed out that:

*"I look at it on two or three angles. One, it can be tutor problem or it can be student problem or it can be college problem. On tutor, you consider how the presentation itself is done. So this takes us back if we are doing lecture method; is your voice loud enough for someone at the back to hear. For example*

*in a hall, I am in front and a student is at the far back, you are giving the definition of bed-bath try to keep in contact with the student to ask them; what have I said on the definition of bed-bath. If that student will be able to say exactly what you have said that alerts you that the student is listen but if that student cannot respond it automatically tells me that student has not understood me. We talk of the class attendance list helps you to check; are all the students in class? If so, fine. If not, find out where they are and since when. That will all be picked from the class attendance form because you tick if they are there and you write the topic which you have taught at that time. Now if the student during your classes did not come because they were sick or went home for other things; likely don't expect that this student will do well. As a teacher now you have to plan and arrange if it was a normal channel because sometimes a student can just decide not to come but when it comes to exams such students do not do well. You analyze to ask was this student coming to class because some of the reasons for their absence. As an institution you look at the support that is rendered. We look at the provision of teaching and learning resources. Are they available? For example books, internet to access latest information, are these things available because procuring of books you don't procure them as a single tutor, it's the college."*

There are many causes for students achieving low grades. These include the *commitment* of the nurse tutor, the *student's attendance of classes*, the *college* and the *availability of the materials*. The teaching performance of nurse tutors on the use of projects during student assessment was also evaluated. Only 20% of the nurse tutors from St Luke Nursing College agreed that they use projects during student assessment, while 38.5% of the nursing students from this college agreed that their nurse tutors use projects during student assessment both in the classroom and at the clinical area. However, 60% of the nurse tutors from St. Lukes Nursing College disagreed that they use projects during student assessment compared to just over half (53.8%) of the students from this college, who also disagreed that their nurse tutors use projects during student assessment both in the classroom and at the clinical area. Moreover, 46.6% of the nurse tutors from Ekwendeni Nursing College disagreed that they use projects on students' assessment, while a total of 52.6% of the nursing students from this college also disagreed that their nurse tutors use projects on student assessment. Only 24.4% (20) n=82 of the nurse tutors from the different nursing colleges agreed that they use projects during student assessment, while 29.5% (38) n=129 of the students from the different nursing colleges agreed that their nurse tutors use projects during student assessment. This suggests that the performance of nurse tutors on the use of projects during student assessment by nurse tutors is limited and not done in some of the nursing colleges in Malawi. A bivariate analysis was also used with spearman correlation coefficient model, to compare the independent



variable of the type of nursing colleges and the dependent variable of the use projects by nurse tutors during student assessment. The outcome of the model revealed a p-value of  $0.057 \geq p = 0.05$ . This means that there is a borderline correlation between the type of nursing college and the nurse tutors use of projects during student assessment both in the classroom and at the clinical area. The type of college where nurse tutors teach influences their performance in the use of projects.

The performance of the nurse tutors in the use of portfolios during student assessment was also evaluated. All nurse tutors at St. Joseph Nursing College strongly disagreed that they use portfolios during student assessment in their colleges. However, only half of the nursing students from the same college also disagreed that their nurse tutors use portfolios during student assessment both in the classroom and at the clinical area. Furthermore, 46.6% of the nurse tutors in Holy Family Nursing College disagreed that they use portfolios during student assessment. while a total 89.5% of the students at this college disagreed that their nurse tutors use portfolios during student assessment. A total of 68.3% (56) n=82 of the nurse tutors from the different nursing colleges disagreed that they use portfolios during student assessment, while 68.2% (88) n=129 of the nursing students from the different nursing colleges disagreed that their nurse tutors use portfolios during student assessment both in the classroom and at the clinical area. This suggests that nurse tutors in Malawi nursing colleges do not use portfolios for student assessment in the classroom and at the clinical area. In addition to the above, bivariate analysis in spearman correlation coefficient was also used to compare the type of nursing college as the independent variable to the use of portfolios by the nurse tutors as the dependent variable. The outcome showed that the p-value was  $0.005 < p = 0.05$ . This indicates that there is a strong correlation between the type of college and the use of portfolios among nurse tutors for student assessment in different colleges.

#### **5.4.2 DISTRIBUTION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE—ON NURSE TUTORS' TEACHING PERFORMANCE**

The concept of nurse tutors' work experience was divided into two groups. The first group consisted of those nurse tutors with work experience of between 1 and 5 years, meaning they have limited experience, while the second group of nurse tutors consisted of those nurse

tutors with 6 years and more of working experience, meaning they have gained considerable experience in student instruction. This classification was based on mastery of the curriculum and other teaching instructions both in the classroom and at the clinical area. Student study experience was also divided into two groups, with the first group consisted of those students with between 1 and 2 years of study experience, meaning they have limited learning experience, while the second group consisted of those students with more than two years study experience, meaning that they have considerable learning experience.

The teaching performance of nurse tutors on understanding the module to be taught was compared to the nurse tutors' work experience both in the classroom and at the clinical area. Just over half (51.5%) of the nurse tutors with more than 6 years of work experience agreed that they understand the module to be taught to students. However, less than half (48.6%) of the nurse tutors with less than 5 years of work experience agreed that they understand the module to be taught to students. The bivariate analysis was used with spearman correlation coefficient model and no missing variable. The model was done in a two-tailed test of significance for the ordinal variables. This was done to compare the independent variable of the nurse tutors' work experience and the dependent variable of understanding the modules to be taught to students both in the classroom and at the clinical area. The outcome of the Spearman Correlation Coefficient model was  $0.001 < p = 0.05$ . This implies that the null hypothesis that the independent variable of nurse tutors' work experience does not correlate to the dependent variable of the nurse tutors' understanding of the modules to be taught to students was rejected. This was in favour of the alternative hypothesis that nurse tutors' work experience strongly correlates to the nurse tutors' understanding of the module to be taught to students. Therefore, understanding of the module to be taught by nurse tutors is influenced by the nurse tutors' work experience. However, in another similar spearman model where Spearman Correlation Coefficient equation used the two-tailed test of significance for comparing the student study experience as the independent variable and the nurse tutors' understanding of the module to be taught as the dependent variable, the null hypothesis was not rejected. This is because the outcome of the model was  $0.247 > p = 0.05$ . This illustrates that there is no correlation between the independent variable of student study experience and the nurse tutors' understanding of the module to be taught to students. As a result, student study experience does not influence nurse tutors' performance on understanding of the module to be taught both in the classroom and at the clinical area.

The teaching performance of the nurse tutors on learning resource mobilisation was also evaluated. A total of 61.4% (27) n=44 of the nurse tutors with more than 6 years of work experience agreed that they mobilise learning resources for their students, While only 38.6% (17) n=44 of nurse tutors agreed that they mobilise learning resources for their students in class. A bivariate analysis was used with a two-tailed test of significance in the Spearman Correlation Coefficient model. This was done to compare nurse tutors' work experience and the nurse tutors' mobilisation of learning resources in the class. The outcome of the model was a p-value of  $0.039 < p = 0.05$ . This means that it is feasible to reject the null hypothesis that nurse tutors' work experience does not correlate to the mobilization of learning resources performance by nurse tutors. Therefore, the alternative hypothesis that nurse tutors' work experience does correlate to the mobilization of learning resources was accepted. Therefore, nurse tutors' work experience influences the mobilization of learning resources for students during teaching both in the classroom and at the clinical area. Altogether 57.4% (35) n=61 of the students with more than two years of study experience agreed that their nurse tutors mobilise learning resources for them both in the classroom and at the clinical area. This compares to 42.6% (26) n=61 of the students with less than 2 years study experience, who agreed that their nurse tutors mobilise learning resources for them both in the classroom and at the clinical area. When the bivariate analysis was used to compare student study experience and the mobilization of learning resources by nurse tutors, the p-value was  $0.072 > p = 0.05$ . This means that there was no correlation between the student study experience and the nurse tutors mobilisation of learning resources for students both in the classroom and at the clinical area. Therefore, the teaching performance of nurse tutors on mobilisation of learning resources for students is not influenced by students' study experience.

The teaching performance of the nurse tutors on providing constructive feedback to students was also assessed. A total of 70% (28) n=40 of the nurse tutors with more than 6 years of teaching experience strongly agreed that they provide constructive feedback to students during teaching both in the classroom and at the clinical area. However, 30% (12) n=40 of nurse tutors with less than 5 years of study experience also strongly agreed that nurse tutors provide constructive feedback to students. In a bivariate analysis using spearman correlation coefficient in a two-tailed test of significance, without missing variable, the p-value was  $0.050 \geq p = 0.05$ . This was done in comparison between the independent variable of nurse tutors work experience and the dependent variable of providing constructive feedback to students

by the nurse tutors. This p-value illustrates that there is a borderline correlation between the dependent variable provision of constructive feedback and the independent variable of nurse tutors' work experience. Therefore, the nurse tutors' work experience influences their provision of feedback to students. However, 61.4% (43) n=70 of the students with more than 2 years study experience agreed that their nurse tutors provide constructive feedback to them in the classroom and at the clinical area. Only 38.6% (27) n=70 of the students with less than two years study experience also agreed that nurse tutors provide constructive feedback during teaching both in the classroom and at the clinical area. Using the bivariate analysis in Spearman Correlation Coefficient model with a two-tailed test of significance, the independent variable of student study experience was compared to the dependent variable of provision of constructive feedback by nurse tutors. In the outcome of the model where there was no missing data, the p-value was  $0.73 > p = 0.05$ . This means that there was no rejection of the null hypothesis that student study experience does not correlate to the provision of constructive feedback by nurse tutors during teaching of students both in the classroom and at the clinical area. Therefore, student study experience does not influence the performance of providing constructive feedback during teaching by the nurse tutors.

Teaching performance of nurse tutors on being a problem solver to students was also analysed in the bivariate analysis. As many as 63.3% (31) n=49 of the nurse tutors with more than 6 years of work experience agreed that they feel they are problem solvers to students. However, only 36.7% of the nurse tutors with less than 5 years of work experience agreed that they feel they are problem solvers. This illustrates that nurse tutors with more work experience have more knowledge on problem solving for the students. Furthermore, a bivariate analysis was used in a Spearman Correlation Coefficient model with a two-tailed test of significance. This was done to compare the independent variable of the nurse tutors' work experience and the dependent variable of being a problem solver to students. The p-value from the model was  $0.007 < p = 0.05$ . This illustrates that the null hypothesis that nurse tutors' work experience does not correlate to being a problem solver to students was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience highly correlates to nurse tutors being a problem solver to students. Therefore, the nurse tutors' work experience influences their role as a problem solver to students during teaching both in the classroom and at the clinical area. Nevertheless, 50.9% of the students with more than two years of study experience also agreed that their nurse tutors are problem solvers for them during teaching. Less than half (49.1%) of the students with less than two years of study

experience agreed that their nurse tutors are problem solvers during teaching. A bivariate analysis was used to compare the student study experience and the nurse tutors role as a problem solver during teaching. In the model, a two-tailed test of significance was selected with no missing data. The outcome of the p-value showed  $0.013 < p = 0.05$ . This means that the null hypothesis that students' study experience does not correlate to nurse tutors role as problem solvers during teaching both in the classroom and at the clinical area was rejected. This was in favour of the alternative hypothesis that students' study experience highly correlates to nurse tutors role as problem solvers during teaching both in the classroom and at the clinical area. This also illustrates that the students' study experience also influences the nurse tutors role as a problem solver during teaching both in the classroom and at the clinical area.

The promotion of tolerance and understanding in students during teaching was also compared to nurse tutors' experience. A total of 69.4% (34)  $n=49$  of the nurse tutors with more than 6 years of work experience agreed that they promote student tolerance and understanding during teaching both in the classroom and at the clinical area. However, only 30.6% of the nurse tutors with less than five years of work experience agreed that they also promote students' tolerance and understanding during teaching. In a bivariate analysis with the spearman correlation coefficient model, a two-tailed test of significance was selected. This was done to compare the independent variable of nurse tutors' work experience and the dependent variable of promotion of tolerance and understanding among students by the nurse tutors. The outcome of the model was a p-value of  $0.042 < p = 0.05$ . This means that there is a strong correlation between the independent variable of nurse tutors' work experience and the promotion of tolerance and understanding among students by nurse tutors during teaching. This implies that the nurse tutors' work experience influences the promotion of tolerance and understanding among students during teaching both in the classroom and at the clinical area.

Nurse tutors also noted the misbehaviour of students during teaching as poor performance by students. For example, a nurse tutor from St. Johns Nursing College pointed out during the in-depth interviews under this priori code that:

*"...not only reporting late but students dressing poorly - not wearing full uniform during night duty as well. Most of the time we send the student back to correct this, even those who are late. They write a report which is placed in their files and since it's a minor offence or it's a major it depends with the rules and regulation what the offense is like what the misbehavior is like it's well stipulated in our*

*rules and regulations and once the student is sent back we follow, they write a report. If it's a minor offence we give verbal warning, because coming late for duties is an offence according to our rules and regulations and if it's for the second time according to our rules students will appear before disciplinary. And also if they do not appear before disciplinary they are requested to replace the day, reporting late for duties they are replacing the day."*

Therefore, good discipline on the part of students and proper follow up both in the classroom and at the clinical area during learning encourage nurse tutors to teach effectively.

A total of 54.9% (39) n=71 of the students with more than two years of study experience agreed that their nurse tutors promote tolerance and understanding among students during teaching. However, 45.1% of the students with less than 2 years of study experience agreed that they promote tolerance and understanding among students during teaching both in the classroom and at the clinical area. In a bivariate analysis using Spearman Correlation Coefficient model with the two-tailed test of significance, the p- value was  $0.217 > p=0.05$ . This indicates that there is no correlation between the independent variable of student study experience and the dependent variable of promotion of tolerance and understanding among students during teaching. It illustrates that students' study experience does not influence the performance of nurse tutors' promotion of tolerance and understanding among students during teaching both in the classroom and at the clinical area.

In table 5.19, the distribution of the nurse tutors' work experience was compared to the performance of the nurse tutors on lecturing during the entire class period. A total of 73.9% (17) n=23 of the nurse tutors with more than 6 years of work experience disagreed that they lecture during the entire class period. However, 57.1% (12) n=21 of the nurse tutors with more than 6 years of work experience agreed that they lecture during the entire class period. Nurse tutors (42.9%) with more than 6 years of work experience agreed that they lecture the entire class period both in the classroom and at the clinical area. In a bivariate analysis using Spearman Correlation Coefficient model with a two-tailed test of significance there was no missing data. This was done to compare the independent variable of nurse tutors' work experience and the dependent variable of nurse tutors' lecturing during entire class period. The outcome of the equation was a p-value of  $0.044 < p=0.05$ . This means that the null hypothesis that nurse tutors' work experience does not correlate to lecturing during the entire

class period was rejected. This was in favour of the alternative hypothesis that nurse tutors' work experience highly correlates to lecturing during the entire class period.



**TABLE 5.15: DISTRIBUTION OF TUTORS' WORK- EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON TUTORS-PERFORMANCE**

VARIABLES	TUTORS' WORK EXPERIENCE				Total n(%)	P-VALUE	STUDENTS' STUDY EXPERIENCE				total N(%)	P-VALUE
	1-5years		6 and more yrs				Two year		More than two yrs			
<b>Lecture during the entire class</b>						<b>0.044*</b>						<b>0.000*</b>
Strongly disagree	3	23.1%	10	76.9%	13		3	37.5%	5	62.5%	8	
Disagree	6	26.1%	17	73.9%	23		15	51.7%	14	48.3%	29	
Not sure	5	71.4%	2	28.6%	7		6	35.3%	11	64.7%	17	
agree	9	42.9%	12	57.1%	21		16	68.0%	34	32.0%	50	
Strongly agree	9	52.9%	8	47.1%	17		14	56.0%	11	44.0%	25	
<b>Had students complete a self-assessment survey activity</b>						<b>0.054*</b>						<b>0.013*</b>
Strongly disagree	7	33.3%	14	66.7%	21		2	14.3%	12	85.7%	14	
Disagree	8	53.3%	7	46.7%	15		11	36.7%	19	63.3%	30	
Not sure	2	40.0%	3	60.0%	5		13	37.1%	22	62.9%	35	
agree	12	40.0%	18	60.0%	30		18	51.4%	17	48.6%	35	
Strongly agree	3	27.3%	8	72.7%	11		10	66.7%	5	33.3%	15	
<b>Took the class on a field trip</b>						<b>0.053*</b>						<b>0.003*</b>
Strongly disagree	7	25.9%	20	74.1%	27		8	25.0%	24	75.0%	32	
Disagree	12	42.9%	16	57.1%	28		15	40.5%	22	59.5%	37	
Not sure	2	28.6%	5	71.4%	7		5	29.4%	12	70.6%	17	
agree	4	44.4%	5	55.6%	9		17	58.6%	12	41.4%	29	
Strongly agree	7	63.6%	4	36.4%	11		9	64.3%	5	35.7%	14	
<b>students engage brainstorming</b>						<b>0.040</b>						<b>0.192</b>
Strongly disagree	2	33.3%	4	66.7%	6		0	.0%	4	100.0%	4	
Disagree	0	100.0%	5	.0%	5		5	50.0%	5	50.0%	10	
Not sure	3	60.0%	2	40.0%	5		3	25.0%	9	75.0%	12	
agree	22	46.8%	25	53.2%	47		36	43.9%	46	56.1%	82	
Strongly agree	5	26.3%	14	73.7%	19		10	47.6%	11	52.4%	21	
<b>Showed video entire period.</b>						<b>0.045*</b>						<b>0.000</b>
Strongly disagree	1	100.0%	0	.0%	1		5	21.7%	18	78.3%	23	
Disagree	1	25.0%	3	75.0%	4		11	28.9%	27	71.1%	38	
Not sure	5	22.7%	17	77.3%	22		7	43.8%	9	56.2%	16	
agree	15	39.5%	23	60.5%	38		22	55.0%	18	45.0%	40	
Strongly agree	10	58.8%	7	41.2%	17		9	75.0%	3	25.0%	12	



Greater work experience of nurse tutors influences lecturing during the entire class period both in the classroom and at the clinical area. Furthermore, 68% (34) n=50 of the students with more than two years of study experience agreed that their nurse tutors lecture during the entire class period. Only 32% (16) n=50 of the students with less than two years of study experience agreed that their nurse tutors lecture the entire class period during teaching both in the classroom and at the clinical area.

Using the Spearman Correlation Coefficient model, the independent variable of student study experience was compared to the dependent variable of lecturing during the entire class period. The outcome p-value from this equation that has a probability of two-tailed test of significance was  $0.000 < p = 0.05$ . This suggest that there is a strong correlation between the students' study experience and the lecturing during the entire class period. Therefore, the students' study experience influences nurse tutors' lecturing during the entire class period when teaching both in the classroom and at the clinical area.

Another teaching performance, which was compared with nurse tutors' experience, was the element of showing videos during the entire class period of teaching. A total of 60.5% (23) n=38 of the nurse tutors with more than 6 years of work experience agreed that they showed videos during the entire class period during teaching. However, only 39.5% (15) n=38 of the nurse tutors with less than five years of work experience agreed that they show the student video during the entire class period when teaching both in the classroom and at the clinical area. In the bivariate analysis using Spearman Correlation Coefficient model with a two-tailed test of significance, the p-value was  $0.045 < p = 0.05$ . This was done after comparing the independent variable of nurse tutors' work experience and the dependent variable of showing videos during the entire class period. This p-value illustrates that there is a strong correlation between the nurse tutors' work experience and the showing of videos during the entire class period during teaching both in the classroom and at the clinical area. This implies that the nurse tutors' work experience influences the nurse tutors' performance of showing videos during the entire class period.

Furthermore, 71.1% (27) n=38 of the students with more than two years of study experience disagreed that their nurse tutors show videos during the entire class period, while 55% (22) n=40 of the students with less than two years study experience agreed that their nurse tutors show videos to student during the entire class period during teaching both in the classroom

and at the clinical area. Using bivariate analysis, with Spearman Correlation Coefficient model as an option, there was no missing data. This was done to compare the independent variable of students' study experience and the dependent variable of showing of videos during the entire class period both in the classroom and at the clinical area. The p-value from the equation of the bivariate model was  $0.000 < p = 0.05$ . This means that the null hypothesis that students' study experience does not correlate to the showing of videos during entire class period was rejected. This is because the alternative hypothesis that students' study experience does correlate to the showing of videos during the entire class period was accepted. Therefore, students' study experience influences the nurse tutors' performance of showing videos during the entire class period.

The teaching performance of the nurse tutors on addressing the sensitive issues of adolescents during teaching was also evaluated (see table 4.20). A total of 69.4% (25)  $n=36$  of the nurse tutors with more than 6 years of work experience agreed that they address the sensitive issues of adolescents during teaching both in the classroom and at the clinical area. However, only 30.6% of the nurse tutors with less than 5 years of work experience also agreed that they address the sensitive issues of adolescents both in the classroom and at the clinical area. In bivariate analysis with Spearman Correlation Coefficient model, the independent variable of nurse tutors' work experience was compared to dependent variable of addressing the sensitive issues in adolescents. The outcome from this spearman model with two-tailed test of significance was a p-value of  $0.004 < p = 0.05$ . This indicates that there is a strong correlation between the independent variable of nurse tutors' work experience and the dependent variable of addressing of the sensitive issues of adolescents by the nurse tutors during teaching both in the classroom and at the clinical area. Therefore, nurse tutors' work experience influences the addressing of sensitive issues of adolescents by the nurse tutors during teaching both in the classroom and at the clinical area. However, in the student data 68.6% (48)  $n=70$  of the students with more than two years of study experience agreed that their nurse tutors address the sensitive issues of adolescents during teaching. Only 31.4% (22)  $n=70$  of the students with less than 2 years of study experience agreed that their nurse tutors address the sensitive issues of adolescents during teaching both in the classroom and at the clinical area. In another spearman correlation coefficient, student study experience was compared to the nurse tutors' addressing of the sensitive issues of adolescents during teaching. The p-value from the equation showed  $0.057 > p = 0.05$ . This means that the null hypothesis that student study experience does not correlate to the nurse tutors' performance

of addressing sensitive issues of adolescents during teaching was not rejected. Therefore, student study experience does not influence the addressing of sensitive issues of adolescents by nurse tutors during teaching both in the classroom and at the clinical area.

The concept of active participation of students in making decisions about programme adoption was also measured. A total of 60% (24) n=40 of nurse tutors with more than 6 years of work experience agreed that they allow active participation of the students in making decisions about programme adoptions during teaching.

The results show that nursing colleges experience inadequate orientation of the nurse tutors from the administration. This is because 78.1% (25) n=32 of the nurse tutors with more than six years of work experience agreed that they had experienced inadequate orientation from the nursing administration in their colleges both in the classroom and at the clinical area. Only 21.9% (07) n=32 of the nurse tutors with less than five years of work experience agreed that they had experienced inadequate teaching orientation from their nursing colleges administration both in the classroom and at the clinical area. Using the spearman correlation coefficient model to compare nurse tutors' work experience as the independent variable and the inadequacy of orientation by the nursing administration to nurse tutors, the p-value was  $0.005 < p < 0.05$ . This means that the null hypothesis that the nurse tutors' work experience does not correlate to inadequate orientation of the nurse tutors by the nursing administration was rejected. This was done in favour of the alternative hypothesis that the nurse tutors' work experience does correlate to inadequate orientation of the nurse tutors by the nursing college administrators during teaching both in the classroom and at the clinical area. Therefore, it is clear that in Malawi nursing colleges, nurse tutors' work experience influences the inadequate orientation by the nursing administration to nurse tutors during teaching both in the classroom and at the clinical area.

Furthermore, 56.4% (31) n=55 of the students with more than two years of study experience were not sure that their nurse tutors had inadequate orientation during teaching by the nursing college administration, while 43.6% (24) n=55 of the nursing students with less than two years of study experience were also not sure that the nurse tutors had inadequate orientation during teaching by the nursing college administration. However, a bivariate analysis was used to compare the independent variable of student study experience and the dependent variable

of nurse tutors' inadequate orientation by the college nursing administration. The outcome of the Spearman Correlation Coefficient model revealed a p-value of  $0.071 > p = 0.05$ .



**TABLE 5.16: DISTRIBUTION OF TUTORS' WORK- EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON TUTORS PERFORMANCE**

VARIABLES	TUTORS' WORK EXPERIENCE				Total n(%)	P-VALUE	STUDENTS' STUDY EXPERIENCE				total N(%)	P-VALUE p-value	
	1-5years		6 and more yrs				Two years	More than two yrs		N=129			
<b>Addressed sensitive issues</b>						<b>0.004*</b>							<b>0.057*</b>
Strongly disagree	1	50.0%	1	50.0%	2		3	75.0%	1	25.0%	4		
Disagree	5	45.5%	6	54.5%	11		4	36.4%	7	63.6%	11		
Not sure	6	40.0%	9	60.0%	15		15	57.7%	11	42.3%	26		
agree	11	30.6%	25	69.4%	36		22	31.4%	48	68.6%	70		
Strongly agree	9	52.9%	8	47.1%	17		10	55.6%	8	44.4%	18		
<b>Paired experienced skills-based health education providers</b>						<b>0.015*</b>							<b>0.212</b>
Strongly disagree	2	100.0%	0	.0%	2		1	20.0%	4	80.0%	5		
Disagree	0	.0%	7	100.0%	7		3	27.3%	8	72.7%	11		
Not sure	5	38.5%	8	61.5%	13		11	44.0%	14	56.0%	25		
agree	14	36.8%	24	63.2%	38		27	43.5%	35	56.5%	62		
Strongly agree	11	52.4%	10	47.6%	21		12	46.2%	14	53.8%	26		
<b>Are tutors supported in the implementation phase?</b>						<b>0.016*</b>							<b>0.861</b>
Strongly disagree	0	0	0	0	0		0	.0%	2	100.0%	2		
Disagree	1	16.7%	5	83.3%	6		4	44.4%	5	55.6%	9		
Not sure	5	29.4%	12	70.6%	17		17	42.5%	23	57.5%	40		
agree	16	36.4%	28	63.6%	44		23	44.2%	29	55.8%	52		
Strongly agree	10	66.7%	5	33.3%	15		10	38.5%	16	61.5%	26		
<b>enhancing skills and knowledge</b>						<b>0.017*</b>							<b>0.051*</b>
Strongly disagree	0	.0%	1	100.0%	1		0	.0%	2	100.0%	2		
Disagree	3	75.0%	1	25.0%	4		4	100.0%	0	.0%	4		
Not sure	3	100.0%	0	.0%	3		9	69.2%	4	30.8%	13		
agree	11	26.8%	30	73.2%	41		28	38.4%	45	61.6%	73		
Strongly agree	15	45.5%	18	54.5%	33		13	35.1%	24	64.9%	37		
<b>lack of commitment and coordination from administrator</b>						<b>0.049*</b>							<b>0.009*</b>
Strongly disagree	1	33.3%	2	66.7%	3		1	9.1%	10	90.9%	11		
Disagree	12	63.2%	7	36.8%	19		13	40.6%	19	59.4%	32		
Not sure	3	15.8%	16	84.2%	19		18	36.0%	32	64.0%	50		
agree	7	36.8%	12	63.2%	19		17	65.4%	9	34.6%	26		
Strongly agree	9	40.9%	13	59.1%	22		5	50.0%	5	50.0%	10		

This indicates that the students' study experience does not correlate to the nurse tutors' inadequate orientation by the college nursing administration during teaching. Therefore, students' study experience does not influence the nurse tutors' inadequate orientation during teaching by the college nursing administration in Malawi.

There is disturbing lack of commitment and coordination from the administrators and nurse tutors during teaching both in the classroom and at the clinical area. More than half (59.1%) of the nurse tutors with more than 6 years of work experience strongly agreed that there is a lack of commitment and coordination among nurse tutors and administrators in the nursing colleges during teaching, while 40.9% (09) n=22 of the nurse tutors with less than 5 years of work experience strongly agreed that there is a lack of commitment and coordination among nurse tutors and administrators during teaching both in the classroom and at the clinical area. The Spearman Correlation Coefficient was also used to compare the nurse tutors' work experience and the nurse tutors' and administrators' lack of commitment and coordination in the nursing colleges during teaching. The outcome of the equation was a p-value of  $0.049 < p = 0.05$ . The result illustrates that there is a correlation between the nurse tutors' work experience and a lack of commitment and coordination among nurse tutors and administrators during teaching in nursing colleges. This implies that the nurse tutors' work experience influences the nurse tutors and administrators' commitment and coordination during teaching in the nursing colleges. In the student data, 64% (32) n=50 of the students with more than two years study experience were not sure whether there is a lack of commitment and coordination among nurse tutors and administrators, while only 36% (18) n=50 of the students with less than two years study experience were also not sure whether there is a lack of commitment and coordination among nurse tutors and administrators during teaching both in the classroom and at the clinical area. During the bivariate analysis in the Spearman Correlation Coefficient model, the independent variable of student study experience was compared to dependent variable of the lack of commitment and coordination among nurse tutors and administrators during teaching. The outcome of the model was a p-value of  $0.009 < p = 0.05$ . This indicates that there is a strong correlation between the students' study experience and the lack of the commitment and coordination among nurse tutors and administrators during teaching. Therefore, the students' study experience influences the teaching performance of the nurse tutors on the commitment and coordination between the tutors and the administrators during teaching in the nursing colleges in Malawi.

Inadequate funding is strongly related to nurse tutors' work experience (see table 5.17). A total of 70% (21) n=30 of the nurse tutors with more than 6 years of work experience strongly agreed that there is inadequate funding at their nursing colleges which affects teaching and learning of the students, while only 30% (09) n=30 of the nurse tutors with less than five years of work experience agreed that there is inadequate funding at their nursing colleges. A bivariate analysis was used with the Spearman Correlation Coefficient model where a two-tailed test of significance was employed. The outcome of the equation was the p-value of  $0.002 < p < 0.05$ . This means that the null hypothesis that nurse tutors' work experience does not correlate to inadequate funding for classroom teaching was rejected. This was in favour of the alternative hypothesis that nurse tutors' work experience does strongly correlate to inadequate funding of the nursing colleges for both classroom and clinical area activities. Therefore, in nursing colleges in Malawi, nurse tutors' work experience influences the availability and inadequacy of funding.

The recognition of the social cultural behaviour of the students which is appropriate for learning was also assessed (see table 5.21). A total of 70.7% (29) n=41 of the nurse tutors with more than 6 years of work experience agreed that they recognise the social cultural behaviours of the students which is appropriate for learning both in the classroom and at the clinical area. However, only 29.3% (12) n=41 of the nurse tutors with less than five years of work experience agreed that they recognise the social cultural behaviour of the students which is appropriate for learning both in the classroom and at the clinical area. A spearman correlation coefficient was used to compare the nurse tutors' work experience and the nurse tutors' recognition of the social cultural student behaviour during teaching. The outcome of the model which used a two-tailed test of significance was a p-value of  $0.030 < p < 0.05$ . This indicates that there is a strong correlation between the nurse tutors' work experience and the nurse tutors' recognition of the social cultural behaviour of the students which is appropriate for learning both in the classroom and at the clinical area.

**TABLE 5.17: DISTRIBUTION OF TUTORS' WORK- EXPERIENCE & STUDENTS' STUDY EXPERIENCE ON TUTORS-**

VARIABLES	TUTORS' WORK EXPERIENCE					P-VALUE	STUDENTS' STUDY EXPERIENCE					P-VALUE	
	1-5years		6 and more yrs		Total n(%)		Two years		More than two yrs		N=129 total N(%)		
<b>Inadequate funding</b>						<b>0.002</b>							<b>.045*</b>
Strongly disagree	0	.0%	4	100.0%	4		3	37.5%	5	62.5%	8		
Disagree	3	42.9%	4	57.1%	7		5	27.8%	13	72.2%	18		
Not sure	7	50.0%	7	50.0%	14		13	31.0%	29	69.0%	42		
agree	13	48.1%	14	51.9%	27		18	62.1%	11	37.9%	29		
Strongly agree	9	30.0%	21	70.0%	30		15	46.9%	17	53.1%	32		
<b>Recognition of social cultural behaviour that is appropriate</b>						<b>0.030*</b>							<b>0.022*</b>
Strongly disagree	0	.0%	2	100.0%	2		0	.0%	1	100.0%	1		
Disagree	0	.0%	3	100.0%	3		2	15.4%	11	84.6%	13		
Not sure	8	53.3%	7	46.7%	15		19	61.3%	12	38.7%	31		
agree	12	29.3%	29	70.7%	41		21	35.6%	38	64.4%	59		
Strongly agree	12	57.1%	9	42.9%	21		12	48.0%	13	52.0%	25		
<b>Willingness to take their own responsibility for behaviour</b>						<b>0.042*</b>							<b>0.687</b>
Strongly disagree	0	.0%	1	100.0%	1		3	60.0%	2	40.0%	5		
Disagree	1	16.7%	5	83.3%	6		3	27.3%	8	72.7%	11		
Not sure	7	63.6%	4	36.4%	11		10	38.5%	16	61.5%	26		
agree	13	28.9%	32	71.1%	45		27	44.3%	34	55.7%	61		
Strongly agree	11	57.9%	8	42.1%	19		11	42.3%	15	57.7%	26		
<b>A sense of care and social support for underprivileged</b>						<b>0.029*</b>							<b>0.179</b>
Strongly disagree	0	0	0	0	0		1	16.7%	5	83.3%	6		
Disagree	1	16.7%	5	83.3%	6		2	22.2%	7	77.8%	9		
Not sure	8	38.1%	13	61.9%	21		12	46.2%	14	53.8%	26		
agree	10	27.8%	26	72.2%	36		30	42.3%	41	57.7%	71		
Strongly agree	13	68.4%	6	31.6%	19		9	52.9%	8	47.1%	17		
<b>Accurate knowledge &amp; adequate personal comfort with teaching</b>						<b>0.013*</b>							<b>0.519</b>
Strongly disagree	0	0	0	0	0		1	25.0%	3	75.0%	4		
Disagree	1	33.3%	2	66.7%	3		4	40.0%	6	60.0%	10		
Not sure	8	66.7%	4	33.3%	12		12	40.0%	18	60.0%	30		
agree	12	25.0%	36	75.0%	48		30	42.9%	40	57.1%	70		
Strongly agree	11	57.9%	8	42.1%	19		7	46.7%	8	53.3%	15		



In the student data, 64.4% (38) n=59 of the students with more than two years of study experience agreed that their nurse tutors recognise the social cultural behaviour of the students which is appropriate for learning both in the classroom and at the clinical area, while 35.6% (21) n=59 of the students with less than two years of study experience also agreed that their nurse tutors recognise the social cultural behaviour of the students which is appropriate for learning both in the classroom and at the clinical area. Using the bivariate analysis with Spearman Correlation Coefficient model at a two-tailed test of significant, the two variables were compared. The comparison was between the independent variable of the students' study experience and the dependent variable of recognition of the social cultural behaviour of the students which is appropriate for learning. The outcome of the model was a p-value of  $0.022 < p < 0.05$ . This indicates that there is a strong correlation between the students' study experience and the nurse tutors' recognition of the social cultural behaviour which is appropriate for learning both in the classroom and at the clinical area. Therefore, the students' study experience influences the performance of the nurse tutors on recognising the social cultural behaviour of the students which is appropriate for learning both in the classroom and at the clinical area.

The nurse tutors' willingness to take responsibility for their own behaviour was also evaluated. A total of 71.1% (32) n=45 of the nurse tutors with 6 years of work experience agreed that they are willing to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area, while only 28.9% (13) n=45 of the nurse tutors with less than 5 years of work experience agreed that that they are willing to take responsibility for their own behaviour during teaching students both in the classroom and at the clinical area (see table 5.21). Moreover, bivariate analysis with Spearman Correlation Coefficient was used. This was done to compare the independent variable of the nurse tutors work experience and the dependent variable of willingness by the nurse tutors to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. The outcome of the model was a p-value of  $0.042 < p < 0.05$ . This means that there is a strong correlation between the nurse tutors' work experience and the willingness of the nurse tutors to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. In Malawi nursing colleges, the nurse tutors' work experience influences the nurse tutors' willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. However, in the student data, 55.7% (34) n=61 of the students with more than two years of study experience

agreed that their nurse tutors are willing to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area, while students with less than two years of study experience (44.3%) also agreed that their nurse tutors are willing to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. Moreover, in a bivariate analysis where Spearman Correlation Coefficient model was used, the two-tailed test of significant was also used. In this model, a comparison was made between the students' study experience and the nurse tutors' willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. The p-value from the model was  $0.687 > p = 0.05$ . This p-value indicates that there is no correlation between the students' study experience and the nurse tutors' willingness to take the responsibility for their own behaviour during teaching both in the classroom and at the clinical area. Therefore, it clearly implies that the students' study experience in all nursing colleges in Malawi does not influence the nurse tutors' willingness to take responsibility for their behaviour during teaching both in the classroom and at the clinical area.

The teaching affective performance of the nurse tutors on the students also focused on a sense of care and social support for underprivileged students. A total of 72.2% (26)  $n=36$  of the nurse tutors with more than 6 years of work experience agreed that they have a sense of care and social support for underprivileged students in their colleges during teaching both in the classroom and at the clinical area. However only 27.8% (10)  $n=36$  of the nurse tutors with less than 5 years of work experience indicated that they have a sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. Using the bivariate analysis in the Spearman Correlation Coefficient model, the independent variable of nurse tutors' work experience was compared to the sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. The model also used the two-tailed test of significance to come up with the p-value of  $0.029 < p = 0.05$ . In this regard, the null hypothesis that nurse tutors' work experience does not correlate to the nurse tutors' sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience is strongly correlated to a sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. It clearly illustrates that the nurse tutors' work experience influences the sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area in all nursing colleges in Malawi. In

the student data, 57.7% (41) n=71 of the nursing students with more than two years study experience agreed that their nurse tutors have a sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area, while 42.3% (30) n=71 of the students with less than two years of study experience agreed that their nurse tutors have a sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. Bivariate analysis was applied to this data to compare the students' study experience and the nurse tutors' sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. The outcome of the model was a p-value of  $0.179 > p = 0.05$ . This clearly implies that there is no correlation between the students' study experience and the nurse tutors' sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area. Therefore, the student data has clearly identified that in Malawi, the students' study experience does not influence the nurse tutors' sense of care and social support for underprivileged students during teaching both in the classroom and at the clinical area.

The performance of the nurse tutors on the identification of learning issues of the students on patients were also evaluated. A total of 70.3% (26) n=37 of the nurse tutors with more than 6 years of work experience agreed that they identify students' learning issues on patients during teaching both in the classroom and at the clinical area. However, only 29.7% (11) n=37 of the nurse tutors with less than five years of work experience agreed that they identify the learning issues of the students on patients during teaching both in the classroom and at the clinical area. Using the bivariate analysis in the Spearman Correlation Coefficient model, the independent variable of nurse tutors' work experience was compared to the identification of learning issues of students on patients during teaching. The p-value was  $0.013 < p = 0.05$ . In this regard, the null hypothesis that nurse tutors' work experience does not correlate to nurse tutors' identification of the learning issues of the students on patients was rejected. This was in favour of the alternative hypothesis that nurse tutors' work experience does strongly correlate to the nurse tutors' identification of the students' learning issues on patients during teaching both in the classroom and at the clinical area. Therefore, it was evident that the nurse tutors' work experience is influenced by the performance of the nurse tutors on identification of the learning issues of students on patients during teaching both in the classroom and at the clinical area. In the student data, 56.3% (40) n=71 of the nursing students with more than two years of study experience agreed that their nurse tutors identify student learning issues on

patients during teaching, while 43.7% (31) n=71 of the students with less than two years of study experience agreed that their nurse tutors identify learning issues of the students on patients during teaching both in the classroom and at the clinical area. In the bivariate analysis with Spearman Correlation Coefficient model, the students study experience was compared to the nurse tutors' identification of student learning issues on patients during teaching. The outcome of the p-value was  $0.414 > p = 0.05$ . This indicates that there is no correlation between the students' study experience and the nurse tutors' identification of the learning issues of the students on patients during teaching both in the classroom and at the clinical area. Therefore, the students' study experience does not influence the nurse tutors' identification of the learning issues on patients during teaching both in the classroom and at the clinical area.

The encouragement of the nurse tutors of students' efforts on patient care in the clinical area was also assessed. A total of 69.4% (25) n=36 of the nurse tutors with more than six years of work experience agreed that they encourage the students' efforts on patient care in the clinical area, while only 30.6% (11) n=36 of the nurse tutors with less than 5 years of work experience agreed that they encourage the students' efforts on patient care in the clinical area during teaching. Bivariate analysis was used with Spearman Correlation Coefficient model to compare the nurse tutors' work experience with the nurse tutors' encouragement of the student's efforts on patient care in the clinical area. The outcome of the spearman correlation coefficient model was a p-value of  $0.027 < p = 0.05$ . This illustrates that there is a correlation between the nurse tutors' work experience and the encouragement of the students' efforts on patients care in the clinical area during teaching.

In the students' data, 57%(45) n=79 of the students with more than two years of study experience agreed that their nurse tutors encourage them in their efforts on patient care during teaching in the clinical area. The students with less than two years of study experience (43%) also agreed that that their nurse tutors encourage them in their efforts on patient care during teaching. The bivariate analysis with spearman correlation coefficient was used to compare the independent variable of the students' study experience and the dependent variable of the nurse tutors' encouragement of the students' efforts on patient care in the clinical area during teaching. The p-value from the spearman correlation coefficient model was  $0.737 > p = 0.05$ . This illustrates that the null hypothesis that the students' study experience as the independent variable does not correlate to the nurse tutors' encouragement of the students' efforts on

patient care during teaching was accepted. Therefore, the students' study experience in Malawi nursing colleges does not influence the nurse tutors' encouragement of the student's efforts on patient care in the clinical area during teaching.

The influence of the nurse tutors on the students' clinical confidentiality on patient care during teaching was also assessed. An total of 69.2% (27)  $n=39$  of the nurse tutors with more than six years of work experience agreed that they influence the students' clinical confidentiality on patient care during teaching in the hospitals, while only 30.8% (12)  $n=39$  of the nurse tutors with less than five years of work experience agreed that they influence the students' clinical confidentiality on patient care during teaching in hospitals. Bivariate analysis was also used with spearman correlation coefficient model to compare the nurse tutors' work experience with their influences on students' confidentiality on patient care in the clinical area. The outcome was a p-value of  $0.012 < p = 0.05$ . This means that the null hypothesis that the nurse tutors' work experience does not correlate to the nurse tutors' influence of the students' confidentiality on patient care in the hospitals is rejected. This was done in favour of the alternative hypothesis that the nurse tutors work experience does strongly correlate to the nurse tutors' influence of the students' clinical confidentiality on patient care during teaching.

It is clear that the nurse tutors' work experience in Malawi nursing colleges guides the nurse tutors' influencing of the students' clinical confidentiality on patient care in the hospital during teaching. However, the student data revealed different student perceptions. Less than half (48.5%) of the students with more than two years of study experience agreed that their nurse tutors influence them on their clinical confidentiality on patient care in the hospital during teaching, while just over half (51.5%) of the students with less than two years of study experience agreed that their nurse tutors influence them on their clinical confidentiality on patient care during teaching. Furthermore, in the bivariate analysis with Spearman Correlation Coefficient model, the students' study experience was compared to the nurse tutors' influence on their confidentiality on patient care in the hospitals during teaching. The model outcome showed the p-value of  $0.316 > p = 0.05$ . This implies that there is no correlation between the students' study experience and the nurse tutors influence on their clinical confidentiality on patient care during teaching in the hospitals. Therefore, in all nursing colleges in Malawi, the student study experience does not influence the students' clinical confidentiality on patient care during teaching in the hospitals.

Teaching performance of the nurse tutors on facilitation of teamwork among students in the classroom and at the clinical area was also evaluated. A total of 67.5% (27) n=40 of the nurse tutors with more than six years of work experience agreed that they facilitate student teamwork during teaching both in the classroom and at the clinical area. Only 32.5% (13) n=40 of the nurse tutors with less than five years of work experience agreed that they facilitate the students' teamwork during teaching both in the classroom and at the clinical area. In a bivariate analysis using Spearman Correlation Coefficient model with a two-tailed test of significance, the nurse tutors' work experience was compared to the nurse tutors' facilitation of teamwork among students during teaching. The outcome of the model was a p-value of  $0.038 < p = 0.05$ . In this regard, the null hypothesis that the independent variable of the nurse tutors' work experience does not correlate to the dependent variable of facilitation of the students on teamwork during teaching in the class and at the clinical area was rejected. This was done in favour of the alternative hypothesis that nurse tutors' work experience strongly correlates with the nurse tutors' facilitation of the students on teamwork during teaching both in the classroom and at the clinical area. This clearly indicates that the nurse tutors' work experience influences the nurse tutors' facilitation of the students on teamwork both in the classroom and at the clinical area. In the student data, 52.2% (36) n=69 of the students with more than two years of study experience agreed that the nurse tutors facilitate their teamwork during teaching both in the classroom and at the clinical area, while less than half (47.8%) of the students with less than two years of study experience agreed that their nurse tutors facilitate their teamwork during teaching both in the classroom and at the clinical area. Consequently, a bivariate analysis with Spearman Correlation Coefficient model was used. In this model, a two-tailed test of significance was also adopted to compare the students' study experience and the nurse tutors' facilitation of teamwork during teaching both in the classroom and at the clinical area. The equation of the model produced a p-value of  $0.368 > p = 0.05$ . This suggests that the students' study experience does not correlate with the nurse tutors' facilitation of their teamwork during teaching both in the classroom and at the clinical area. Therefore, in Malawi nursing colleges, the students' study experience does not influence the facilitation of the students' teamwork during teaching both in the classroom and at the clinical area.

Teaching performance of the nurse tutors to act as a resource person to students during teaching were also assessed. A total of 65.8% (25) n=38 of the nurse tutors with more than

six years of work experience agreed that they act as a resource person during teaching both in the classroom and at the clinical area, while nurse tutors with less than five years of work experience (34.2%) also agreed that they act as a resource person during teaching to students both in the classroom and at the clinical area. Using a bivariate analysis in the Spearman Correlation Coefficient model, the nurse tutors' work experience was compared to the nurse tutors acting as a resource person during teaching both in the classroom and at the clinical area. The result of the model was a p-value of  $0.025 < p = 0.05$ . This indicates that the null hypothesis that the nurse tutors' work experience does not correlate to the nurse tutors acting as a resource person for students during teaching both in the classroom and at the clinical area. Therefore, it is clear that the nurse tutors' work experience influences the nurse tutors acting as a resource person during teaching to students both in the classroom and at the clinical area. In the students' data, 58.8% (40)  $n=68$  of the students with more than two years of study experience agreed that their nurse tutors act as resource persons during teaching both in the classroom and at the clinical area, while 41.2% (28)  $n=68$  of the students with less than two years of study experience also agreed that their nurse tutors acted as resource persons during teaching both in the classroom and at the clinical area. Moreover, in the bivariate analysis using Spearman Correlation Coefficient model, the independent variable of the students' study experience was compared to the dependent variable of the nurse tutors acting as resource persons during teaching both in the classroom and at the clinical area. The outcome of this two-tailed test of significance model was a p-value of  $0.010 < p = 0.05$ . In this case, the null hypothesis that student study experience does not correlate to nurse tutors acting as resource persons during teaching was rejected. This was done in favour of the alternative hypothesis that the students' study experience strongly correlates to the nurse tutors acting as resource persons during teaching both in class and at the clinical area. As a result, in Malawi, it is clear that nursing students' study experience influences nurse tutors acting as a resource person during teaching both in class and at the clinical area.

Also assessed was the teaching performance of the nurse tutors on facilitating clinical orientation of students during teaching. The nurse tutors with more than six years of work experience (63.8%) agreed that they facilitate clinical orientation of students during teaching in the hospital, while only 36.2% (19)  $n=51$  of the nurse tutors with less than five years of work experience agreed that they facilitate clinical orientation of students during teaching in hospitals. In a bivariate analysis, using Spearman Correlation Coefficient model, the nurse tutors' work experience was compared to the nurse tutors' facilitation of clinical orientation

of students. The model also adopted a two-tailed test of significance and the resulting p-value was  $0.026 < p = 0.05$ . This means that the null hypothesis that the nurse tutors' work experience does not correlate to the nurse tutors' facilitation clinical orientation of students during teaching in the hospital was rejected. This was done in favour of the alternative hypothesis that the nurse tutors' work experience strongly correlates to the nurse tutors' facilitation of clinical orientation of students during teaching in the hospital. The nurse tutors' work experience therefore does influence the nurse tutors' facilitation of clinical orientation of students during teaching in the hospital at all nursing colleges in Malawi. Furthermore, in the students' data, 59.2% (42)  $n=71$  of the students with more than two years of study experience agreed that their nurse tutors facilitate clinical orientation of students during teaching in the hospital.

However, only 40.8% (29)  $n=71$  of the students with less than two years of study experience agreed that their nurse tutors facilitate them on clinical orientation during teaching in the hospital. Using the bivariate analysis in Spearman Correlation Coefficient model with a two-tailed test of significance, the students' study experience was compared to the nurse tutors facilitation of clinical orientation of students during teaching at the hospital (see table 5.22). The result of the model was a p-value of  $0.030 < p = 0.05$ . This means that the null hypothesis that the students' study experience does not correlate to the facilitation of clinical orientation of students during teaching by the nurse tutors was rejected. This was done in favour of the alternative hypothesis that the students' study experience strongly correlates to the nurse tutors facilitation of clinical orientation of students during teaching in the hospitals. Therefore, the students' study experience also influences the nurse tutors facilitation of clinical orientation of students during teaching in the hospital.

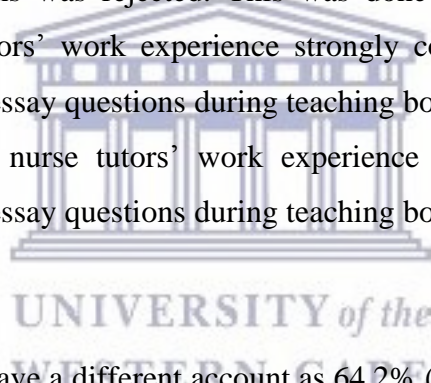


**Table 5.18 DISTRIBUTION OF WORK- EXPERIENCE AND TUTORS-STUDENT ASSESSMENT**

VARIABLES	TUTORS' WORK EXPERIENCE				Total n(%)	P-VALUE	STUDENTS' STUDY EXPERIENCE				total N(%)	P-VALUE p-value	
	1-5years		6 and more yrs				Two years	More than two yrs					
<b>Assessment by using Essays</b>						<b>0.044*</b>							<b>0.550</b>
Strongly disagree	7	46.7%	8	53.3%	15		8	57.1%	6	42.9%	14		
Disagree	3	15.0%	17	85.0%	20		5	33.3%	10	66.7%	15		
Not sure	0	0	0	0	0		7	46.7%	8	53.3%	15		
agree	12	54.5%	10	45.5%	22		19	35.8%	34	64.2%	53		
Strongly agree	10	40.0%	15	60.0%	25	15	46.9%	17	53.1%	32			
<b>Assessment using Short answer</b>						<b>0.050*</b>							<b>0.871</b>
Strongly disagree	4	36.4%	7	63.6%	11		8	57.1%	6	42.9%	14		
Disagree	0	.0%	7	100.0%	7		5	33.3%	10	66.7%	15		
Not sure	0	0	0	0	0		7	46.7%	8	53.3%	15		
agree	13	40.6%	19	59.4%	32		19	35.8%	34	64.2%	53		
Strongly agree	15	46.9%	17	53.1%	32	15	46.9%	17	53.1%	32			
<b>Assessment using Multiple-choice items</b>						<b>0.026*</b>							<b>0.316</b>
Strongly disagree	1	14.3%	6	85.7%	7		1	50.0%	1	50.0%	2		
Disagree	1	14.3%	6	85.7%	7		2	50.0%	2	50.0%	4		
Not sure	0	0	0	0	0		6	54.5%	5	45.5%	11		
agree	5	35.7%	9	64.3%	14		25	42.4%	34	57.6%	59		
Strongly agree	25	47.2%	28	52.8%	53	20	37.7%	33	62.3%	53			
<b>Assessment using portfolio</b>						<b>0.026*</b>							<b>0.016*</b>
Strongly disagree	3	16.7%	15	83.3%	18		7	33.3%	14	66.7%	21		
Disagree	3	25.0%	9	75.0%	12		10	34.5%	19	65.5%	29		
Not sure	1	100.0%	0	.0%	1		13	34.2%	25	65.8%	38		
agree	13	50.0%	13	50.0%	26		12	52.2%	11	47.8%	23		
Strongly agree	12	48.0%	13	52.0%	25	12	66.7%	6	33.3%	18			
<b>Assessment using interview</b>						<b>0.032</b>							<b>0.013</b>
Strongly disagree	11	37.9%	18	62.1%	29		8	40.0%	12	60.0%	20		
Disagree	7	30.4%	16	69.6%	23		9	39.1%	14	60.9%	23		
Not sure	0	.0%	1	100.0%	1		7	25.0%	21	75.0%	28		
agree	8	53.3%	7	46.7%	15		20	50.0%	20	50.0%	40		
Strongly agree	6	42.9%	8	57.1%	14	10	55.6%	8	44.4%	18			

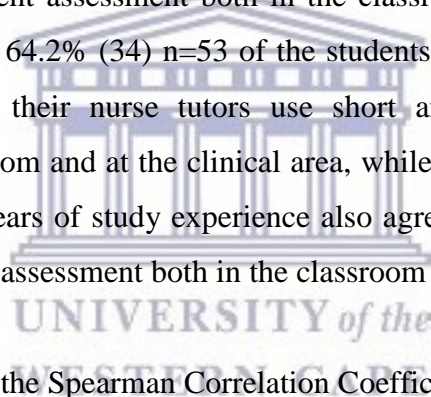
This is a bivariate table showing the correlation between student study experience, nurse tutors' work experience and performance in class and at the clinical area.

Furthermore, the nurse tutors' teaching performance of the assessment by using essay questions was assessed during the study. A total of 60% (15) n=25 of the nurse tutors with more than six years of work experience strongly agreed that they assess their students in the college by using essay questions during teaching both in the classroom and at the clinical area, while only 40% (10) n=25 of the nurse tutors with less than five years of work experience agreed that they assess their students using essay questions during teaching both in the classroom and at the clinical area. A bivariate analysis with Spearman Correlation Coefficient model was also used. This was done to compare the independent variable of the nurse tutors' work experience and the dependent variable of the nurse tutors' student assessment using essay questions during teaching both in the classroom and at the clinical area. The result of the model was a p-value of  $0.044 < p < 0.05$ . In this case, the null hypothesis that the nurse tutors' work experience does not correlate to the nurse tutors' assessment of students using essay questions was rejected. This was done in favour of the alternative hypothesis that the nurse tutors' work experience strongly correlates to the nurse tutors' assessment of students using essay questions during teaching both in the classroom and at the clinical area. Therefore, the nurse tutors' work experience influences the nurse tutors' assessment of students using essay questions during teaching both in the classroom and at the clinical area.



Meanwhile, the student data gave a different account as 64.2% (34) n=53 of the students with more than two years of study experience agreed that their nurse tutors assessed them using essay questions during teaching both in the classroom and at the clinical area, while of those students with less than two years of study experience, only 35.8% (19) n=53 agreed that their nurse tutors assess them using essay question during teaching both in the classroom and at the clinical area. In a bivariate analysis, using the spearman correlation coefficient model with a two-tailed test of significance, the students' study experience was compared to the students' assessment using essay questions during teaching. The result of the model was a p-value of  $0.55 > p > 0.05$ . This means that the null hypothesis that the students' study experience does not correlate to the nurse tutors' assessment of students using essay questions during teaching both in the classroom and at the clinical area was accepted. This illustrates that the students' study experience does influence the nurse tutors' assessment using essay questions during teaching both in the classroom and at the clinical area in all nursing college in Malawi.

In addition to the essay questions, the assessment of students using short answer questions was also assessed among the nurse tutors in Malawi. More than half (53.1%) of the nurse tutors with more than six years of work experience agreed that they assess the students using short answer questions during teaching both in the classroom and at the clinical area, while 46.9 (15) n=32 of the nurse tutors with less than five years of work experience strongly agreed that they assess the students by using short answer questions during teaching both in the classroom and at the clinical area. In a bivariate analysis, using the Spearman Correlation Coefficient model, a two-tailed test of significance was adopted. This was done to compare the independent variable of the nurse tutors' work experience and the dependent variable of the nurse tutors' assessment using short answer questions. The outcome of the model is the p-value of  $0.050 < p = 0.05$ . This indicates that there is a borderline correlation between the nurse tutors' work experience and the nurse tutors' assessment using short answer questions. Therefore, the nurse tutors' work experience influences nurse tutors in Malawi to use short answer questions during student assessment both in the classroom and at the clinical area. However, in the student data, 64.2% (34) n=53 of the students with more than two years of study experience agree that their nurse tutors use short answer questions for student assessment both in the classroom and at the clinical area, while only 35.8% (19) n=53 of the students with less than two years of study experience also agreed that their nurse tutors use short answer questions during assessment both in the classroom and at the clinical area.



In the bivariate analysis using the Spearman Correlation Coefficient model at a two-tailed test of significance, the two variables were compared. These were the students' study experience as the independent variable and the nurse tutors' assessment using short answer questions as the dependent variable. The outcome of the model was a p-value of  $0.871 > p = 0.05$ . The result shows that there is no correlation between the students' study experience and the nurse tutors' assessment using short answer questions both in the classroom and at the clinical area. Therefore, it is clear that students' study experience does not influence nurse tutors on assessment of students using the short answer questions both in the classroom and at the clinical area in all nursing colleges of the country.

The performance of nurse tutors on the assessment of students using multiple-choice questions was also evaluated in all nursing colleges in Malawi. Just over half (52.8%) of the nurse tutors with more than 6 years of work experience strongly agreed that they assess the nursing students using multiple-choice questions both in the classroom and at the clinical

area, while 47.2% (25) n=53 of the nurse tutors with less than five years of work experience also strongly agreed that they use multiple-choice questions during student assessment both in the classroom and at the clinical area. In a bivariate analysis where spearman correlation coefficient was used the two-tailed test of significance was adopted. This was done to compare the independent variable the nurse tutors' work experience and the dependent variable of student assessment using multiple-choice questions both in the classroom and at the clinical area. The result showed a p- value of  $0.026 > p = 0.05$ . This indicates that there is a strong correlation between the nurse tutors' work experience and the nurse tutors' assessment of students using multiple-choice questions during teaching both in the classroom and at the clinical area. Therefore, the nurse tutors' work experience influences student assessment using multiple-choice questions during teaching both in the classroom and at the clinical area for all nursing colleges in Malawi. Meanwhile, in the student data, 57.6% (34) n=59 of the students with more than two years study experience agreed that their nurse tutors assess them using multiple-choice questions both in the classroom and at the clinical area, while 42.4% (25) n=59 of the students with less than two years of study experience also agreed that their nurse tutors assess them using multiple-choice questions during teaching both in the classroom and at the clinical area.

In a bivariate analysis with Spearman Correlation Coefficient model, a two-tailed test of significance was adopted in the model. This was done to compare the students' study experience and the assessment of students using multiple-choice items during teaching. The result of the p-value was  $0.316 > p = 0.05$ . This means that there is no correlation between the independent variable of student study experience and the dependent variable of the nurse tutors' assessment of students using multiple-choice questions during teaching both in the classroom and at the clinical area. Therefore, the students' study experience does not influence the nurse tutors' assessment of students using multiple-choice questions during teaching both in the classroom and at the clinical area in all nursing colleges.

The assessment of students by nurse tutors using portfolios was also evaluated at all nursing colleges in Malawi. Half of the nurse tutors with more than six years of work experience agreed that they assess students using portfolios during teaching both in the classroom and at the clinical area. Similarly, half of the nurse tutors with less than five years of work experience also agreed that they assess students using portfolios during teaching both in the classroom and at the clinical area. In bivariate analysis with Spearman Correlation

Coefficient model a two-tailed test of significance was used. This model was used in order to compare the nurse tutors' work experience as the independent variable and the use of portfolios during student assessment both in the classroom and at the clinical area. The outcome of the mode equation was a p-value of  $0.026 < p = 0.05$ . This indicates that the null hypothesis that the nurse tutors' work experience does not correlate to the nurse tutors' utilisation of portfolios during teaching was rejected. This was done in favour of the alternative hypothesis that the nurse tutors' work experience strongly correlate to the utilisation of portfolios during teaching both in the classroom and at the clinical area. Therefore, it is clear that the nurse tutors' work experience in Malawi nursing colleges influences the performance of nurse tutors' in utilisation of portfolios during teaching assessment of students both in the classroom and at the clinical area. Furthermore, in the students' data, 65.8% (25) n=38 of the students with more than two years of study experience were not sure that their nurse tutors in the respective colleges assess them using portfolios during teaching both in the classroom and at the clinical area.

Only 34.2% (13) n=38 of the students with less than two years of study experience were unsure whether their nurse tutors use portfolios during teaching assessment both in the classroom and at the clinical area. When bivariate analysis was used with Spearman Correlation Coefficient model option, a two-tailed test of significance was adopted. This was done to compare the students' study experience and the nurse tutors' utilisation of portfolios during teaching both in the classroom and at the clinical area. The result of the p-value was  $0.016 < p = 0.05$ . This illustrates that the null hypothesis that students' study experience does not correlate to use of portfolios by nurse tutors during teaching assessment was rejected. The rejection was done in favour of the alternative hypothesis that the students' study experience strongly correlates to the use of portfolios during teaching assessment. Therefore, the nurse tutors' performance of using portfolios during teaching assessment in Malawi nursing colleges is influenced by the students' study experience.



Part of Nkhoma Nursing College third year students (2014) waiting for clinical assessment on the reproductive health skills in the laboratory.

**Figure 5.28: Group of students waiting for laboratory skill acquisition**

### **5.4.3 ASSOCIATION OF NURSE TUTORS' WORK EXPERIENCE AND STUDENTS' STUDY EXPERIENCE ON TUTORS' PERFORMANCE**

In order for the study to determine the association of the nurse tutors' work experience and the nursing students' study experience in relation to the nurse tutors' performance, a binary logistic regression model was constructed. This was done using the Omnibus Tests of Model Coefficients, which gave an overall indication of how well the model performed in comparison with the nurse tutors' experience and teaching strategies. The main aim of using this model was to assess the determinants of performance between nurse tutors and students and the extent to which the nurse tutors' experience and the nursing students' study experience affects this performance. Over and above the results obtained for the equation, the inclusion of some of the predictors when entered into the model gave the 'goodness of fit' test. For this set of results, the goal was to obtain a highly significant value (the significant value should be less than .05). The results shown in the Hosmer and Lemeshow Test also support our model as being meaningful. This test has been used in the SPSS software and is the most reliable test for this study.

Logistic regression was performed firstly by selecting all dependent variables that showed statistical significance in the bivariate analysis and entering them into the model of binary logistic regression. This was done after dichotomising the five ranked Likert scale dependent variables to two covariates of "Agree" and "Disagree". Disagree was coded 0 to become a constant value in our output, but not presented in the table below due to space and agree was

coded 1 to become our interactive value in the output. With logistic regression analysis, the findings reported in this study informed the importance of independent variables and their effect on the dependent variables' odds. This suggested that the effect of the nurse tutors' work experience and nursing student study experience influences the dependent variables on nurse tutors' performance. The main objective was to determine the tutors' performance and how it affects learning with a focus on teaching needs. On each independent variable which was statistically significant, the Odds Ratios were considered since they informed the study about the probability of the nurse tutors and students' performance both in the classroom and at the clinical area.

The Beta (B) values provided in the first column of the logistic regression model below (Table- 5.7) are the outcome values in an equation where the calculation of the probability of a case falling into a specific category was done. Using this model, it was noted that the B coefficient sometimes produced a negative relationship. This illustrated the direction of the relationship between the tutors' work experience and the use of the specific teaching strategies (which factors increase the likelihood of a yes answer and which factors decrease it). A negative B coefficient in the equation indicated that an increase in the independent variable score will result in a decreased probability of the case recording a score of 1 in the dependent variable (indicating the presence of the use of lecturer method problems in this case). In this model, there is also a negative B value on variable measuring of the use of interviews as a teaching strategy by nurse tutors,  $B = -0.095$ . This indicates that the more experience the nurse tutors have, the less likely it is that they will use the interview as a teaching strategy competently. For the other three significant categorical variables (use of role-play, discussion and case study), the B coefficients are positive. This suggests that nurse tutors with more experience are more likely to agree to the question that followed.

All variables under the nurse tutors' performance section were dichotomised from the five ranked Likert Scale to the two ranked Likert scale with the aim of producing agreeing and disagreeing options as categorical variables. This was done in readiness for logistic regression models, which were developed to associate the nurse tutors' work experience and their performance during teaching and student assessment. The independent variables for two different separately conducted models were student study experience and the nurse tutors' competence. This was done because logistic regression models focus on probability classifications that require categorical variables (Pallant, 2011). The cut-off of 0.5 and the

entry point of p-value of 0.05 in statistics of Hosmer-Lemeshow goodness-of-fit was done. The equation was based on the method of ENTER, with the maximum iteration of more than 20 items. The equation had a probability of 95% confidence interval.

The Odds Ratio (OR) interpretation of 1 above was adopted for the predictor variables of nurse tutors' work experience and students' study experience separately. All the categorical or dependent variables under the nurse tutors' competence and the predictor/independent variables were first tested in the bivariate analysis at p-value of 0.05. All constant values were not tabulated, although the models produced them during analysis due to table spacing (see below). The degree of freedom was set at 1; all the nurse tutors' competence variables thus dependent variables and nurse tutors' work experience and students' study experience, which are independent categorical variables, were dichotomized and coded correctly (with 0=disagree or lack of the characteristic(); 1=agree, on the presence of the characteristic as described in table 4.15 . This model was chosen because it gives an indication of the adequacy of the model (set of predictor variables) by assessing 'goodness of fit'. It also provides an indication of the relative importance of each predictor variable such as the nurse tutors' work experience and students' study experience, or the interaction among predictor variables. It provides a summary of the accuracy of the classification of cases based on the model, allowing the calculation of the sensitivity and specificity of the model and the positive and negative predictive values using Beta values.

The variable of inadequate clinical orientation of students was measured to the nurse tutors' performance to see the statistical association using the logistic regression in table 4.23. The logistic model opted for probability for stepwise of the entry level of 0.05 and the removal level of 0.10. In this model, which was an omnibus test model of coefficient, the outcome of the odds ratio was  $OR \leq 0.302; CI(0.096 \pm 2.955); p \geq 0.042$ . This was after the predictor variable of nurse tutors' work experience was compared to dependent variable inadequate clinical orientation of students. In this outcome where the logistic method was ENTER, it clearly implies that the more years the nurse tutors have both in the classroom and at the clinical area, the less likely it is that nurse tutors would have adequate clinical orientation of students during teaching in the clinical area. Even the Beta value of the analysis displayed a negative direction of relationship between the predictor variable and the dependent variable as it was  $B = -1.196$ . This means that for every increase in years of work for nurse tutors, both in the classroom and at the clinical area, there will be a decrease of the clinical orientation to



students. Therefore, the length of nurse tutors' work experience in Malawi nursing colleges leads to limited or poor clinical orientation of students. Furthermore, this was the same in the students' perceptions as the omnibus test model of coefficient outcome of the odds ratio, Beta value, the Ward, correlations and the confidence interval were adopted. The results illustrated that  $OR \leq 1.032; CI(0.430 \pm 2.474); p \geq 0.944$ . In this outcome, the probability was the main predictive values with standardisation as the specific residuals. This means that there was a strong association between the predictor variable of student study experience and the dependent variable of inadequate clinical orientation of students by nurse tutors. Therefore, for every additional year in the student study experience in all nursing colleges in Malawi, there would be 2.045 times of nurse tutors' inadequate clinical orientation of students during teaching both in the classroom and at the clinical area.



These were part of 120 first year students in 2014, at Nkhoma Nursing College waiting for their laboratory clinical orientation

**Figure 5.29: A group of students waiting for clinical laboratory orientation**

The infusion of health issues without providing foundation within one subject as a performance of the nurse tutors during teaching was also analysed using the omnibus test of model coefficient. In this model a Hosmer-Lemeshow goodness-of-fit was also a statistical choice. This was done in order to compare the predictor variable of nurse tutors' work experience and the dependent variable of infusion of health issues without providing the foundation within one subject during teaching.

There was a strong association between these variables as the outcome of the logistic regression equation was  $OR \leq 1.433; CI(0.326 \pm 6.295); p \geq 0.634$ . This implies that for any increase in the nurse tutors' work experience, there would be a likelihood probability of 1.433 times more on the performance of the nurse tutors on the infusion of health issues without providing foundations within one subject to students during teaching. Although the Beta Coefficient value was in decimal point figure ( $B = 0.360$ ), it was in a positive direction of the relationship between the predictor and dependent variables. Therefore, any increase in years of the nurse tutors' work experience, there would be a likelihood of a slight increase of the nurse tutors' infusion of the health issues without providing foundation within the one subject during teaching of students both in the classroom and at the clinical area. However, the perceptions of the students on the variables were different. Using the same omnibus test coefficient, the student study experience was compared to the nurse tutor's infusion of health issues without the foundation within one subject. In this equation, where the probability for stepwise criteria was 0.05 for entry and 0.5 for classification cut-off, the outcome of the logistic regression model was  $OR \leq 0.177; CI(0.035 \pm 0.898); p \geq 0.037$ . This implies that although the p-value expresses a high correlation, there is no high statistical association between the student study experience and nurse tutors' infusion of health issues without providing the subject foundation during teaching. This further illustrates that for every additional year of the students' study experience, there would be a probability likelihood of only 0.177 times more for nurse tutors to infuse health issues without providing foundation within a subject. Therefore, there is only a slight relationship between student study experience and the increased performance in nurse tutor's infusion of health issues without subject foundation in Malawi nursing colleges. (See table 5.19 below).

**TABLE 5.19 ASSOCIATION OF TUTORS' WORK EXPERIENCE, STUDENTS' STUDY EXPERIENCE AND TUTORS' CLINICAL PERFORMANCE**

Tutors who AGREE on PERFORMANCE variables	Tutors' work experience						Students' study experience					
	B	WARD	Sig	ODD	Confidence interval		B	WARD	sig	ODD	Confidence interval	
					lower	upper					lower	upper
Inadequate clinical orientation	<b>-1.196</b>	<b>4.152</b>	<b>.042</b>	.302	.096	.955	.031	.005	.944	<b>1.032</b>	.430	2.474
Too little-time to clinical practice	.514	.572	.450	<b>1.672</b>	.441	6.344	<b>1.844</b>	<b>5.165</b>	<b>.023</b>	<b>6.324</b>	<b>1.289</b>	<b>31.030</b>
Infusion health without foundation	.360	.227	.634	<b>1.433</b>	.326	<b>6.295</b>	<b>-1.731</b>	<b>4.370</b>	<b>.037</b>	.177	.035	.898
Weak leadership	<b>-.239</b>	.121	.728	.787	.204	3.039	<b>-1.080</b>	<b>4.735</b>	<b>.030</b>	.340	.128	.898
Lack of teaching material	<b>-.024</b>	.002	.967	.976	.312	3.054	<b>-.063</b>	.022	.882	.939	.407	<b>2.163</b>
Inadequate funding	.013	.000	.985	<b>1.013</b>	.271	3.793	<b>-.989</b>	<b>6.688</b>	<b>.010</b>	.372	.176	.787
Recognition behaviour	.523	.450	.502	<b>1.687</b>	.366	7.771	.612	<b>1.855</b>	.173	<b>1.845</b>	.764	4.452
Willingness to take responsibility	<b>-.762</b>	.732	.392	.467	.081	2.675	<b>-.161</b>	.097	.756	.851	.308	2.351
Concerned with Social student issues	.447	.270	.603	<b>1.564</b>	.290	8.449	.105	.033	.856	<b>1.110</b>	.358	3.446
Sense of student care	.341	.158	.691	<b>1.406</b>	.262	7.550	<b>-.462</b>	.679	.410	.630	.210	1.889
Accurate teaching knowledge	<b>-1.119</b>	<b>2.513</b>	.113	.327	.082	1.303	.091	.036	.850	<b>1.095</b>	.427	2.807

**TABLE 5.24 ASSOCIATION OF TUTORS' WORK EXPERIENCE, STUDENTS' STUDY EXPERIENCE ON STUDENT TEACHING ASSESSMENT**

Tutors who AGREE STUDENT ASSESSMENT	Tutors' work experience						Students' study experience					
	B	WARD	Sig	ODD	Confidence interval		B	WARD	sig	ODD	Confidence interval	
					lower	upper					lower	upper
Use of Essay questions	.223	.164	.685	<b>1.249</b>	.426	3.666	.319	.566	.452	<b>1.376</b>	.599	3.162
Use of Short Answer	<b>-.257</b>	.091	.762	.774	.146	4.087	.217	.221	.638	<b>1.242</b>	.503	3.068
Use of Multiple-choice questions	<b>1.043</b>	<b>1.013</b>	.314	<b>2.837</b>	.372	21.607	.196	.110	.741	<b>1.217</b>	.381	3.886
Use of Projects	.963	<b>2.788</b>	.095	<b>2.621</b>	.846	8.120	.362	.739	.390	<b>1.437</b>	.629	3.282
Use of Clinical Observation (OSCE)	.714	<b>1.642</b>	.200	<b>2.042</b>	.685	6.089	.638	<b>2.226</b>	.136	<b>1.894</b>	.818	4.381
Use of Interviews	<b>-.009</b>	.000	.987	.991	.354	2.778	<b>-1.215</b>	<b>7.457</b>	<b>.006</b>	.297	.124	.710

This is a logistic regression models with probability classification cut-off of 0.5 and the entry point of p-value of 0.05 in statistics of Hosmer-Lemeshow goodness-of fit. Based on method of ENTER, the maximum iteration of more than 20 items were entered. Only those that show statistical significance were tabulated. The equation had a probability of 95% confidence interval. The OR interpretation of above 1 was adopted for the predictor variables of nurse tutors' experience and student study experience separately. All the categorical or dependent variables and the predictor/independent variables were first tested in the bivariate analysis at p-value of 0.05. All constant values were not tabulated although the models produced due to table spacing. The degree of freedom was set at 1. All nurse tutors' performance variables were regarded as dependent variables and nurse tutors' work experience and student study experience which are independent or predictor variables. All categorical variables were dichotomizedly coded correctly (with 0=disagree or lack of the characteristic ()); 1=agree, or the presence of the characteristics. The disagree was treated as a constant value

No association was found between nurse tutors' work experience and the weak administrative leadership for students in all nursing colleges in Malawi. This was done through a logistic regression analysis where the omnibus test model coefficient was used, where the nurse tutors' work experience was compared to weak nursing administrative leadership in the colleges. In the model, ENTER was selected as the equation method with the probability for stepwise criteria of 0.05 as an entry and 0.5 as the classification cut-off. The outcome of the omnibus test of model coefficient was  $OR \leq 0.787; CI(0.204 \pm 3.039); p \geq 0.728$ . This means that for every additional year of the nurse tutors' work experience, there would be a probability likelihood of 0.787 times for nurse tutors to less likely have administrative weak leadership in all nursing colleges. Therefore, the results suggest that nurse tutors have very limited weak administrative nursing leadership in all nursing colleges in Malawi. Furthermore, the Beta Coefficient value of the model outcome shows (-0.239). This illustrates that for any increase of the number of years of work experience; there would be a decrease in the weak leadership in the nursing colleges. Furthermore, in the students' data, when the same omnibus test of model coefficient was used, there was no statistical association between the student study experience and the nurse tutors' administrative weak leadership for student learning. This was because for the logistic regression, which had ENTER as a method of choice in the equation, the outcome of the odds ratio was  $OR \leq 0.640; CI(0.128 \pm 0.898); p \geq 0.030$ . This indicates that for any additional year of the students' study experience, there would be a probability likelihood of 0.340 times for the weak leadership of the administration in all nursing colleges. Therefore, there is marginally weak leadership in all nursing colleges that affects the learning process of the students in these colleges. In addition, the Beta Coefficient value of the omnibus test of coefficient model was (B= -1.080). It clearly showed that there is a strong negative direction of relationship between the predictor variable of students' study experience and the dependent variable of weak administrative leadership during teaching. As such, if there is an increase in the number of years of the students' study experience, there would be a decrease in the weak administrative leadership in the nursing colleges.

Moreover, the lack of teaching material is a serious problem among nurse tutors in Malawi and this variable was evaluated using the logistic regression analysis. In the omnibus test model coefficient, the probability for stepwise criteria was 0.05 at entry and 0.5 as the classification cut-off. This was done to compare the predictor variable of nurse tutors' work experience and the dependent variable of nurse tutors' lack of teaching material in the colleges and at the clinical area. The outcome of the model was an odds ratio of

OR $\leq$ 0.976;CI(0.312 $\pm$ 3.054);p $\geq$ 0.967 (see table 4.23). This indicates that there is no association between the nurse tutors' work experience and the lack of teaching material both in the classroom and at the clinical area. For every additional year in the nurse tutors' work experience, there would be a probability likelihood of 0.976 times for the nurse tutors to lack teaching materials. Therefore, the nurse tutors' work experience does not associate with the lack of teaching materials in the nursing colleges. Even the Beta Coefficient value showed (B= -0.239), a negative direction of the relationship between the nurse tutors' work experience and the nurse tutors' lack of teaching materials both in the classroom and at the clinical area. This suggests that for any increase in nurse tutors' work experience there would be a decrease in the nurse tutors' lack of teaching material in the nursing colleges during the teaching of both theory and practical lessons.

Moreover, in the student data, when student study experience as a predictor variable was compared to the lack of teaching materials, there was no statistical association. This was done after the omnibus test of the model coefficient, where the probability for stepwise criteria included 0.5 as the classification cut-off. The results of the equation revealed the odds ratio of OR $\leq$ 0.939;CI(0.407 $\pm$ 2.163);p $\geq$ 0.882. This suggests that, for every additional year of the student's study experience in all nursing colleges in Malawi, there would be a probability likelihood of 0.939 times for nurse tutors to have a lack of teaching materials. As such, student study experience has limited or no association with the lack of materials for teaching in nursing colleges. For the Beta Coefficient value of the results (see the table), it clearly showed that (B= -0.063) there is a negative direction to the relationship between student study experience and the lack of teaching materials in nursing colleges. Therefore, for every additional year of the students' study experience, there would be a decrease in the nurse tutors' lack of teaching materials both in the classroom and at the clinical area. Therefore, the lack of teaching material is not associated with student study experience.

Furthermore, through using the logistic regression with omnibus test of model coefficient, the results show that inadequate funding in nursing administration for teaching is associated with nurse tutors' experience. In the model, the predictive value of probabilities of stepwise criteria of 0.05 at entry and 0.1 at removal and 0.5 as the classification cut-off were used. The result of the equation clearly showed the odds ratio of OR $\leq$ 1.013;CI(0.271 $\pm$ 3.793);p $\geq$ 0.985. The model indicates that there is a strong association between the predictor variable of the nurse tutors' work experience and the dependent variable of inadequate nursing

administrative funding for nurse tutors' teaching in all the nursing colleges in the country. For every additional year of the nurse tutors' work experience, there would be a probability likelihood of 1.013 times more inadequate nursing administrative funding in the colleges. Therefore, the more work experience nurse tutors have, the bigger the likelihood is of inadequate nursing administration funding in nursing colleges. Although, the Beta Coefficient value was a decimal point ( $B= 0.013$ ), it illustrated the positive direction of the relationship between the nurse tutors' work experience and the nursing administrations' inadequate funding to the teaching programmes. Meanwhile, the students had different perception towards the funding issue of their nursing colleges. Using the same logistic regression model, with the omnibus test model of coefficient, the results of the odds ratio revealed  $OR \leq 0.372$ ;  $CI(0.176 \pm 0.787)$ ;  $p \geq 0.010$ . This means that there was no association between the student's study experience and inadequate nursing administrative funding. For each additional year of the students' study experience, there would be a probability likelihood of 0.372 times of nursing administration having inadequate funding. This shows that nursing administration does not have a significant problem with funding of nurse tutors during teaching. Moreover, the Beta Coefficient value from the logistic regression equation showed  $B= -0.989$ . This is an illustration of negative direction in the relationship between the students' study experience and the administrative inadequacy of funding the nurse tutors during teaching. Thus, any increase in years of the students' study experience would result in the decrease of the inadequacy of administrative funding in the nursing colleges. This implies that students feel that any increase in their study experience would not affect the funding structure of the nursing college.

Another performance area of nurse tutors was their willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. This was analysed using the logistic regression model. In the model, which adapted the omnibus test of model coefficient, the probability stepwise criteria of 0.05 for entry was selected and 0.5 was used for the classification cut-off point. The main finding of the odds ratio was  $OR \leq 0.467$ ;  $CI(0.081 \pm 2.675)$ ;  $p \geq 0.392$ . This indicates that there is no association between the nurse tutor's work experience and the nurse tutors' willingness to take responsibility for their own behaviour both in the classroom and at the clinical area. For every additional year of the nurse tutors' experience, there would be a probability likelihood of 0.467 times of the nurse tutor's willingness to take responsibility for their own behaviour during teaching. Even the Beta value from the equation results showed ( $B= -0.762$ ) that there is a negative relationship

between the nurse tutor's work experience and their willingness to take responsibility for their own behaviour towards students' learning during teaching both in the classroom and at the clinical area. The beta value implies that for any increase in the years of the nurse tutors' experience, there would be a likelihood of increasing the nurse tutors' willingness to take responsibility for their own behaviour towards student learning during teaching. The students' data shows that there is no association between students' study experience and the nurse tutors' willingness to take responsibility. This was found after using the omnibus test of model coefficient, where the predictor variable of the students' study experience was compared to the dependent variable of nurse tutors' willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. Therefore, the result of the odds ratio from the logistic regression model was  $OR \leq 0.851; CI(0.308 \pm 2.351); p \geq 0.756$ . This implies that for any additional years of the students' study experience, there would be likelihood increase of 0.851 times on the nurse tutors' willingness to take responsibility for their own behaviour towards student learning during teaching both in the classroom and at the clinical area. Moreover, the Beta Coefficient value of the results showed ( $B = -0.161$ ), a negative direction of the relationship between the predictor variable of the students' study experience and the dependent variable the nurse tutors' willingness to take responsibility for their own behaviour towards student learning during teaching both in the classroom and at the clinical area. Any increase in the student study experience would result to a likelihood decrease of the nurse tutors' willingness to take responsibility for their own behaviour towards student learning during teaching both in the classroom and at the clinical area.

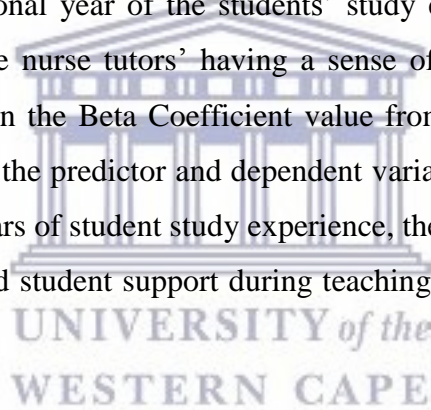
The performance of nurse tutors on their concerned with social student issues during teaching was also analysed using the logistic regression model. In this model, the omnibus test of model coefficient was adopted with probability stepwise criteria of 0.05 as entry and 0.5 as a classification cut-off point. The method of the logistic regression model was ENTER with a maximum iteration of 20. The results of the model show the odds ratio of  $OR \leq 1.564; CI(0.290 \pm 8.449); p \geq 0.603$ . This indicates that there is an association between the predictor variable of the nurse tutors' work experience and the nurse tutors' concerns with social student issues for learning during teaching both in the classroom and at the clinical area. The result illustrates that for every additional year of the nurse tutors' work experience, there would be 1.564 times more of the nurse tutors' concerns with social student issues for learning during teaching. Even the Beta Coefficient value in the logistic regression model

shows the ( $B= 0.447$ ) positive direction of the variables relationship although it is in decimal points. This implies that any increase in the nurse tutors' work experience would result in the slight increase of the nurse tutors' concerns with social student issues for student learning during teaching both in the classroom and at the clinical area. Looking at the student data, there is an association between the predictor variable of the students' study experience and the dependent variable of the nurse tutors' concerns with social issues during teaching. Taking the logistic regression analysis with omnibus test of model coefficient as the choice model, probability stepwise criteria of 0.05 was also used as entry and 0.5 as the classification cut-off point. The results show an odds ratio of  $OR \leq 1.110$ ;  $CI(0.358 \pm 3.446)$ ;  $p \geq 0.856$ . Therefore, the result clearly indicates that for any additional year of student study experience, there would be 1.110 times increase in the nurse tutors' concerns with social student issues during teaching. Moreover, in the Beta Coefficient analysis, it is evident that there is a ( $B= 0.105$ ) positive direction of predictor and dependent variable relationship from the equation. If there is an increase in the student study experience in years, there would be a likely increase of the nurse tutors' concerns with social student issues for learning during teaching.

The performance of the nurse tutors on their sense of student care and social support during teaching both in the classroom and the clinical area was also analysed using the logistic regression model. The probability stepwise criteria of 0.05 were chosen for the entry level in the equation and 0.5 was adopted for the classification cut-off point. This was done to compare the predictor variable of the nurse tutors' work experience and the dependent variable of the nurse tutors' sense of care and social support for student learning both in the classroom and at the clinical area. The result of the logistic regression model, which included the odds ratio was  $OR \leq 1.406$ ;  $CI(0.082 \pm 1.303)$ ;  $p \geq 0.691$ . This clearly indicates that there is a strong association between the predictor variable of the nurse tutors' work experience and the dependent variable of the nurse tutors' sense of care and social support to students during teaching. For each additional year of the nurse tutors' work experience, there would be a likelihood of 1.406 times more for them to have a sense of care and social support for student learning during teaching. There was also ( $B= 0.341$ ) a positive direction of the relationship between the predictor and dependent variables in the Beta Coefficient value from the results (see table 4.23).

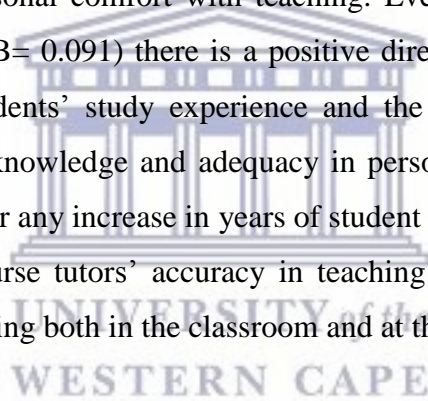


The Beta results clearly support the fact that in Malawi nursing colleges, any increase of the nurse tutors' work experience would result in an increase of their sense of care and social support for student learning during teaching both in the classroom and at the clinical area. However, the student perception is different regarding the sense of care that nurse tutors provide to them. This is because in the logistic regression analysis, there is no association between the predictor variable of the students' study experience and the dependent variable of the nurse tutors' sense of care and student support during teaching both in the classroom and at the clinical area. This was after comparing the two variables using the omnibus test of model coefficient. In this model the probability stepwise criteria of 0.05 was used with 0.5 as a classification cut-off point. The result, which included the odds ratio, was  $OR \leq 0.630; CI(0.210 \pm 1.889); p \geq 0.410$ . This illustrates that there is no association between the predictor variable of the students' study experience and the dependent variable of the nurse tutors' sense of care and student support during teaching both in the classroom and at the clinical area. For each additional year of the students' study experience, there would be a 0.630 times probability of the nurse tutors' having a sense of care and support to student learning during teaching. Even the Beta Coefficient value from the equation showed ( $B = -0.462$ ) a negative direction of the predictor and dependent variable relationship. This implies that for any increase in the years of student study experience, there would be a decrease in the nurse tutors' sense of care and student support during teaching both in the classroom and at the clinical area.



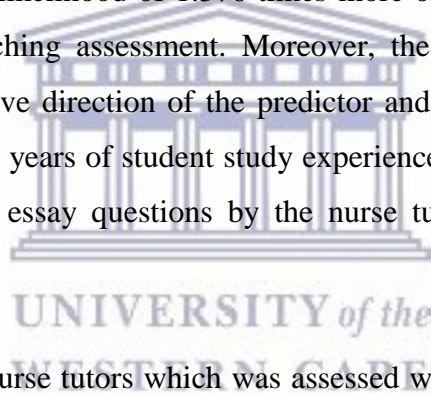
The researcher also analysed the performance of the nurse tutors on accurate teaching knowledge and adequate personal comfort during teaching using the logistic regression model. In the model, the researcher selected the probability stepwise criteria of 0.05 for entry level and 0.5 was adopted as the classification cut-off point in the equation. This was done as the predictor variable compared with the dependent variable of accurate teaching knowledge and adequate personal comfort during teaching. The result of the equation includes the odds ratio of  $OR \leq 0.327; CI(0.082 \pm 1.303); p \geq 0.113$ . This illustrates that there is no association between the predictor variable of the nurse tutors' work experience and the accurate knowledge of teaching and adequate personal comfort during teaching. For each additional year in the nurse tutors' work experience, there would be 0.327 times probability of the nurse tutors' accurate teaching knowledge and adequate personal comfort during teaching students both in the classroom and at the clinical area. Even in the Beta Coefficient results, it clearly shows that ( $B = -1.119$ ) there is a negative direction of the relationship between the predictor

variable of the nurse tutors' work experience and the dependent variable of accurate teaching knowledge and adequate personal comfort with teaching. If there is an increase in the number of years of student study experience, there would also be a likely increase in the nurse tutors' accuracy in teaching knowledge and adequacy in personal comfort with teaching. However, the students revealed different perceptions. Using the same logistic regression model, where a probability stepwise criteria of 0.05 for entry and the 0.5 as a classification cut-off point was used to compare the students' study experience as the predictor variable and the nurse tutors' accurate knowledge in teaching and adequate personal comfort during teaching, the outcome also includes the odds ratio of  $OR \leq 1.095$ ;  $CI (0.427 \pm 2.807)$ ;  $p \geq 0.850$ . This clarifies that there is a strong association between the students' study experience and the nurse tutors' accurate teaching knowledge and adequate personal comfort during teaching. The results from the regression analysis show that for each year added to the students' study experience, there would be a likelihood of 1.095 times more for the nurse tutors to have accurate teaching knowledge and adequate personal comfort with teaching. Even the Beta Coefficient value from the results shows that ( $B = 0.091$ ) there is a positive direction of relationship between the predictor of variable students' study experience and the dependent variable of nurse tutors' accuracy in teaching knowledge and adequacy in personal comfort during teaching. This implies that in Malawi for any increase in years of student study experience, there would also be an increase in the nurse tutors' accuracy in teaching knowledge and adequacy of personal comfort during teaching both in the classroom and at the clinical area.



Performance of nurse tutors on use of essay questions during teaching assessment was also analysed using the logistic regression model (see table 4.24). In the model, the omnibus test of model coefficient was adopted with ENTER as a method of the equation. The probability stepwise criteria of 0.05 for entry were used and 0.5 was also adopted as the classification cut-off point in the equation. The result, which included odds ratio and confidence interval, was  $OR \leq 1.249$ ;  $CI (0.426 \pm 3.666)$ ;  $p \geq 0.685$ . This indicates that there is a strong association between the predictor variable of the nurse tutors' work experience and the dependent variable of use of essay questions during student teaching assessment both in the classroom and at the clinical area. The result implies that for each additional year that is added to the nurse tutors' work experience; there would be a likelihood probability of 1.249 times more for the nurse tutors to use essay questions during student teaching assessment both in the classroom and at the clinical area. Moreover, the Beta Coefficient value of the outcome from the logistic model showed ( $B = 0.223$ ) a positive direction of the relationship between the

predictor variable of nurse tutors' work experience and the use of essay questions during student teaching assessment both in the classroom and at the clinical area. As a result, it is clear that for any increase in years for performance of nurse tutors in Malawi nursing colleges there would also be an increase in the use of essay questions during student teaching assessments. This was confirmed by the students, who also noticed that nurse tutors' performance in using essay questions during teaching assessment was important for nurse tutors. This was revealed from the logistic regression model where omnibus test of model coefficient was used with ENTER method. The probability stepwise criteria were 0.05 at entry and 0.5 as the classification cut-off point. The results of the equation included the Beta Coefficient value and the odds ratio with the confidence interval in the following format:  $OR \leq 1.376; CI(0.599 \pm 3.162); p \geq 0.452$ . This implies that there is a strong association between students' study experience and the use of essay questions during student teaching assessment both in the classroom and at the clinical area. For each additional year of the students' study experience, there would be a likelihood of 1.376 times more of the nurse tutors using essay questions during student teaching assessment. Moreover, the Beta Coefficient value ( $B = 0.319$ ) also showed the positive direction of the predictor and dependent relationship. This means that for any increase in years of student study experience, there would be a likelihood of an increase in the use of essay questions by the nurse tutors during student teaching assessment.



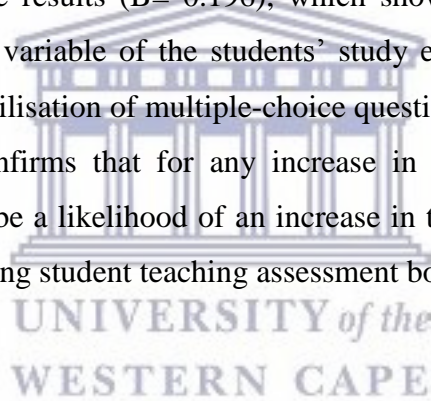
Another performance of the nurse tutors which was assessed was on the use of short answer questions during student teaching assessment. In the logistic regression analysis Hosmer – Lemeshow goodness-of-fit was adopted with omnibus test of model coefficient. The probability for stepwise criteria was 0.05 at entry and 0.1 at removal. This criterion also included 0.5 as the classification cut-off point. The results from the model included the confidence interval, the p-value, odds ratio and the Beta value. The results were  $OR \leq 0.774; CI(0.146 \pm 4.087); p \geq 0.762$ . This means that there is no association between the predictor variable of the nurse tutors' work experience and the use of short answer questions during student teaching assessment both in the classroom and at the clinical area. For each additional year of the nurse tutors' work experience, there would be a likelihood of 0.774 times more of the nurse tutors using short answer questions during student teaching assessment both in the classroom and at the clinical area. Even in the Beta Coefficient value, ( $B = -0.257$ ) there was a negative direction of the relationship between the nurse tutors' work experience and the use of short answer questions during student teaching assessment.

However, there was different perception from the students' data. The students' study experience was found to be strongly associated with the nurse tutors' utilisation of short answer questions during student teaching assessment. This was revealed after comparing the predictor variable of student study experience with the dependent variable of the nurse tutors' utilisation of short answer questions during student teaching assessment. The logistic regression analysis used the omnibus test of model coefficient, where ENTER was the method in the equation. The results from this logistic regression analysis, which included confidence interval and the odds ratio, was  $OR \leq 1.242; CI (0.503 \pm 3.068); p \geq 0.638$ . This means that there is a strong association between students' study experience and the use of short answer questions during student teaching assessment. For each additional year of the students' study experience, there is a likelihood of 1.242 times more of the nurse tutors' utilisation of short answer questions during student teaching assessment both in the classroom and at the clinical area. Moreover, there was a positive direction of the relationship between students' study experience and the use of short answers questions from the Beta Coefficient results ( $B = 0.217$ ). These results illustrates that for any increase in the years of the students' study experience, there will also be an increase in the utilisation of short answer questions by nurse tutors during student teaching assessment.

The use of multiple-choice questions by the nurse tutors was also assessed using the logistic regression model. In the regression analysis omnibus test of model coefficient was chosen to run the equation in SPSS. The probability stepwise criteria of 0.05 was also adopted for the entry point while 0.5 was used for a classification cut-off point. The result of the model equation was in confidence interval, Beta value, ward and odds ratio as follows:  $OR \leq 2.837; CI(0.372 \pm 21.607); p \geq 0.314$ . This suggests that there is a strong association between nurse tutors' work experience and the use of multiple-choice questions during student teaching assessment. For every additional year of the nurse tutors' work experience, there would be a likelihood of 2.837 times more of the nurse tutors using multiple-choice questions during student teaching assessments both in the classroom and at the clinical area. Most importantly, the Beta Coefficient value also pointed in a positive direction ( $B = 1.043$ ) for the relationship between the predictor variable of nurse tutors' work experience and the dependent variable of nurse tutors' utilisation of multiple-choice questions during teaching assessment both in the classroom and at the clinical area. This implies that if there is an increase in the nurse tutors' years of work experience, there is also a likelihood of an increase

in the utilisation of multiple-choice questions by nurse tutors during teaching assessment of students both in the classroom and at the clinical area.

In addition to these findings in the student database, after running the logistic regression analysis, it was also found that there is a strong association between students' study experience and the utilisation of the multiple-choice questions during student teaching assessment. This was done after utilising the omnibus test of model coefficient from the logistic analysis, where the probability stepwise criteria of 0.05 was used for the entry point and 0.5 was used for the classification cut-off point. The outcome of the equation was an odds ratio of  $OR \leq 1.217$ ;  $CI (0.381 \pm 3.886)$ ;  $p \geq 0.741$ . This result illustrates that for each additional year of the students' study experience, there would be a likelihood of 1.217 times more of the nurse tutors' utilisation of multiple-choice questions during student teaching assessment both in the classroom and at the clinical area. These results were also confirmed by the Beta Coefficient value results ( $B = 0.196$ ), which showed the positive direction of relationship for the predictor variable of the students' study experience and the dependent variable of the nurse tutors' utilisation of multiple-choice questions both in the classroom and at the clinical area. This confirms that for any increase in years of the students' study experience, there would also be a likelihood of an increase in the nurse tutors' utilisation of multiple-choice questions during student teaching assessment both in the classroom and at the clinical area.



Nurse tutors pointed out that they use projects during student teaching assessment both in the classroom and at the clinical area. This was revealed after running logistic regression analysis with omnibus test of model coefficient where the probability stepwise criteria was 0.05 as the entry point and 0.5 as the classification cut-off point. ENTER was the method of choice in the regression equation and the main outcome was as follows:  $OR \leq 2.621$ ;  $CI(0.846 \pm 8.120)$ ;  $p \geq 0.095$ . This shows that there is a strong association between the predictor variable of nurse tutors' work experience and the dependent variable of the utilisation of projects during student teaching assessment both in the classroom and at the clinical area. For any additional years in the nurse tutors' work experience, there would be a likelihood of 2.621 times more of the nurse tutors' utilisation of projects during student teaching assessment both in the classroom and at the clinical area. Furthermore, the Beta Coefficient value also shows ( $B = 0.963$ ) that there is a positive direction of the relationship between the nurse tutors' work experience and the nurse tutors' utilisation of projects for

student teaching assessment both in the classroom and at the clinical area. For any increase in number of years of the nurse tutors' work experience, there would also be an increase in the nurse tutors' utilisation of projects during student teaching assessment. The students also acknowledged that there is a strong association between students' study experience and the nurse tutors' utilisation of projects during student teaching assessment both in the classroom and at the clinical area. This was established after logistic regression analysis, where the findings in the odds ratio showed  $OR \leq 1.437; CI(0.629 \pm 3.282); p \geq 0.390$ . The finding of the logistic regression analysis where omnibus test of model coefficient was adopted clearly implies that there is a strong association between the predictor variable of the students' study experience and the dependent variable of the nurse tutors' utilisation of projects during student teaching assessment both in the classroom and at the clinical area. This shows that for each additional year of the students' study experience, there would be a likelihood of 1.437 times more of the nurse tutors' utilisation of projects during student teaching assessment both in the classroom and at the clinical area. Furthermore, the Beta Coefficient value of the logistic regression ( $B = 0.362$ ) also showed a positive direction of the predictor variable of the students' study experience and the dependent variable of the use of projects during student teaching assessment by the nurse tutors.

The performance of the nurse tutors on the use of the OSCE (Observational Structured Clinical Evaluation) during student teaching assessment at the clinical area was also analysed using logistic regression analysis. In the model, the omnibus test of coefficient model was selected with probability stepwise criteria of 0.05 as the entry point and 0.1 as the removal point and 0.5 was selected as the classification cut-off point. This was done to compare the students' study experience and the nurse tutors' utilisation of the OSCE during student teaching assessment in the clinical area. The result, which included the odds ratio, was  $OR \leq 2.042; CI(0.685 \pm 6.089); p \geq 0.200$ . This means that there is a strong association between the nurse tutors' work experience and the utilisation of the OSCE during student teaching assessment at the clinical area. This implies that for each additional year of the nurse tutors' work experience, there would be a likelihood of 2.042 times more for the nurse tutors to utilise the OSCE during the student teaching assessment in the clinical area.

Therefore, in Malawi nursing colleges, the utilisation of the OSCE in the clinical area during student teaching assessment depends on the nurse tutors' work experience. Moreover, in the equation, the Beta Coefficient value was  $B = 0.714$ , which also illustrates that there is a

positive direction in the relationship between the predictor variable of nurse tutors' work experience and the dependent variable of the utilisation of the OSCE during student teaching assessment in the clinical area. Therefore, any increase in the number of years of the nurse tutors' work experience would result in a likelihood increase of the nurse tutors' utilisation of the OSCE during student assessment in the clinical area.

It should also be pointed out that even in the student data, it was found that there is a strong association between the students' study experience and the nurse tutors' utilisation of the OSCE (Observational Structured Clinical Evaluation) during student assessment in the clinical area. This was revealed after using the omnibus test of model coefficient, where the probability stepwise criteria of 0.05 was the entry point and 0.5 was adopted as the classification cut-off point. The results were in confidence interval, the p-value and the odds ratio not forgetting the Beta Coefficient value and Ward (see table 4.24) as follows:  $OR \leq 1.894; CI(0.818 \pm 4.381); p \geq 0.136$ . This implies that there is a strong association between the predictor variable of the students' study experience and the dependent variable of the nurse tutors' utilisation of the OSCE during student teaching assessment in the clinical area. For each additional year of the students' study experience, there would be a likelihood of 1.894 times more of the nurse tutors' utilisation of the OSCE during students' teaching assessment in the clinical area. This implies that for any increase in years of the students' study experience, there would also be an increase in the nurse tutors' utilisation of the OSCE during student teaching assessment in the clinical area. Therefore, in Malawi nursing colleges, the utilisation of the OSCE during student teaching assessment by the nurse tutors depends on the students' study experience.

## 5.5.0 DISCUSSION

This study has found that direct nursing instructions, which are more teacher centred, are the common teaching strategies used by nurse tutors in Malawi. The lecture teaching strategy remains the most common among the direct teaching strategies in nursing. However, most of the nurse tutors combine this teaching strategy with other strategies such as question and answers or a quiz. The combination helps nurse tutors and students to interact both in the classroom and at the clinical area.

Among the many teaching aids at Malawi Nursing Colleges, posters have long been recognized as an effective medium for disseminating information, particularly with respect to evidence-based practice in nursing. This research has revealed that posters are commonly used at nursing colleges in Malawi. However, nurse tutors complained about the appropriateness of their utilisation, which is a challenge at most of the nursing colleges in Malawi. The main problem is the availability of posters, which results nurse tutors seldom utilising them during teaching.

There is now a clear scientific evidence-based rationale on why there is a public outcry in Malawi over nursing competences in hospital services. Grigulis (2010) noted that nurses' competences are questioned by the public as nurses' actions do not meet peoples' expectations. This self-assessment research has found that competences among nurse tutors and students in Malawi are below theoretical and clinical standards. This means that a nursing student graduates with a low competence level, which has a negative impact on health services. The public is quick to recognise and react to this.

In this study, after completing a 40 competence self-assessment item analysis and student-tutor assessment, it is clear that there is low level of nurse tutors' achievement in most competences in nursing education both in the classroom and at the clinical area. Malawi nursing education is currently going through what the United Kingdom went through in 1985 where, after realising the nurses' lack of competence in the clinical area, the British government deployed more foreign nurses, particularly from developing countries, to the clinical areas. This intervention increased the nurse patient ratio, which boosted nurses' competences on patient care (Jones, 2009). However, this is not possible within the nursing profession in Malawi, as it is one of the poorest countries globally.



This study has also revealed that students' and nurse tutors' challenges regarding teaching interactions at Malawi colleges of nursing are a reality. The level of knowledge, attitude and skills impact negatively on the teaching interaction challenges at the nursing colleges. Nurse tutors in Malawi work under immense pressure due to the lack of basic resources during teaching. This exacerbates the interaction challenges. Increased stressful working conditions of the nurse tutors create interaction challenges as the nurse tutors' attitudes tend to negatively influence the interactions among nurse tutors and students.

The performance of nurse tutors at nursing colleges in Malawi leaves much to be desired, particularly in nursing education. The public outcry for better nursing services points to structural problems in the nursing system in Malawi, including nursing education. If the performance of nursing services is not addressed through nursing education, the image of nursing in Malawi will remain negative in the eyes of the public.

Therefore, the development of the Nkhoma Teaching Strategy in Malawi has given a glimmer of hope for the improvement of nursing services in the country. The use of ADDIE model in developing the Nkhoma Teaching strategy has logically and statistically shown that it is an effective method of teaching which nurse tutors and nursing student can adopt without too much effort. There is now clear evidence that the ADDIE model can be used in nursing education.

### **5.5.1 UTILISATION OF TEACHING STRATEGY IN MALAWI**

Although there are many different teaching strategies used by nurse tutors in Malawi, direct teaching strategies such as the lecture method, are commonly used at Malawi Nursing Colleges (44.6%(55) n=129). Saskatchewan (2009) pointed out that if the presenter of a lecture teaching strategy is knowledgeable, perceptive, engaging, and motivating, then the lecture can stimulate reflection, challenge the imagination, and encourage curiosity and a sense of inquiry. Criteria for the selection of the lecture method include the types of experiences nurse tutors and students are afforded and the types of learning outcomes that is expected. Because the lecture is teacher-centred and student activity is mainly passive, the attention span of students is improved by combining the lecture with other teaching strategies. However, at Malawi nursing colleges, given that the learners are adults, it is important for nurse tutors to

be cautious in the utilisation of the lecture method as adult students could be sensitive to the learning process. This study has cemented what Gaberson (2009) pointed out, namely that in USA, almost 80% of all U.S. college classrooms in the late 1970s reported using some form of the lecture method to teach students (Cashin, 1990). Although the usefulness of other teaching strategies is being widely examined today, the lecture remains an important way to communicate information in USA (Johnson, 2009). Gaberson (2009) added that where the lecture-teaching strategy is used in conjunction with other active learning teaching strategies, the traditional lecture can be an effective way to achieve instructional goal. It is interesting to note that this study found that there is no association between nurse tutors' work experience and the utilisation of the lecture teaching strategy. This means that the number of years that the nurse tutors have been working does not influence the utilisation of the lecture method.

The other direct teaching strategy of explicit teaching and guiding and sharing is not preferred among nurse tutors at Malawi nursing colleges. This is because students and nurse tutors are afraid to use them as they are mostly teacher centred.

The use of demonstration as a teaching strategy in nursing education is crucial as the teaching process is a dual process that involves classroom and clinical teaching. This study has found that nurse tutors do make use of demonstrations effectively both in the classroom and at the clinical area. This is because 41.1% (53)n=129 of the students strongly agreed that their tutors use the demonstration strategy during teaching both in the classroom and at the clinical area. The tutors (65% (53)n=82) agreed that the use of demonstration is a common teaching method for them. This is in line with Sowan (2014), who discovered that the experience of 102 first-year undergraduate nursing students at a school of nursing in Jordan were able to understand demonstrations. A virtual course with streaming videos was designed to demonstrate medication administration fundamental skills. The videos recorded the ideal lab demonstration of the skills, and real-world practice performed by registered nurses for patients in a hospital setting. After completion of the course, students completed a 30-item satisfaction questionnaire.

Although Role-play has a 54% on utilisation among the nurse tutors it is one of the best interactive teaching instructions and has been recommended in most studies in nursing. This approach has the potential to enhance the capacity of at-risk students to process complex information, to nurture their development as critical thinkers, and to improve nursing

students' overall academic performance. Miller (2001) added that role-play increases student knowledge acquisition, particularly in the classroom situation. This interactive teaching strategy enhances nursing students' motivation to learning. It is important to create student motivation at an early stage in the learning process in nursing education so that when the students start clinical practice, they can perform at high standard level. It is, therefore, encouraging that the analysis of role-play teaching strategy utilisation has shown a high statistical significance with nurse tutors' work experience. The more years that nurse tutors make use of this strategy, the more accurate their utilisation of it. However, when used in combination with other teaching strategies, role-play has been shown to uplift the quality of the presentations and the delivery by the nursing tutors in both the classroom situation and the clinical area.

It is also very encouraging to note that nurse tutors in Malawi mostly use the discussion method as it is an interactive teaching strategy that promotes the student-tutor relationship and communication. Both the nursing students and the nurse tutors in Malawi agreed that the use of discussion as a teaching strategy is influential in their teaching and learning processes. Understanding of medical conditions and diseases requires a more active learning process. Without an active learning process, the acquisition of most of the medical jargon can be limited. Masoomi (2012) concurs that medical education requires student collective group discussions, which enhance self-awareness and reflection. Therefore, the nurse tutor's experience helps to influence the qualitative utilisation of the group discussion. However, combining group discussion with other teaching strategy like question and answer has also been proved to be beneficial under the Best Evidence Medical Education (BEME). Even Buckerly (2010) pointed out the use of combined teaching strategies promoted portfolio utilisation in UK.

Nurse tutors in Malawi have shown that they often make use of indirect teaching strategies such as case study teaching. There has also been a binary logistic regression statistical association in both the nurse tutors' work experience and the student study experience. It is a true reflection of the utilisation of case study that it depends on the nurse tutors' work experience and the students' study experience. It is not expected that a novice student would make use of this teaching strategy, but those students with more learning experience in nursing do use the strategy. Khandewal (2012) noted that case study as a teaching strategy has an influence on student learning in emergency medicine for third year students. This is in

in line with what has been found in this study, namely that experienced nurse tutors encouraged second and third year students at Malawi nursing colleges to make use of case study teaching strategies in the clinical area. However, the use of other teaching strategies such as problem solving and concept mapping appear to be intimidating to nurse tutors at the nursing colleges. These teaching strategies are commonly used at a high level of learning particularly at universities, where decision-making and concept analysis is common.

There is poor utilisation of the use of independent studies as data shows that in Malawi, nurse tutors do not often use this type of teaching strategy. Students at Malawi Nursing colleges do not use essay type teaching and learning strategy these days. Nonetheless, some nurse tutors occasionally allow students to use the essay-teaching strategy during examinations only through clinical case study writing. This teaching strategy is only used for second and third year students. In their first year, students cannot grasp the essence of using the essay teaching strategy as critical professional thinking has not yet developed. According to Maunye (2009), students cannot use essays in the early years of nursing as they cannot identify and solve problems using critical and creative thinking. However, with ongoing motivation, they gradually start to use essays in assessments.

There are also very few teaching strategies that are used by the nurse tutors on the experiential learning strategies. Field trips, narrative and storytelling have been combined with other teaching strategies by nurse tutors in Malawi. These teaching strategies cannot be used alone when teaching as they lack many of the attributes for thorough and effective teaching and learning. For example, storytelling is utilised during the lecture teaching strategy in nursing. There is always a clarification of the information from nurse tutors during the use of discussion, lecture or demonstration teaching strategy. Although there are many teaching strategies under experiential learning, only a few are utilised in nursing education one of which is the field trip. However, the results show that the utilisation of the field trip as a teaching strategy is not very common at Malawi nursing colleges. The field trip is also known as community fieldwork in nursing education in Malawi as the nurse tutors and students do not regularly visit the community unless it is time for community course. This mostly occurs during a student's second year at the college. Therefore, although there was no statistical association of the odds ratio in the regression model, there was a strong statistical p-value of  $0.004 < p < 0.05$ . This was a true reflection of the significance of the field trip teaching strategy in nursing education in Malawi nursing colleges. Nurse tutors use this

method when they want their nursing students to learn about community-oriented health conditions such as industrial hygiene, community sanitation and school health. This strategy exposes students to community work such as occupational health and school health. However, the lack of funding of the colleges has brought the community trip to a standstill as it impacts negatively on transportation of the students and accommodation.

Another teaching strategy type, namely instructional skills, is commonly used in nursing education in Malawi. Teaching strategies like demonstration and explanations are most common. However, there is still a problem as most nurse tutors do not use these teaching strategies as a standalone, but in combination with other teaching strategies. Liou (2013) in his article entitled: Innovative strategies for teaching nursing research; pointed out that teaching strategies must help students recognize the relevance of education in providing excellent patient care in clinical and community settings. Therefore, the use of demonstration as a teaching strategy is crucial in nursing education. This is indeed most significant among nurse tutors in Malawi as 63.4% emphasized that they use the demonstration method as a teaching strategy. However, 80% indicated that they combine demonstration with other teaching strategies. Combining of teaching strategies is essential to bring about the desired learning performance of students (Li-Ling Hsu, 2014). Without combining teaching strategies such as demonstration, students may not easily grasp the content. It is important to note that in the nursing profession, because it is mostly skills based, there is no way nurse tutors can teach students to acquire knowledge without a demonstration. Therefore, students are taken to the clinical area where several skills are demonstrated. Without demonstrating the skills, students would not be able to perform to expected standards, which they have to accomplish by the end of their placement. This means that in reality, nurse tutors must teach by demonstration each of the skills that are required for a particular clinical placement. Therefore, use of the demonstration is common among nurses because the profession is skill based. Students need to practice skills in different clinical areas. However, the nurse tutors face various challenges with demonstration due to the large number of students and a lack of resources. If there were enough resources and more nurse tutors, then demonstration as a teaching strategy for student would be one of the most effective teaching strategies in nursing.

What this study has noted is that a situation determines the teaching strategy that a nurse tutor chooses. For example, it has been found that nurse tutors do not use lecture or role-play in the

ward where the nurse tutors expect students to acquire skills. Sometimes it is not really the situation, but the lack of time allocated to a topic during teaching as discussions take more time than lecturing. The type of topic; contents of the topic and its time needs have been identified by the nurse tutors as affecting their choice of strategy. It has been noted that the volume of content and level of learners, especially first year students, makes it difficult to use the role-play method due to their lack of knowledge. If role-play is used, these students cannot conceive what is expected of them as their critical thinking skills have not yet been developed in the profession. Therefore, using creative approaches in nursing and midwifery education is an important consideration in the development and implementation of effective student-centred learning strategies for new nursing students in the profession. The need for educators to be responsive to the differing learning styles of students is a fundamental principle in adult learning strategies. In order to be responsive, educators need to be flexible, adaptive and creative in identifying ways of engaging with students and creating a learning environment that accommodates all learning styles (McCormack, Brendan 2014).

This suggests that choosing a teaching strategy largely depends on the individual lecturer who is going to teach the topic to the students. Although the teaching strategies are stipulated in the curriculum, nurse tutors have the mandate to choose their teaching strategies in line with the topics, content and the type of students. For example, one student in a focus group pointed out the following: *“Sometimes is the resources that make you choose the particular teaching strategy to use during out presentations in class. For example, lecture method - they need a lot of resources so in situations where one does have enough resources they would choose just to stand in front of the students to talk to them and go.”*

Another teaching strategy under instructional skills is explanation. This teaching strategy cannot be used in isolation during teaching as there is always the need to combine the strategy with others such as demonstration and discussion. The ability of nurse tutors to use teaching strategies effectively in the classroom has been found to be limited. This is not only due to the lack of resources, but also to the level of knowledge among the nurse tutors. Teaching strategy is delivered efficiently when the resources are available. Nurse tutors in Malawi struggle as they have to make do with limited resources (Grigulis, 2010). This is compounded by limited funding of the colleges. For example, at Nkhoma nursing College there were only two working LCD projectors for three classes of first, second and third year nursing students, while classes are supposed to be conducted for 8 hours a day. This affected

some nurse tutors who were than compelled to use teaching strategies such as lecturing and the chalkboard. Under such condition, nurse tutors' facilitation of the teaching process is limited.

Varying of the teaching strategy utilisation is seen as an important element for reducing boredom. If a nurse tutor uses one teaching strategy all the time, students may begin to identify the tutor with the teaching strategy. The student then becomes bored with that strategy. However, when nurse tutors employ different strategies such as concept mapping and role-play, the students learn and they are ready for the lesson in class. Therefore, as nurse tutors strive to become tutors or lecturers, they need to choose innovative teaching methods, not just the lecture method, and have a teaching strategy that is innovative. *“Thus, concept mapping is simple for some nurse tutors, as it was for me when I was teaching as I thought students would be able to understand issues more clearly. That is what prompted me to use it and I understood it in class, not in class but during my readings, so I wanted to use it. Students were attracted to it.”*

This indicates that students become active in class if the nurse tutors use innovative teaching strategies. Varying the teaching strategy reduces boredom of the students in class.

### **5.5.2 CHALLENGES RELATED TO UTILISATION OF TEACHING AIDS**

The utilisation of teaching aids at Malawi nursing colleges has been a challenge for nurse tutors due to poor funding. The use of posters, figurative models, modules, the internet, videos, PowerPoint projector, workbooks, chalk and green board is very important to nurse tutors in Malawi. Earlene (2006) noted that technology is impacting the learning for all nursing students. Indeed, the nursing students in this century are mostly technologically savvy young adults. While many publications identify the use of technology in the educational environment and focus on bridging the “theory to practice” gap, there are still many challenges in different professions, including nursing.

Posters have long been recognized as an effective medium for disseminating information, particularly with respect to evidence-based practice in nursing. This research has revealed that posters are commonly used at nursing colleges in Malawi. Nurse tutors, however, complain of the lack of effective utilisation of posters, which is a challenge in most of the nursing colleges. The main problem is the availability of posters, which leads the nurse tutors

not making use of this important teaching aid during teaching. In Cincinnati, Ohio nursing colleges, posters are now being used for staff education at the clinical level in the surgical, medical, cardiac, and open-heart intensive care units. The benefits are more widespread than originally imagined (Maiocco Gina, 2002). If the posters are in good condition, they aid quality improvement and needs assessment of students. Posters can also help to identify and develop topics to present both in the classroom and at the clinical area. This process also helped overcome the rigidity in thinking that posters are only for academia. In addition, the opportunity fits well with the hospital's clinical ladder programme, because the participating nurses could earn credit (Maiocco Gina, 2002). Today many posters are designed with Microsoft PowerPoint templates, but tutors can also lay out the sections of the poster on a large piece of poster board before finalizing it.

The use of whiteboards and markers is also very common among nursing tutors at Malawi nursing colleges although there has been a difference of opinion between students and nurse tutors on this teaching aid. Students clearly pointed out that nurse tutors do not commonly use the whiteboard and markers while nurse tutors have stressed that they usually teach using the whiteboard and markers. Whiteboard and markers technology enables students to write classroom notes, retrieve the notes electronically over the internet and then have them synchronized with video and audio recordings of the professor's class presentation. This system is uploaded to the Course Management System, Blackboard. As a new learning system, it enhanced students' achievement, which is in line with the mission of the nursing colleges (Earlene, 2006). Some words in nursing are jargon that students cannot easily understand unless they are clearly spelled on the whiteboard. Furthermore, some students are slow learners and require notes to be written on the whiteboard for them to copy and read in their own time in order to prepare for examinations. If students do not make proper notes during teaching, there is a greater chance that they will during examinations.

The use of projectors is becoming outdated in teaching worldwide even in Malawi as a developing country with very limited resources in nursing education. Overhead projectors have been replaced by the use of the PowerPoint projector. This has seen hand written notes now being written on the computer where PowerPoint presentations are clearer than hand written notes on transparencies. Nonetheless, the teaching aid remains the same where information to be taught is displayed by the projector. The PowerPoint projector is connected to the computer and makes use of Liquid Crystal Display (LCD). According to Lee (2010),



Liquid Crystal Display (LCD) monitors are linked to the recording system in classes. These LCD monitors serve to broadcast live or recorded notes and images for illustration and subsequent debriefing, lecturing or discussion. The major challenge lies in the connection and operation of the system. These systems rely on the availability of electrical power. If there is no electrical power, the nurse teacher cannot operate it.

Furthermore, the use of PowerPoint presentations at Malawi nursing colleges is common among nurse tutors. PowerPoint utilisation works with an LCD machine. The main challenge facing nurse tutors is often how to operate the LCD machine and the computer. Malawi nursing colleges have only 3-5 LCD machines for 15-20 nurse tutors to use in a class where not less than 150 students are learning. It becomes an administrative problem to obtain more of these teaching aids. This would enable many more nurse tutors to utilise these systems and become acquainted with their operational system (Maunye, 2009). The primary roles that nurse tutors perform as a teacher is to design and implement instruction. Teachers at every level prepare plans that aid in the organization and delivery of their daily lessons. These plans vary widely in style and degree of specificity in the use of PowerPoint presentations. Some instructors prefer to construct elaborate detailed and impeccably typed outlines in PowerPoint presentations, while others rely on the briefest of notes as this enables them to present more clearly. Therefore, mastering the use of LCD and computer needs to coincide with how to create a PowerPoint presentation on the computer. If the PowerPoint presentation has been created properly and the words are clear, it enhances the clarity of the presentation to students.

The use of figurative models or manikins at Malawi nursing colleges is viewed as a challenge. Basically, human simulation aims to imitate reality while offering a skills-based clinical experience in a safe and secure environment (Cant & Cooper, 2010). This format of using the manikins is a difficult process in Malawi. The challenge is not only the availability of adequate manikins for a large class, but also the technical utilisation of the manikins by nurse tutors. It should be noted that the availability of manikins is donor related at Malawi nursing colleges as they are very expensive and are only produced outside the country. Not many colleges have more than 5 working manikins and other anatomical models. This makes it difficult for nurse tutors to conduct a demonstration session to large class of students as one topic would take longer due to student group division.

The use of research articles when teaching is gaining ground in Malawi nursing colleges due to the availability of the internet. However, many nurse tutors and students disagreed that they use this type of teaching aid. This is because in the libraries at most colleges, research articles or journals are not up to date. Yava (2009) conducted a study on how nurses in Turkey perceive the barriers to and facilitators of research utilisation. However, this study lacked validity and reliability, and barriers and facilitators of research utilisation were not reported in rank order. No further studies of the use of evidence-based practice in nursing have been attempted in Turkey. At Malawi nursing colleges, there is no orientation on how to use research articles to obtain the latest information on a particular subject.

It is evident that nurse tutors mostly use workbook or teaching modules when teaching although students did not agree. The discrepancy arises because of the availability of the teaching modules where most students finish learning the module without owing the workbook. While the aim of the teaching module is to promote the presence of self-directed learning among students in nursing, the availability of the teaching modules presents a challenge. O'Shea (2003) pointed out that with the complexity and degree of change in practice today, nurses should be encouraged to take responsibility for their own learning. Even in America, studies have been conducted to explore the amount of time nurses spend on self-directed learning using modules. When the students were asked to recall their learning experiences, the differences in memory recall were high. However, despite fewer teaching modules in Malawi, students still find it difficult to recall what they have learnt or covered in the module.

The use of modules is becoming a common method among nurse tutors for facilitating learning at many nursing colleges in Malawi. Different courses have been designed into a modular format to facilitate the teaching of students by nurse tutors. In this research, it has emerged that use of modules at Malawi nursing college is very common. Nurse tutors use modules for every course. These modules are approved by the nurses' council in the country. It is in fact the council which had collectively compiled the syllabus in a modular format so that all the nursing colleges use the same module and content when teaching nursing. Learning modules are designed to help nurses understand college practice standards and other related documents. Each self-study module contains an introduction, learning objectives, content chapters, additional resources and a quiz. According to the College of Nurses in Ontario (2015), nurses use the quiz score to help determine a specific learning objective in

the module. Nurses are invited to use these modules at their convenience, but they should note that viewing the module and responding to the questions is not considered a substitute for reading the practice standard or document. Participation in learning modules is self-directed and anonymous. The college does not keep records of participation in the modules or collect individual quiz scores.

The use of the computer laboratory at Malawi nursing colleges is still in its infancy. Computer laboratories assist students to obtain current information concerning nursing globally, regionally and locally. Many colleges do not have a computer laboratory where they can obtain information from the internet or learn how to type assignments. This impacts negatively on the acquisition on computer and internet skills by students. Millward and Jeffries (2001) noted that there were no significant baseline differences between the computer and nursing lecture groups when comparing education or computer skills. Results indicated significant differences between the two groups in cognitive gains and nursing student satisfaction, with the computer group demonstrating higher student satisfaction and more cognitive gains than the lecture group. The groups were similar in their ability to demonstrate the skill correctly. This is not the case in the third world developing countries such as Malawi as this study's student odds ratio on computer utilisation was 0.441. Although it is imperative to compare USA students and Malawi students, the unavailability of computers reduces the quality of the nursing graduates at the same level as the USA student.

Although use of chalk is considered old fashion in some countries, in Malawi, it is still used in the classroom for student learning at the colleges. The challenge of nursing students using chalk is that it makes dust on their white uniforms. White chalk is not too much of a concern, but coloured chalk tends to stain the traditional white clothing worn by students and nurse tutors. Nonetheless, chalk is a common teaching aid for nurse tutors in Malawi. Many of the nurse tutors and students agreed that chalk causes discoloration of their uniforms. With the complexity and degree of change in nursing practice today, nurses should be encouraged to take responsibility for their own learning. However, even when adult nursing students are willing to assume responsibility for their own learning, they will have different affinities for certain kinds of learning including the use of chalk in class while wearing their traditional white uniform.

The use of the library as a teaching and learning aid has been most useful at Malawi nursing colleges. The colleges view a library as a basic need for students to obtain books that will improve their knowledge. However, in most libraries, there are insufficient books and many of them are outdated. Students are advised to use books that are not more than 10 years old. The use of outdated books from the library means that tutors and students fall behind on nursing issues and fail to get new information and best management practices on new emerging conditions such as HIV and AIDS, Ebola and SARS. Students are supposed to know the current literature of these conditions so that when they are deployed to health institutions, they are able to treat such conditions. Walters (2013) points out that building a strong e-book collection is difficult at libraries in developing countries as many academic titles are not available in any e-book format. This has been a major factor in librarians' reluctance to commit to e-book collections. Scholarly titles account for just one-tenth of all e-books.

The use of video conferencing is still a dream at all nursing colleges in Malawi. Video conferencing is one of the current distance teaching technology utilised by developed countries, and some developing countries where the economy is stable. Malawi nursing colleges' do not even have TV screens for students to view learning video compact disks. Video conferencing is a technological innovation in nurse education that could be extended to many health and social care courses that require students to link theory to practice and where service user involvement and/or the expertise of clinical practitioners is essential. In Nottingham nursing college, students spend 50% of the required 37.5 hours per week in the classroom and in self-directed study and 50% in practice placements (Rush et al., 2013). They are supported and assessed in practice placements by mentors who are qualified in their area of work as required by the Nursing and Midwifery Council. Since student nurses come from a variety of backgrounds, with differing levels of general education and different levels of health care experience, their preferred learning styles and use of teaching and learning aids are likely to differ.

The use of patients as a teaching aid has been statistically noted to be very common among nurse tutors and students at Malawi nursing colleges. This clearly demonstrates that nurse tutors use the patients as a teaching aid, particularly in the clinical area. The reality of such teaching and the interaction with patients improves students' confidence early in their profession. In Malawi, students start working with patients during their first year by doing

basic nursing care such as bed baths and making beds. In this process, students gain confidence on procedures and master the skills early on. It is important to note that nurse tutors sometimes bring real patients such as those with mild anaemia to the classroom in order to demonstrate the signs and symptoms to students at first hand. This lends credit to the learning process as it acts as a motivation to students and their internalization of the information is very high. While simulation is becoming an option to modern nursing, its use of as teaching aids cannot have a reality replacement.



### 5.5.3 NURSE TUTORS' COMPETENCES IN TEACHING

There is now clear scientific evidence based on the rationale of why the public in Malawi are in an uproar about hospital services. Grigulis (2010) noted that nurses' competence is questioned by the public as nurses' actions are perceived as not meeting people's expectations. This research has found that competences among nurse tutors and students in Malawi are below theoretical and clinical standards. This means that a nursing student ends up graduating at a very low competence level, thereby contributing to the existing poor health services which is obvious to the public. The competencies adopted in this thesis assume that a nurse educator is a skilled health-care provider who meets professional nursing standards both in the classroom and at the clinical area and has graduate nursing preparation as an advanced generalist or specialist in a specific field of nursing (SREB, 2002). The nurse educator competencies are important because their ability - or lack of ability - can affect the accomplishments of the faculty and students in nursing.

In this study, after doing a 40 competence self-assessment item analysis and student-tutor assessment on the nurse tutors, it is clear that there is a reduced level of nurse tutors' achievement in most competences in nursing education both in the classroom and at the clinical area. Malawi nursing education is currently going through what the United Kingdom went through in 1985 where, after realising the nurses' lack of competence in the clinical area, the British government allowed and deployed more foreign nurses, particularly from developing countries to work in the clinical area. This model increased the nurse patient ratio, which boosted the nurses' competences on patient care (Jones, 2009). However, this cannot be the case with nursing in Malawi as it is one of the poorest countries globally and is unable to employ foreign nurse expatriates who would be role models in the process of patient care.

It is clear that the currently, nurse tutors in Malawi are failing to provide students both in the classroom and at the clinical area with adequate and quality knowledge and skills that the students require to become competent practitioners in the complex reality of our current health care system. If nurse tutors spend inadequate time with nursing students in the classroom and at the clinical area as student data has shown (45.2% (52) n=129), it implies that students' learning is adversely affected. The teaching role of the nurse tutors is not done in accordance with the recommended nurses' council hours. Most of the time students learn without the supervision of a nurse tutor. Moreover, student nurses at the clinical area are also

supervised by incompetent nurses and support staff who provide professional nursing activities in the clinical area. The lack of nursing capabilities is easily observed by non-professionals such as patients or guardians. Nevertheless, nurse tutors image in Malawi is well below the acceptable level in the eyes of the public. According to SREB (2002), Standards of practice that guide nursing care influence the nursing techniques of care that are reflected in a core set of competencies in nursing education. Nurse tutors must master and maintain these competencies throughout their careers. However, in Malawi, it has been found that nurse tutors have some limitations that affect their capabilities to provide adequate health care.

The competence of providing notes to students as part of documentation when teaching at Malawi nursing colleges tends to be most effective due to the use of teaching modules both in the classroom and at the clinical area. Nurse tutors create their lesson in relation to the module direction and content requirements as stipulated in the module. These notes are given to the students during teaching as a hand-out which they copy during their free periods. The process of giving notes to students assists them to document the information both in the classroom and at the clinical area. In the clinical area, students are supposed to master documentation on all treatments administered to patients. Documentation encourages nurses to assess patient progress and determine which interventions are effective and which are ineffective, as well as identifying and documenting changes to the care plan as required (CRNBC, 2013). Documentation can be a valuable source of data for making decisions about funding and resource management as well as facilitating nursing research, all of which have the potential to improve the quality of nursing practice and patient care. Individual nurse tutors can use outcome information or information from a critical incident to reflect on their practice and make the necessary changes based on evidence. To meet professional and legal standards in nursing education, documentation is a valuable method for demonstrating that, within the nurse-patient relationship, the nurse has applied his or her knowledge, skills and judgment according to professional standards. The nurse's documentation may be used as evidence in legal proceedings such as lawsuits, coroners' inquests, and disciplinary hearings through professional regulatory bodies. In a court of law, the patient's health record serves as the legal record of the care or service provided. Nursing care and the documentation of that care is measured according to the standard of a reasonable and prudent nurse with similar education and experience in a similar situation.

The use of good examples when teaching in nursing has been found to be limited among nurse tutors at Malawi nursing colleges. Jones (2010) pointed out that the use of good examples during teaching is related to nurse tutors' experience and advanced level of professional preparation. Most nurse tutors at Malawi nursing colleges have a degree certificate in general nursing. This means that students do not receive adequate training relating to the curriculum development and implementation. It is only those nurse tutors with post graduate degrees who place emphasis on curriculum development and implementation of a course or module. This suggests that tutors who are failing to articulate good examples when teaching did not have adequate teaching preparation. According to the Nurses Council of Malawi (2009), nurse tutors are given a short course on teaching strategies, but for the course to be effectively taught and functional, it requires sufficient funding. This complicates the efforts of the nursing colleges to solve the problem of poor teaching by having no good or related examples during teaching.

The teaching assessment competence of awarding marks is a crucial capability that nurse tutors must acquire in order to promote learning. It has been found that nurse tutors in Malawi do not award marks accordingly when assessing students both in the classroom and at the clinical area. Salminen (2009) noted that student evaluation must involve not only classroom teaching performance but also the amount of feedback that students receive from nurse tutors about theoretical and clinical learning skills. However, for the nurse tutors to evaluate the students both in the classroom and the clinical area, they must also be knowledgeable on what to evaluate. This clearly indicates that nurse tutors in Malawi have limited knowledge on what they are supposed to evaluate students for. If the nurse tutor merely awards marks without using the marking guide, the chances of awarding marks incorrectly are high. This is obvious to students as they share and discuss the results of their classroom assessments. The most notable outcome of poor assessment is that student mistrust their nurse tutors. If the mismanagement of examinations is severe, the chances of the tutor being reprimanded by administration are high.

Another important competence that was assessed is on the evaluation of the module after class. Nurse tutors in Malawi do not evaluate the module after teaching both in the classroom and at the clinical area as the statistics showed that there was no association between module evaluation and the nurse tutors' work experience. Module evaluation is a most important element in nursing. According to a 2015 report at the Kings College in London, at the end of



semesters, students are asked to complete module evaluation forms providing feedback on all aspects of the quality of teaching they have experienced and on the content of the module itself. On all the modules that were taught by more than one nurse tutor, students are asked to complete a circus module teaching evaluation form that focused on all the nurse tutors involved. It should be pointed out that module evaluation forms for one module confirmed that students enjoyed preparing presentations and found the informal feedback they received from tutors and other students most useful. Students may suggest that presentations be formally assessed as part of the summative assessment of the module. If there is a problem, after careful consideration, the module convener changes the presentation to be formally assessed, a development which is well received by students in the following academic year.

Another important competence that was assessed is providing sufficient prescribed and required books to students. Nurse tutors use nursing books as specified in the curriculum and syllabus of the students. Students are supposed to be given a module outline or the whole module in order to peruse them in the library. Nurse tutors need to arrange with library staff before the semester starts to make sure that sufficient prescribed books are on the bookshelves in the library for students. However, at times the prescribed books may not be readily available in the library. It is the duty of nurse tutors to liaise with the librarian on the need for buying prescribed books for specific modules. Libraries also have interlinks with other libraries, therefore, students can arrange to borrow books from another library, particularly books of general education that other libraries may have. If the prescribed books are not provided to students, they may not get sufficient information on a particular topic.

The competence of promoting listening and communication skills among nurse tutors among students has been found to be below par (32.6%(42)n=129). Students do not receive sufficient communication from the nurse tutors. When there is good communication, learning is facilitated. Good communication promotes harmonious relationships between nurse tutors and students. Ammentorp (2007) concurs that despite the growing awareness of the importance of good communication in nursing education, considerable problems such as misinformation, lack of information and lack of responsiveness are still among those most often reported in surveys regarding students' satisfaction. Insufficient communication between patients and health professionals is one of the most significant factors for patients deciding to file a complaint; where the need for improving doctors' and nurses' communication skills is highlighted. If the level of communication between nurse tutors is

limited, students then fail to communicate professional competences to patients which could lead to poor nursing care.

Despite the experience of the nurse tutors in teaching nursing, there is still a poor competence of punctuality. This is a most crucial capability in nursing education. Nurse tutors are supposed to be role models in maintaining punctuality both in the classroom and at the clinical area. This assists in adhering to the time frames on all teaching activities. If nurse tutors and students are not punctual both in the classroom and at the clinical area, activities fall behind and it becomes difficult to meet set deadlines. There are many factors that lead to poor punctuality by the nurse tutors both in the classroom and at the clinical area. Some of the causes for poor punctuality in Malawi nursing colleges include: distance from the residential area, transportation problems, other responsibilities, laziness and irresponsibility of the nurse tutors. It should be noted that the lack of competence in respect of punctuality among nurse tutors is a common problem in nursing education. According to Joyceann (2011), nurse tutors are important role models for students, especially concerning the professional behaviour of punctuality. The student should view their teacher as a mentor who does not expect more from the student than they themselves would do. Being punctual involves commitment and planning of the nurse tutors. If the nurse tutors are not punctual, students are likely to imitate such behaviour both in the classroom and the clinical area.

Nurse tutors are also supposed to be problem solvers for students. However, students do not perceive this as being the case. This means that nurse tutors do not articulate teaching content in line with students' expectations. Problem-solving is not always followed by problem resolution. This may be the result of the quality of the problem-solving process or the quality of the problem (Makhathini, 2002). Some problems in nursing education require evidence-based assessment in the form of research to articulate the exact solution. Other smaller problems merely require an explanation of the causal effect or influencing factor. Therefore, nurse tutors need to acquire these skills in order to solve nursing students' problems both in the classroom and at the clinical area. If nurse tutors do not solve students' problems, students may perceive nurse tutors as unintelligent and incapable of teaching them both in the classroom and at the clinical area. Furthermore, Aliakbari et al. (2015) point out that cognitive psychologists, unlike the behaviourists, believe that learning is an internal process objective which focuses on thinking, understanding, organizing, and consciousness. Fundamentalists

believe that learners should be equipped with the necessary skills of inquiry and problem solving in order to learn through the discovery and process of information.

Another competence of the nurse tutors which was assessed was tolerance and understanding of students. Students expect nurse tutors to be tolerant and understanding during teaching both in the classroom and at the clinical area. This study suggests that students perceived to be most tolerant and understanding. It is important for the students to appreciate the tolerance and understanding of the nurse tutors. Brink (1989) points out that nurse tutors who allow and trust their students to assume responsibility for their own learning would negate this trust if they constantly checked up on them to ensure that they are studying the prescribed topic or assignment. If the nurse tutors do not trust and follow up on the students' work both in the classroom and at the clinical area, there is a likelihood of creating misunderstanding between the nurse tutors and the students. This misunderstanding may affect the learning process, thereby increasing the failure rate of the students both in the classroom and at the clinical area.

It is important to note that poor economy of a developing country such as Malawi results in reduced funding from the government to the nursing colleges. This has a negative impact on teaching resources. Therefore, nurse tutors need to be vigilant on mobilising of learning and teaching resources. From this research, it has been noted that the situation is distressing as nurse tutors do not manage to mobilise the teaching and learning resources for the students in Malawi nursing colleges. Nurse tutors do not have resources to mobilise for teaching of students. . Resource mobilization is an important competence of the nurse tutors during teaching as most teaching procedures require many resource. For example, if a nurse tutor wants to teach a basic nursing procedure such as the bed bath, there must be source of water, pail/basin, linen, soap, screen, etc. If a nurse tutor is not able to mobilise these resources in advance, particularly before the real procedural demonstration to students, there is always the likelihood of poor presentation of the procedure where the nurse tutor ends up apologising to students during each step in the procedure.

The element of giving constructive feedback to students was another of the competences which was assessed between the nurse tutors and students. Results indicated that nurse tutors in Malawi nursing colleges do not provide constructive feedback to students during

assessment or examinations. This behaviour reflects the limited capabilities of the nurse tutors in counselling of the students during their learning process.

Another important competence that this research examined is the nurse tutors' competence of encouraging students' active participation. It was revealed that nurse tutors do not encourage students on active participation both in the classroom and at the clinical area during teaching. Nursing is action oriented and students are to actively participate in procedures in order to acquire the necessary skills. If the capability of the nurse tutors is limited, most students will not have an opportunity to acquire these skills. This impact negatively at the clinical area, where students would lack the necessary knowledge on patient care, which could result in unnecessary complications or even the death of a patient. Salminen (2009) also discovered that nurse tutors rated themselves at a low level in encouraging students' active participation on procedures in the clinical area. The only difference with this study is that the assessment has been done not only for the clinical area as it was the case in Turkey, but also in the classroom.

The incompetence of teaching during the entire class period is also common among nurse tutors. Students are supposed to have frequent break periods in order to relax. Nurse tutors in Malawi commonly teach for two to three hours without giving students a break between classes. The shortage of nurse tutors, sometimes there are only two or three at a college, often means that students do not have a rest between 7.30am and 12 noon or between 12 noon and 5pm from Monday to Friday. Such marathon teaching sessions yield poor results as students lose concentration.

#### **5.5.4 NURSE TUTORS' CHALLENGES OF STUDENT INTERACTION**

This study has revealed that challenges of teaching interactions between students and nurse tutors exist at Malawi colleges of nursing. Low levels of knowledge, attitude and skills impact negatively on teaching interaction at the nursing colleges. Nurse tutors in Malawi work under enormous pressure due to a lack of basic resources during teaching. This also compounds the interaction challenges. Increased stressful working conditions of the nurse tutors further contribute to interaction challenges between nurse tutors and students.

The concept of the increase in "rude" behaviour among nurse tutors emanates from two areas: the classroom and clinical culture change, and professional strain. The culture change is seen

in our changing views about behaviours that are not harmful to anyone. Arguably, it is the result of the ongoing and natural evolution of the profession. Nurse tutors' rudeness is the behaviour, which is obviously harmful or deeply disruptive to students during learning (for example, refusing to follow the class schedule, interrupting students while they are answering questions), could be on the rise as the nursing profession is experiencing increased psychological stresses. Most of the time, rudeness becomes reciprocal. Both nurse tutors and students are likely to engage in such unsavoury exchanges. Sources of rudeness in nurse tutors mostly emanate from increased work tension, social stress, peer disapproval, professional incompetence and non-achievement of goals deprivation (Kasson, 2003). The situation could also be exacerbated by the economic hardship experienced by Malawian nurse tutors. However, this is unprofessional and would commonly result in dismissal or the removal of licensures if the administration acted on it.

It has also been found that in some nursing colleges in Malawi, nurse tutors are excessively talkative when teaching. Although literature has focused on the concept of talkativeness as a natural and unique human behaviour characterised by family traits and environmental changes (Kasson, 2003), in nursing it affects the students' learning and creates negative perceptions of the nurse tutors. Excessive talkativeness in the clinical area impacts negatively on patient care. Nurse tutors need to use good experience of interaction during teaching. Koskinen (2002) pointed out that the process of knowledge provision to students should not be accompanied by negative communication skills. Therefore, being talkative during teaching is considered a negative communication skill.

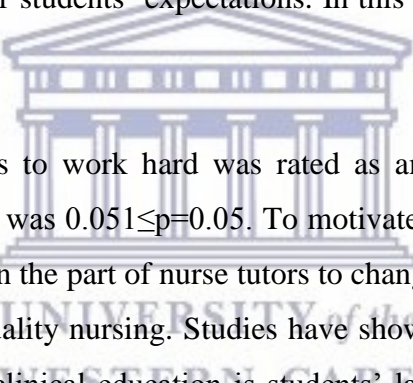
The concept of being cheerful to students as part of interaction has been accepted as a key element for many professionals including nursing education. Nurse tutors should be cheerful not only to patients, but also to students. Ford (2009) pointed out that it is not always the successful performance of a procedure that gives students the impression that a nurse tutor is skilled, but often the caring practices that a nurse shows while performing the technical task. This suggests that a good nurse tutor is not necessarily the one with the best competency or nursing performance, but rather the one who is cheerful towards the students during the teaching process. If the nurse tutor is not cheerful towards students, students do not perceive the outcome as successful teaching despite the tutor's intelligence. This is because cheerfulness is the beginning of effective interaction among students and nurse tutors.

Nurse tutors must also be academically sociable towards students during teaching both in the classroom and at the clinical area. It is important to socialise with the students to a certain degree to ease tension and promote the learning process. Graduates with a liberal social education are praised by employers for their analytical and creative capacities and demonstrate stronger skills in the areas of communication, assessment, cultural sensitivity, resourcefulness, the ability to apply knowledge, and scientific reasoning (Rosseter, 2015). If the nurse tutors are teaching students adequately, students tend to graduate with good social behaviour, which assists in patient care. If the nurse tutors do not engage on a social level with the students adequately, they are perceived as poor role models.

Nurse tutors are supposed to be considerate to students during teaching both in the classroom and at the clinical area. Students respect the nurse tutors if they shows respect towards the students. This study has found that nurse tutors show consideration to students during teaching as the p-value was  $0.034 < p = 0.05$ . Being considerate during teaching means that when the students fail to understand examples or an explanation during teaching, the nurse tutor uses another mechanism to convey the concept both in the classroom and at the clinical area. Another potential role for the nurse tutors in helping students to understand the expectations placed upon them is to provide support in understanding the academic requirements of their student programme and to review the student's academic progress (Thomas, 2006). Students would like the nurse tutors to be considerate in monitoring their progress closely and give proactive feedback on their academic work (Braine & Parnell, 2011; Stephen, O'Connell & Hall, 2008). Students have cited such feedback as a vital resource (Braine & Parnell, 2011). Surprisingly, there is a lack of reference in literature to the review of academic skills as an individual task of nurse tutor. This raises the possibility that although it is often viewed as central to the nurse tutor's role, it is an additional activity. Combining the roles of academic and pastoral support for students has been considered of greater value in nursing education (Elander, 2003). If nurse tutors are not considerate during academic counselling of students, it has the potential to result in poor student tutor interaction that leads to poor performance by the students.

The results show the attribute of nurse tutors' reflection during teaching to be minimal to nurse tutors and to students in nursing in Malawi as the p- value was  $0.251 > p = 0.05$ . It has been found that nurse tutors are not reflective during the teaching process at Malawi nursing colleges. Nurse tutors are supposed to reflect on the content covered or information

disseminated in previous classes and periods so that students can easily recall the material. The basis of all reflection is the willingness to undertake the process and to value it as a means of self-improvement and development in nursing education. Reflection can be difficult or even intimidating as it forces nurse tutors to be honest with themselves and recognise not only their successes, but also identify areas where they need to improve. It forces nurse tutors to take responsibility for their teaching and learning. Being a reflective nurse tutor is like being one's own observer and critic. Therefore, willingness to reflect and develop is an essential mental attitude for the nurse tutor in nursing education, without which the whole process of nurse tutor reflection is pointless (Moon, 2005). Success in nursing reflection, therefore, is not just a matter of luck, it stems from a thorough planning and preparation, knowledge of students, and evaluation of the teaching practice. A nurse tutor experiences satisfaction after a class or clinical teaching session has been effective and efficient based on the students' enjoyment of it. Conversely, nurse tutors feel despondent when a teaching session does not live up to their students' expectations. In this situation, the nursing students do not want to learn.



Motivation of nursing students to work hard was rated as among nurse tutors at Malawi nursing colleges as the p-value was  $0.051 \leq p = 0.05$ . To motivate an adult learner is not a one-day process, it requires effort on the part of nurse tutors to change or influence new behaviour patterns in students towards quality nursing. Studies have shown that, in the clinical setting, the most important barrier to clinical education is students' lack of interest and motivation (Hanift, 2010). Nursing students need ongoing motivation during their studies. Thus, it is important to pay due attention to the concept of motivation both in the classroom and at the clinical area. The environment and human factors are also considered as part of clinical education in nursing. Clinical placements form a major part of nursing education and play an important role in students' perceptions of nursing. Nursing students cite unsatisfactory placement experiences as a reason for leaving the nursing profession. Similarly, failure to recognise students' rights had a negative effect on their motivation. The participants believed that some nurse tutors showed inhuman behaviour towards students and patients. Witnessing such behaviour, together with negative feedback from the patients about the nurse tutors' behaviour, affects clinical learning motivation in the nursing students. Recent reports have highlighted negative patient experiences, which reflect a clear lack of compassionate nursing care. Clinical competency promotes skills and confidence of the nurse tutors to teach effectively. Confidence itself coincides with increased dignity and self-respect in nurse tutors,

enabling them to be appropriate role models for nursing students and motivate them for clinical learning. In contrast, the nurse tutors with low clinical knowledge made a poor impression on the students and, in the opinion of the participants, this had a negative effect on the views of other professional groups in the clinic as well as the community.

The concept of aggression is an extreme interactive behaviour that corresponds with increased tension among nurse tutors and students. Aggression was found to be the root cause of some of the systemic problems that confronted the education of mental health nurses in Australia. Shortcomings in the preparation of undergraduate students of nursing for commencing practice in mental health nursing were described and comments were given on aggressive issues affecting the quality of postgraduate mental health nursing education (Clinton, 2000). This is similar with what is happening in the nursing colleges in Malawi. The only difference is that in Australia, the aggression involves mental health nurses while in Malawi, it involves the general nurse educators. Previously, in Malawi, the nurse council imposed punitive measures on any nurse found to be aggressive towards patients. However, there is no evidence that administrative judgement was passed on any nurse tutors accused of aggressive behaviour towards nursing students.

The ability to give constructive feedback to students among nurse tutors has also been found to create interaction challenges. Constructive feedback on any nursing student's assignment requires good communication skills. If these skills are lacking during feedback meetings with students, it can create tension and dissatisfaction. Luhanga (2010) pointed out that accountability in nursing education must be unquestionable multifaceted. Nurse tutors have a responsibility towards student nurses, while at the same time being contractually accountable to provide assessment feedback to students. Insufficient or no feedback to the student elicits a negative reaction towards the nurse tutor. This can affect both the nurse tutor's reputation and the student's motivation to learn. Teaching in nursing as a profession requires complete honesty among nurse tutors and students. Any dishonesty within the teaching and learning process results in misconduct that is administratively punished resulting in dismissal and removal of licensure. Nurse tutors should always be honest during interaction with students both in the classroom and at the clinical area. Luhanga (2010) found that one third of the preceptors in Canada were dishonest during clinical procedures. The dishonesty included lying, hiding nursing care errors and not admitting to one's own mistakes, which revealed



interactive challenges. The only difference with nurse tutors in Malawi that emerged from this study is that the most common dishonesty has been noted on students' assessments.

It has been noted that nurse tutors in Malawi are not tolerant and understanding during teaching. Nurse tutors may have preconceived ideas of students' behaviour. If a student does badly in a class quiz, he or she can be viewed as being ignorant. Although it is claimed that when nurse tutors and students interact, it is difficult for an outsider to see how ethical issues play out in their physical, and social environment (Epstein, 2012), the outcome of student performance particularly at the clinical area explains more about the challenges of the teaching and learning interaction process. If the nurse tutor is not tolerant towards students, the outcome is that students may transfer such behaviour to patients by not responding adequately to patients' needs during nursing care.

Apart from understanding and tolerance, nurse tutors must also be reflective during teaching. Reflective teaching involves recapping and referring of the material covered in the previous lesson and giving of examples that are consistent with current nursing care. Poor reflective teaching can lead to students failing during examinations. Epstein (2012) found that nurse educators became increasingly concerned by their students' reflection on assignments and their descriptions of their clinical experiences in Ontario Canada. The results of this study show that most nursing students did not express themselves adequately in the given assignment and obtained low marks. The main problem was found to be limited interaction between tutors and students, which resulted in students not reflecting accurately in any given assignment. This is similar to what Malawian nurse tutors are going through both in the classroom and at the clinical area. There is an increasing need for nurse tutors to be clearly reflective during teaching students as they have experience on the materials being taught.

In addition, the nurse tutors are not compassionate towards students' welfare in Malawi nursing colleges. Being compassionate is a professional role not only for nurses but also for nurse tutors. Students are generally under stress during learning. It is the accountability and responsibility of the nurse tutor to reduce students' stress by being respectful during classroom and clinical interactions with the students. If the nurse tutor does not show compassion towards students learning problems during interactions, students are likely to withdraw from the programme. Epstein (2012) concurs that nursing students feel distressed if the nurse tutors do not show compassion towards them. Experience of learning and support,

according to Dobinson-Harrington (2006), is instrumental in helping student nurses gain the necessary skills to work effectively in the clinical environment and provide high quality care. Therefore, developing and supporting students implies enabling them to feel secure and valued. This emerges from the tutor expressing genuine interest and care (Aasen & Naden, 2008). Such care relates to recognising and attending to the vulnerabilities of others, a concept which resonates with Dewar et al.'s (2011) notion of compassion in nursing education.

Nurse tutor's work experience is a professional response to the challenges of interaction with students. This study, however, has found that there is no statistical difference between the more experienced nurse tutors and those that do not have much experience in coping with the challenges of student tutor interactions. D'Souza (2013) found that those tutors who engage with students in the teaching and learning process both in the classroom and at the clinical area helps to promote relationships, improve development of critical thinking and enhance openness to diversity between the nurse tutors and students. The interactive clinical learning environment is vital to quality patient care. Poor interaction among health professionals can lead to an increase in mortalities at hospitals. Many student nurses are mature and have family commitments, which may conflict with the demands of nursing programmes both in the classroom and at the clinical area. This increases their stress levels. Despite the university's best efforts, not all clinical placements provide the best learning experience, which has a negative impact on students.

The concept of being a role model for nurse tutors to students is another important attribute in maintenance of the nurse tutor student interaction. Nurse tutors must create an environment which is conducive to student learning and provide appropriate communication and support from skilled nurse practitioners. A clinical setting which offers many learning experiences, but does not lend itself to a supportive environment for the nurse tutors, discourages nursing students from seeking experience and results in limited learning and growth opportunities (Mabuda, 2008). On the other hand, a setting with limited experiences, but rich in support from nurse tutors, provides opportunities for student nurses to examine new health needs and ways of addressing clinical practice. Thus, regardless of where clinical practice takes place, the learning climate influences student nurses' achievement and satisfaction with the learning experience. The researcher, who is also a nurse educator, has observed and often heard student nurses expressing concern and dissatisfaction with their clinical learning experiences.

This concern generated the interest to formally investigate the experiences of student nurses during their placement in clinical learning environments - the clinical learning environment includes hospital wards and units, the community and health clinics. If the nurse tutor is reluctant to act as a role model and mentor, it can be disconcerting for professional nurses in the ward and student nurses as role modelling is a fundamental principle of learning in the clinical setting.

The concept of being respectful when dealing with students is another important aspect in promoting interaction between nurse tutors and students. In this study, results showed that nurse tutors are not respectful during teaching both in the classroom and at the clinical area. Nurse tutors should respect students' ideas during teaching even if they are not correct. This can help to avoid embarrassing the students, thereby encouraging them to answer questions. Respect is an attitude directed towards someone based on the qualities that makes him or her worthy of respect (Frei & Shaver, 2002), with cognitive, affective and behavioural components (Hendrick & Hendrick, 2006). Treating nursing students with respect means treating them as valuable human beings and valuing their humanity by being sensitive to their physical and psychological integrity during teaching (e.g. not condescending, not humiliating) and treating them as autonomous and rational human beings (e.g. respecting their point of view) (Lalljee, Laham, & Tam, 2007). Important component of respectful behaviour in the context of health-care include treating patients as equals; taking them seriously (treating them as individuals, paying attention to their feelings and validating their viewpoints); involving them in decisions; providing them with information; and treating them as important human beings (taking time with patients and being dedicated to their situation (Beach, Roter, Wang, Duggan, & Cooper, 2006; Clucas & St Claire, 2010; Purnell, 1999). If a nurse tutor respects the students, they automatically reciprocate this, thereby promoting the interaction.

Nurse tutors in Malawi were found to be enthusiastic during teaching. It should be pointed out that enthusiasm and enjoying teaching are identified as qualities of good teachers. This is in line with findings of residents' perception of their teaching role as well as described rewards for clinical teachers (Aron et al., 2000; Busari et al., 2002). The importance given to these qualities by the study sample, shows a distinct difference from studies on other teaching interactions, where this was mentioned merely as an aside. Passion and enthusiasm for teaching in this study emerged as a key characteristic for skills in nurse tutors. Nurse tutors aim to develop students' ability to identify their own educational needs and to enable them to

take appropriate actions to fulfil those needs. At the same time, nurse tutors indicated that they actively and enthusiastically engage students in the learning and to provide meaning and relevance during teaching. In other words, they promote self-directed learning by incorporating Knowles' Principles of Adult Learning in their teaching approach (Knowles, 2000).

Nurse tutors demonstrated an increased commitment to students during teaching in this study as the odds ratio was found to be in the outlier area. This means that nurse tutors' work experience was strongly associated with the tutors' commitment to students during teaching both in the classroom and at the clinical area. This was not the case with the students' data. Therefore, there is a definite discrepancy on the nurse tutors' commitment to students during learning. Although nurse tutors clearly indicated that they are committed to teaching students, the students clearly indicated that nurse tutors are not committed to students. Commitment is an important concept in the interaction between nurse tutors and students (Mashaba, 2014). Teaching involves the transmission of knowledge and skills which requires professional commitment although spontaneity is to be encouraged. Nurse tutors, therefore, need to address the teaching act continually through planning, implementation of instructional activities and evaluation of students' performance. Most of the respondents respected the fact that the nurse tutors are role models who not only had the psychomotor skills needed for nursing, but also demonstrated extensive knowledge, values and norms in the field.

The concept of approachability was also assessed on the student nurse tutor interaction. There was no association between the predictor variable and the dependent variable of being trustworthiness in students' affairs by the nurse tutors. This means that students do not feel free to ask for guidance from nurse tutors as the latter are either too busy or not in a good frame of mind for students to consult with academically (Raintree, 2012). As nurse tutors are supposed to be role model for students, it is necessary for them to have a desire to share experiences, both clinical and theoretical, with student nurses. It is also necessary that they have good communication skills to enable them to be comfortable and interact positively with the diverse nursing student population found in classrooms today, including being confident enough to interact and provide appropriate opportunities that will support student success. Without patience and an approachable attitude to nursing students, nurse tutors are likely to fail to create a disciplined and rational environment for learning both in the classroom and at the clinical area (Raintree, 2012). By being patient when dealing with students, the nurse

tutors place themselves in the best possible position to overcome anxiety, fear, discouragement and failure in students.

The students in Malawi have shown that do not trust nurse tutors during the teaching process. This is a disturbing situation as students do not trust information that the nurse tutors provide in class. It implies that some nurse tutors have limited skills on the process of teaching. This means that there is no correlation between the independent variable of nurse tutors' work experience and the dependent variable of nurse tutors being trustworthy in students' affairs. Nursing students often experience uncertainty and anxiety in the classroom and clinical settings due to the unavailability and inaccessibility of nurse tutors as a result of time constraints, lack of awareness among senior professionals regarding the needs and problems of student nurses, and conflicting expectations of the nurse tutors and clinical nursing personnel (Carlson, Kotze & Van Rooyen, 2003). If trust among nurse tutors and students is lacking, there is always the possibility of students becoming increasingly anxious that they will fail during examinations.

Nurse tutors should be ready to address any sensitive issues that may arise with students, be it academic or social. In this study, it was determined that nurse tutors do not address sensitive issues of students both in the classroom and at the clinical area. This means that there was no association between the independent variable of nurse tutors work experience and the dependent variable of addressing sensitive issues of the students during teaching both in the classroom and at the clinical area. Dealing with students' anxieties is an important element of student counselling. For example, if the student has a personal family problem, he or she might be participate fully in class work could fail in the examinations.

Waghid (2009) recommended a demonstration of 'responsible expression' by students when emotive material is addressed. Guidelines should be incorporated into written 'learning contracts negotiated with students at the commencement of the programme of study which include principles for classroom-based dialogue such as respect, tolerance, confidentiality and the importance of listening skills. However, increasing diversity in the classroom challenges nurse tutors and students to identify issues that complicate teaching (perils) and enable tutors to analyse barriers for themselves and their students (pitfalls), and select new strategies for working with non-traditional students (pearls). These are some of the issues that derive from common attitudes and values that are observed within the culture of nursing and the

subculture of nursing education (Bednarz, 2010). One such attitude is that of avoiding unwanted discrimination as students feel everyone should be treated the same, regardless of race, ethnicity, country of origin, gender, age, socioeconomic status, or any other characteristic. Another closely held value is the golden rule to “do unto others as you would have them do unto you.”

The concept of honesty as an attribute of nurse tutors and student interaction has been widely acknowledged by many researchers. Nurse tutors are expected to be honest when teaching students. Education presumes the need to engage in problem solving and critical thinking to synthesize more complex and changing knowledge into appropriate courses of action. If nurse tutors are not honest, students start to mistrust the nurse tutors. Nursing has a long and rich history of being a calling both in terms of care and the nature of education and practice as, from the time of Florence Nightingale, nursing is based on honesty and trust (Polit & Beck 2007). Nursing has made great strides in advancing education to produce professional practitioners who are able to deal with the nuances and complexities of modern health care. However, the value of honesty and trust remains as an important subtext within the discipline, and it is often difficult to see the changes that a more diverse student body demand. It is also difficult for many people to envision new ways of tailoring nursing education to accommodate different student needs, and it may be equally difficult for some people to even recognize the need to make such changes.

#### **5.5.5 NURSE TUTORS' AND STUDENTS' PERFORMANCE**

Generally, this study has found that both nurse tutors and students are not impressed with the nurse tutors' performance during teaching. Similarly, nurse tutors and students also clearly indicated their dissatisfaction with the nurse tutors' performance at the clinical area. The researcher noticed that the various nursing colleges in Malawi have a different sense of support to students.

The concept of nurse tutors' performance on lecturing during the entire class period poses a problem for the students' process of learning. In this study, students clearly indicated that nurse tutors teach them for the entire class period irrespective of their level of experience. Student cannot cope with the pressure of such learning. When students are tired, it is necessary to let them relax and renew their energy through fresh air, nutrition and taking their

minds off their studies. However, when students learning continuously without any break, they lose concentration, which results in poor contribution and participation.

Lamba (2014) points out that attention and concentration are the most powerful assets of human beings, and if used correctly, they can be extremely beneficial. At the same time, it is difficult to master content if the concentration span is reduced. A descriptive survey was conducted to assess the impact of teaching time (classes lasting for two hours) on the attention and concentration spans of student nurses. The finding showed that 44% of students had good attention and concentration in the first two hours of learning, 46% had an average attention and concentration span and only 10% of students had a poor attention and concentration score during the teaching - learning activities. This implies that teaching beyond two hours continuously reduces the concentration span of nursing students. There are, however, many factors which can affect the attention and concentration spans of nursing students in the classroom. These include the duration and method of teaching, novelty and repetition of topic, surrounding environment, interest, and health and emotional status. If students do not pay attention during teaching learning activities, they will indulge in other activities such as private conversations, dropping pens or pencils, fidgeting, and exchanging notes. The environment of a professional college is very challenging. When an individual enters a professional college as a student, they have to prepare themselves for the demands of higher education such as increased attention and concentration spans during classes required for future growth.

Another performance of the nurse tutors that was evaluated was the concept of showing videos throughout the entire class period. Students may be interested at first to watch a video for the first time, but later when the video's content becomes too much, the concentration span wanes. It is noteworthy that irrespective of the type of teaching strategy that the nurse tutors employ, most students lose attention and concentration during lengthy teaching activities and there is no significant association between sample characteristics with attention and concentration scores of students in most studies (Lamba, 2014). Students enter nursing colleges with their individual qualities such as motivation, expectations, knowledge retention capacity, skills, experience, and ability to concentrate and solve problems, together with access to student support facilities. These variables influence their capacity to learn and retain the content of lessons during teaching and learning activities. Student nurses also need to gain expertise in theory and practical subjects to help them maintain nursing professional

standards. If the entire class watches a training video which has not been explained to them, some students will not associate or relate the video material to the learning process content. Therefore, nurse tutors must be very careful when utilising teaching activities such as showing videos to students. Moreover, some videos depicting private parts may distract students' attention from the content or the meaning of the topic.

The concept of the nurse tutors' performance on addressing sensitive issues with students also emerged as a challenging activity for the nurse tutors in Malawi. Culturally, nurse tutors are supposed to observe the students' behaviour and counsel them accordingly. Proper student counselling depends on the ability of the nurse tutors to understand the problems and identify alternative courses of action for the students to follow. Nursing students' experience many sensitive issues. As young adults living away from their families, they face numerous challenges including those of a sexual nature. Therefore, counselling students on the private issues poses a challenge and requires maturity and dedication, including privacy and confidentiality. If the students are not counselled on sensitive issues, may affect their learning process. Some students could stop attending class or even withdraw from the course. Such counselling challenges include ambiguity in terminology and the resultant lack of conceptual clarity, the limited evidence base to underpin practice and education, the complexities of teaching sensitive topics to large groups and limited teaching expertise to deliver the content (Nicholl, 2012).

The performance of nurse tutors on demonstration of clinical procedures was also assessed. Generally, it was noticed that only 54.3% (70)n=129 of the students from all the nursing colleges agreed that their nurse tutors effectively demonstrate clinical procedures both in the classroom and at the clinical area. Nurse tutors' performance in demonstration is critical for students at the clinical area. If the nurse tutors' performance in the demonstration of clinical procedure is below standard, some students may notice as they read widely about such procedures in books. This could lower the nurse tutors' reputation in the eyes of the students. According to Bjørk and Kirkevold (2000), skills acquisition is viewed as complex due to the double demand on nurse tutors to learn how to actually perform the skill in question as well as developing a professional understanding of theoretical and social aspects involved in such performance. Social aspects are expressed through eye contact, voice, body language, and attention directed towards the patient. Experiencing procedures from the perspective of the patient gives the students the opportunity to reflect on whether their features convey a sense



of caring concern. However, when the nurse tutors' fail to impart these skills to students, they lose respect for the nurse tutor.

Another concept under teaching performance of the nurse tutors was the willingness to take responsibility for their own classroom and clinical behaviour during teaching. Nurse tutors are expected to take more responsibility on the clinical and classroom behaviour that would guide the students' learning process. However, only 47.3% (61) n=129 of the students throughout the nursing colleges in Malawi agreed that their nurse tutors have a willingness to take responsibility for their own behaviour during teaching both in the classroom and at the clinical area. Moreover, the main finding of the odds ratio was  $OR \leq 0.467; CI(0.081 \pm 2.675); p \geq 0.392$ . This indicates that there is no association between nurse tutors' work experience and nurse tutors' willingness to take responsibility for student learning both in the classroom and at the clinical area. This is a complex situation as nurse tutors are required to show dedication during teaching both in the classroom and at the clinical area. In another study, results showed that the main factors leading to a lack of responsibility during clinical teaching by educational staff include lack of control and a sense of conflict, stress and anxiety in the ward-teaching situation, lack of peer support, and an inability to plan for such work. The most pervasive feature which emerged, however, was a lack of available time for clinical work and other duties. This is discussed in terms of role strain. Differences in responses to the nurse tutors' performance in the clinical area were studied and the results show that all the problems identified appear to be greater among the nurse tutors' groups. This may be a consequence of a further finding that clinical nurse tutors are more likely to make detailed and more frequent distinctions between the aims and problems of ward- and school-based teaching (Jones, 2005).

The teaching performance of nurse tutors on guiding clinical students on resource mobilisation was also investigated during analysis. More than half (56.5%) of the students from different colleges of nursing agreed that nurse tutors guide nursing students on resource mobilisation during teaching, particularly in the clinical area. This means that both students and nurse tutors agree that the performance of the nurse tutors on resource mobilisation is generally met during teaching both in the classroom and at the clinical area. Resource mobilization is crucial at Malawi nursing colleges as nurse tutors teach under critical resource constraints. Nurse educators in Malawi nursing colleges face several challenges. There are resource limitations, particularly in rural or under-privileged areas of the country. They face

heavy workloads in the face of increasing student numbers with limited resources. There is also inadequate ongoing professional development, which influences the quality of teaching and clinical accompaniment and supervision of students. Other factors include a lack of orientation or induction programmes for nurse educators at many nursing colleges, insufficient up-skilling in new technologies, the absence of a structured strategy for nursing educators to acquire new knowledge and skills; and an exodus of nurse educators due to occupation specific dispensation (OSD) and rural allowance. If nurse tutors are given adequate resources for teaching they might not leave their essential teaching posts to work at non-governmental organizations.

Communication between nurse tutors and students is essential to quality nursing education. Nurse tutors must communicate clearly with the students both in the classroom and at the clinical area. Generally, from this study in Malawi, 52.4% (43) n=82 of the nurse tutors strongly agreed that they clearly communicate to the students about issues in clinical area, while 51.1% of the nursing students from different nursing colleges agreed that their tutors communicate clearly on issues in the clinical area during teaching. This indicates that nurse tutors and students in Malawi nursing Colleges generally agreed that the nurse tutors' performance is moderate relating to the communication of clinical issues in the clinical area. Waterson et al (2006) pointed out that the integration of knowledge, skills, attitudes and values in a specified context is one of the cornerstones advocated by the outcomes-based approach to teaching and learning. Teachers are charged with the responsibility of creating a learning environment and learning opportunities that are inviting, challenging and motivating, and that promote critical thinking and problem-solving skills. The environment should be characterized by the emphasis on active participation, communication and collaborative and cooperative learning with learners taking responsibility for, and ownership of, their own learning. As communication skills are taught on a range of nursing courses, questions regarding effective communication are particularly relevant for nursing educationalists (Jones, 2007). This is especially so as doubts have been raised regarding the quality of interaction between nurses and students in the United Kingdom.

Furthermore, in this study, the provision of ongoing feedback to students for growth during teaching both in the classroom and at the clinical area was also assessed. Only 46.3%(38)n=82 of the nurse tutors from different nursing colleges agreed that they provide ongoing feedback to nursing students during teaching, both in the classroom and at the

clinical area; while 60.5%(78)n=129 of the nursing students from different nursing colleges agreed that the nurse tutors provide ongoing feedback to nursing students during teaching both in the classroom and at the clinical area. This implies that many nurse tutors disagree that they provide ongoing feedback to nursing students during teaching. Therefore, the performance of nurse tutors on provision of ongoing feedback to students during teaching is limited both in the classroom and at the clinical area.

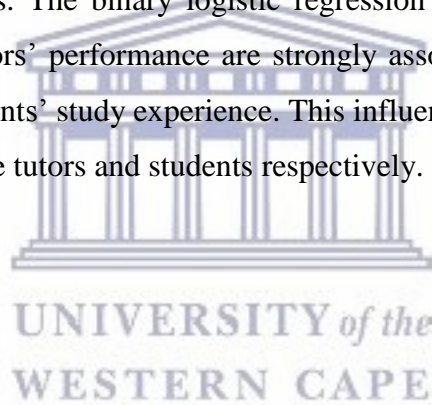
## 5.6 SUMMARY

In this chapter, the teaching needs of nurse tutors and students such as teaching strategies have been expounded in relation to their reality at Malawi nursing colleges. The lecture teaching strategy is still the mostly popular but is combined with other minor teaching strategies such as questions and answers. This is evident in both the qualitative and quantitative analyses. Quantitative results indicate that some teaching aids are scarce in the nursing colleges and as a result the nurse tutors and students face challenges in the teaching and learning process respectively both in the classroom and at the clinical area. There is still a knowledge deficit on the utilisation of teaching strategies by nurse tutors both in the classroom and at the clinical area as most of the teaching strategies are not adequately utilised due to the lack of resources and skills at Malawi nursing colleges.

The challenges of nurse tutor-student interaction during teaching is a major concern at Malawi Nursing Colleges as it impinges on the smooth running of courses both in the classroom and at the clinical area. Qualitatively, both students and nurse tutors have expressed reasons for their poor interaction both in the classroom and at the clinical area. It has been noted through inferential statistics that rudeness, aggression and poor respect by the nurse tutors to students impede the teaching process in the nursing colleges although the nurse tutors refute this allegation. There is still a large discrepancy in knowledge level between students and nurse tutors with regard to communication principles as the students seem to refute the availability of good teaching interaction of the nurse tutors while the nurse tutors acknowledge the effectiveness of their interaction both in the classroom and at the clinical area.

There is also a large discrepancy regarding nurse tutors' competence as teachers at Malawi nursing colleges. Nurse tutors appraised themselves highly while students indicated that nurse tutors are not competent in most of the required skills both in the classroom and at the clinical area. Using binary logistic regression, some variables under nurse tutors' competence such as teaching and showing videos for the whole period indicated that there is no association between nurse tutors' work experience and this competency. Clinical competence tends to be reduced with limited nurse tutors' participation.

The findings in this chapter have also shown that classroom and clinical nurse tutors' performance is limited among teaching staff. This has been proved through binary logistic regression models. There is a large discrepancy between the students and the nurse tutors on the utilisation of assessment tools and setting examination. Students tend to be dissatisfied with the nurse tutors' performance both in the classroom and at the clinical area. This affects the students' learning process. The binary logistic regression model has shown that some variables under the nurse tutors' performance are strongly associated with the nurse tutors' work experience and the students' study experience. This influences both the teaching and the learning processes of the nurse tutors and students respectively.



## **CHAPTER SIX**

### **DEVELOPMENT OF AN EFFECTIVE TEACHING STRATEGY**

#### **6.0 INTRODUCTION**

In this chapter, the ADDIE model has been used to explain the implementation process of developing an effective teaching strategy for nurse tutors in Malawi nursing colleges. NKHOMA Nursing College has been used as the intervention area, while St. Johns Nursing College was adopted as the control area. Nkhoma Nursing College was selected because of its closeness to the principal investigator, who was only 55 km away from the main working area at Kamuzu College of Nursing.

Another reason was that Nkhoma Nursing College could provide an adequate number of qualified staff, who succeeded in working together effectively throughout the strategy development process. This is because the principal of the college has a PhD in nursing and the Dean of the College has a Master of Nursing. There are 11 nurse tutors with first degrees, 4 nurse tutors with Masters' degrees as well as an additional 4 nurse tutors in the process of completing their Masters' degree, who also assisted in the teaching process. There were sufficient teaching structures, with four new nursing classrooms, each of which can accommodate over 100 students. They have a new teaching laboratory with two qualified nurse tutors dedicated to student skill development. The library is well equipped with current books and enough space for more than 60 students to study. There are also enough support staff, such as kitchen staff, administration and library personnel, who are mostly punctual and assist the students and nurse tutors during the teaching process. During the time of implementation there were 77 first-year students and 49 third-year students. There were no second-year students in this college as there had been no intake of students during the previous year due to staff problems.

As previously stated Nkhoma Nursing College is a CHAM affiliated nursing college and is situated within the Nkhoma hospital 55 km away from Lilongwe, the capital city of Malawi. This hospital qualifies as a nursing teaching hospital because of its qualified nursing staff and doctors. It also has enough basic equipment within the various nursing departments. Some senior nursing staff come to the nursing college to teach either theoretical or clinical courses.

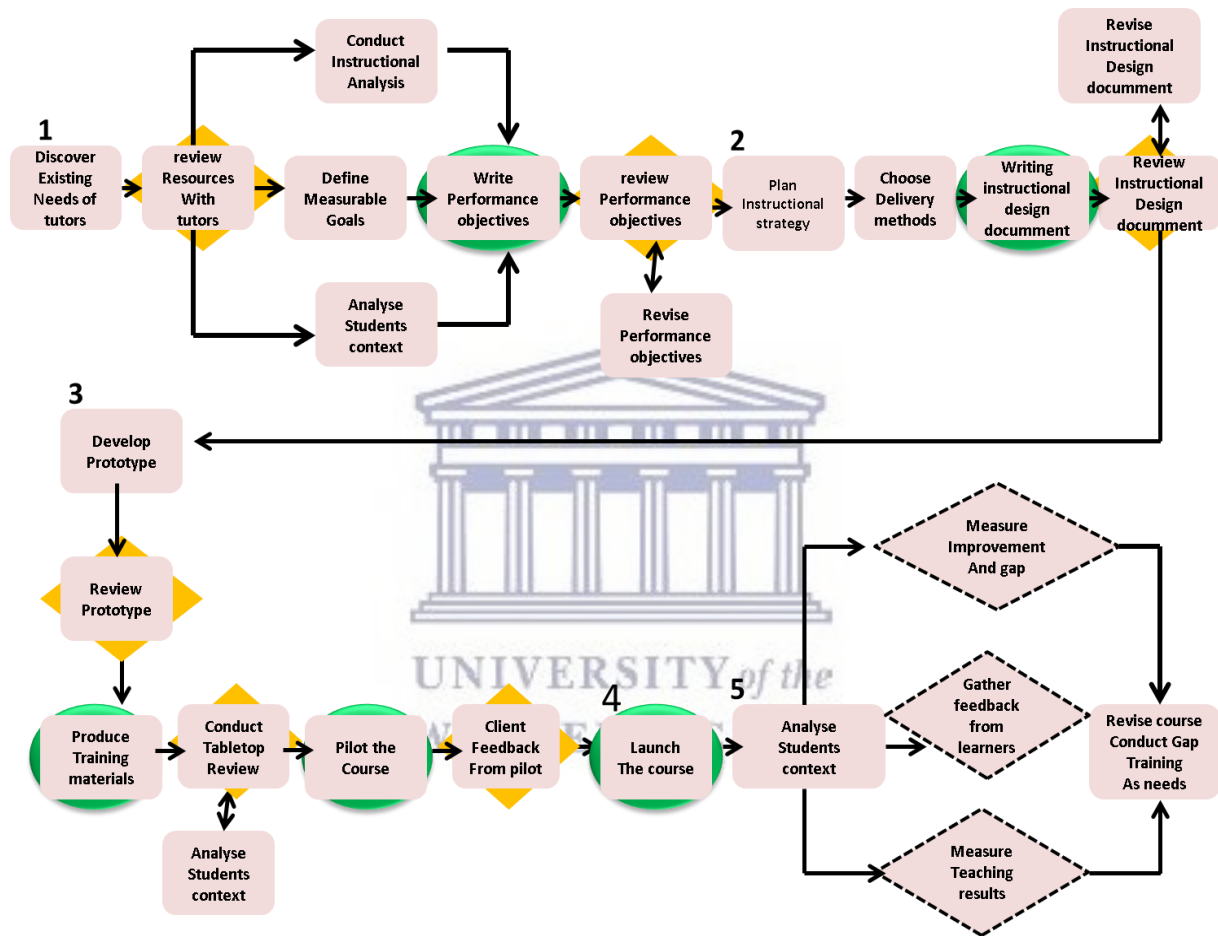
Considering the massive problems that affect teaching and learning in the nursing colleges in Malawi, discovered during the needs assessment feedback, the ADDIE model was adopted to develop an effective teaching strategy. As stated in chapter one the ADDIE model is an instructional teaching model that helps to realise new knowledge, attitudes and practices in a formal and informal teaching arena. The ADDIE Instructional Design helps students and nurse tutors to simultaneously teach, gain theoretical knowledge and develop problem solving skills while working through the activities. There are different adaptations of the ADDIE model but generally it consists of five cyclical phases: Analysis, Design, Development, Implementation, and Evaluation (Frontiers, 2012). These processes represent cyclic and dynamic, flexible guidelines for developing an effective nursing programme and provide visual nurse tutor performance support tools, not only in general education, but also in nursing education. Instructional Design (ID) of the ADDIE model is the methodological process of determining, creating, delivering, and evaluating learning through nurse training solutions. It is a foundational component of successful nursing student learning. This Instructional Design is the fundamental architecture, the blueprint, of the learning territory in nursing education. Therefore, presented in this chapter is the systematic approach that was followed in the development of the effective teaching strategy for nurse tutors in Malawi.

## **6.1 PURPOSE OF THE NEW TEACHING STRATEGY**

The main purpose of developing this strategy was in response to the challenging demand of better teaching strategies for nurse tutors in the Malawi Nursing Colleges. Based on the findings of the needs assessment in the preliminary phases of the study, it was noted that to improve the competences, interactions and performance of nurse tutors it would be necessary to develop an effective teaching method that targeted nurse tutors and could be used to improve the process of student teaching in all the nursing colleges in the country.

As depicted in figure 6.1 below, the existing needs of the nurse tutors and students were discovered through a comprehensive needs assessment. This was followed by reviewing the classroom and clinical resources of the nurse tutors and students through observations. The instructional analysis was also conducted through a classroom and clinical participatory approach of *sitting in* on teaching activities, both at Nkhoma Nursing College and the Nkhoma Teaching Hospital. The measurable goals of effective teaching strategy for nurse

tutors was developed with a focus on teaching strategies, teaching competences, teaching interactions and teaching performances for the nurse tutors.



**Figure: 6.1: The ADDIE model process in development of the teaching strategy**

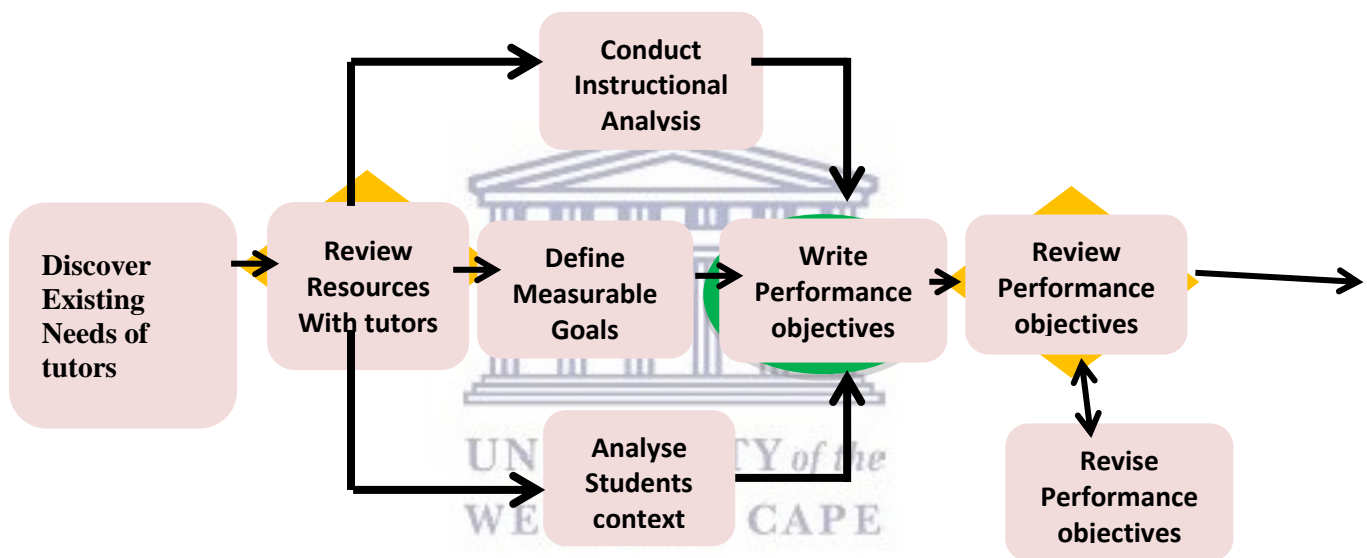
This model was an adjusted and modified model originally from Frontiers, 2012

The students' perception of the teaching strategies, teaching competences, nurse tutor and students' interaction challenges and teaching performances were also reviewed using the questionnaires in the survey. Thereafter, the performance objectives were written and circulated to different relevant professionals.

### 6.1.0 THE ANALYSIS PHASE OF THE ADDIE MODEL ON EFFECTIVE TEACHING STRATEGY DEVELOPMENT

In phase one of the study, which is the analysis phase, it was important to investigate the existing needs and interaction challenges of the nurse tutors and students. This was done through a comprehensive needs survey, focusing on the nurse tutors and students of 8 nursing colleges in the country. The main areas of concern that were focused on were nurse tutor competences, nurse tutor-student interaction challenges and nurse tutor performances (see figure 6.1).

FIGURE 6.2: THE ANALYSIS PHASE



**Phase one of the model focusing on: discovery, review, defining, writing and reviewing the performance**

The existing needs of the nurse tutors and students for effective teaching fell into four main areas, namely teaching strategies, competences, interaction challenges and the nurse tutor performances (see figure 6.2). However, *teaching aids*, *clinical teaching performance* and *student assessment* were included. In each area, there were numerous concepts that were reviewed (See Table 6.1). It was noticed that many of the global teaching strategies were only moderately used by nurse tutors and students in Malawi. However, it was noticed that lecture demonstration and discussion were among the most commonly used and were seen as high level characteristics. The teaching strategies being used in both the classroom and at the clinical area, were combined most of the time. As previously found in chapter five, there



were discrepancies among students and nurse tutors on the characteristics of the levels of competences, challenges of students, nurse tutors interactions and the nurse tutor characteristics of performance. Therefore, these were found to be the main areas of special needs for nurse tutors and students (see table 6.1).

Through different feedback meetings, nurse tutors realised the importance of developing a new teaching strategy that covers almost all needs required for effective teaching. All the characteristics that were discovered under the teaching strategies, teaching aids, nurse tutor competences, nurse tutor challenges of interaction and nurse tutor performance were classified again to determine the priority areas. The focus of the classification was on low, medium and high needs. Very low levels of needs were marked between 1-30% while the characteristics that were averagely needed were classified as medium needs with 31-50%. The needs that were classified as very important during teaching but were found to be very poor during the needs assessment, were identified as high needs, above 50%. This classification was done to provide a true reflection of the importance of the different needs. The main characteristics were: teaching strategies; teaching aids; nurse tutor-student interactions, nurse tutor teaching competences and nurse tutor teaching performances. Verbal and non-verbal skills as well as teaching assessment were also added, as the most valued characteristics. The instructional needs analysis focused mainly on the following areas of the teaching strategy development: tutors and students' analysis, data analysis, tasks analysis and context analysis.

Teaching resources were available at Nkhoma Nursing College for first- and third-year students engaged in the theoretical classroom learning process. Each classroom had a college LCD and a laptop that were kept in the nurse tutors' lounge. These teaching aids were monitored not only by the Dean but also the classroom student presidents. Strickland (2014) pointed out that the analysis phase of the ADDIE model focuses on face validity and content validity of the model. Therefore, most of the nurse tutors created their lesson plans on PowerPoint which has remained a very effective method of lesson delivery. Therefore, the number of nurse tutors, as well as their qualifications and the availability of resources, influenced the principal investigator of this study to adopt Nkhoma Nursing College as the intervention area for the development of an effective teaching strategies.

Table 6.1 below also clarifies the existing gap in the utilization of the teaching strategies. There was no common nurse tutor teaching strategy for all nurse tutors participating in the

teaching process, both in class and at the clinical area. Each college nurse tutor could choose the teaching strategy that they felt comfortable with. During this instructional analysis of the teaching process in Nkhoma nursing college and other nursing colleges, it was noted that most of the identified teaching strategies were not used by students or nurse tutors. For example, discussion, demonstration and role-play were not commonly used by the students, particularly in the classroom.



**TABLE 6.1: LEVELS OF THE CHARACTERISTICS AFTER NEEDS ASSESSEMENT IN MALAWI NURSING COLLEGES**

NEEDS ASSESSMENT CHARACTERISTICS	VERY LOW LEVELS (1-30%)	MEDIUM OR MODERATE LEVEL (31-50%)	VERY HIGH OR BEST LEVEL >50%
<b>TEACHING STRATEGIES UTILIZATION AMONG NURSES AND STUDENTS IN MALAWI</b>	structured overview, drill & practice, peer partner learning, cooperative learning groups, structured controversy, concept attainment, computer assisted instruction, learning logs, learning contracts, simulations, model building	drill & practice, didactic questions, panels , conferencing, inquiry, journals, research projects narratives, model building	lecture, didactic questions, demonstrations, role-playing, brainstorming, discussion, problem solving, tutorial groups, case studies, reflective discussion, concept mapping, essays, reports, homework, research projects, questioning.
<b>UTILIZATION OF TEACHING AIDS IN</b>	research articles internet, small group, facilitations	posters, whiteboard, models, workbook, library, module	overhead projector, LCD, computer, laboratory, patient
<b>NURSE TUTOR –STUDENT INTERACTION CHALLENGES AMONG NURSES AND STUDENTS IN MALAWI</b>	cheerful, honest, models, polite, self-directed teaching, support, freedom, opportunities, over-familiar, apologetic empathetic, enthusiastic, humour, commitment, advocates, cooperation , equity human rights	listen, respectful, arrogant, fair examination, satisfy, tolerance, willingness, considerate, responsibility, attentive, a sense of care, sociable, accommodative, warmth, honest, open-minded, nurturing social distance, non-judgemental	rude, talkative, aggressive, constructive, punctual, risk, talking entire class, communicate, reserved, approachable, trustworthy, sensitive, goal oriented have clear language, non-verbal
<b>NURSE TUTOR COMPETENCES AMONG NURSES AND STUDENTS IN MALAWI</b>	opportunities for student, practising skills , role-played, motivate student, keeps track , decision mapping, facilitator non-verbal and verbal 2 simulation, support services, stakeholders, administration	identify the goal, act as the facilitator, very reflective look arrogant, student welfare, excellent strategy, content, key points, evaluate, instructions, role-played , clarifies material, liaisons. communication, supportive training, assessing, referral, monitoring and evaluation educational materials	open-ended questions, keep track of discussion, any idea sharing, human rights, goal of the discussion, objectives, guiding questions, organization, direction, local participative promotes learning, support, positions
<b>VERBAL &amp; NON-VERBAL AMONG NURSE TUTORS</b>	tutor movement, smiling, word repetition, leaning, nodding	dress code, voice tone, mannerisms, irrigative, seating plan	eye contact, facial expressions, hair
<b>NURSE TUTOR PERFORMANCE AMONG NURSES AND STUDENTS IN MALAWI</b>	internet resources, gives tests appropriate time, marks examination evaluates the lesson, constructive feedback, handles crisis, networks of, positive reinforcement, adequate time,	self-directed learning, punctuality, tolerance, resource mobilization, collaborative learning skills used, clarifies students, procedures laboratory exercise, curriculum design, social issues, gender-sensitivity experts, constructive criticism	instructional time, enough information, books to use, personal tutor, good objectives, gives relevant examples, Asks questions, skilled clinical practise skills, active participation, appraisal tool
<b>NURSE TUTOR CLINICAL PERFORMANCE</b>	stimulates clinical group case information, resource mobilization reflection in tutorials	confidentiality, students stress, respect, collaborate, change agents, critical thinking, self-evaluation, skill adjustment, patient care	Orientation, communicate, teamwork, perform skills feedback, staff meetings, clinical tutorials, clinical expectations objectives at clinical, questions, demonstrate
<b>NURSE TUTOR-STUDENT, ASSESSMENT</b>	exhibitions, journals, projects, interviews	essays, portfolios concept mapping, systematic observation, long-term investigation, manipulative skills	short answer items, multiple-choice, laboratory

There were *limited interactions* during teaching, as the focus group discovered during in-depth interviews with students and nurse tutors. They admitted that they are unable to have amicable interactions amongst themselves, as emphasised in chapter five. Molenda (2003) adds that the ADDIE model illustrates the interconnection between the development of the instructional interventions and the development of the performance improvement interventions. The *performance interventions* such as incentive programmes, job redesign, and ergonomic overhauls must begin to be created within the analysis phase.

After a comprehensive needs assessment feedback to the college nurse tutors and administration, the measurable goal and objectives were created from the major areas of concern during teaching. It was agreed that the main goal should be: “*to develop an effective teaching strategy for students and nurse tutors in Malawi nursing Colleges*”. It was also agreed that the new teaching strategy must have at its core the following objective areas: the student and nurse tutor interactions, nurse tutor competences, nurse tutor performance and teaching assessments, both in class and at the clinical area. In each area the characteristics were to be developed that enhanced the achievement of the goals and objectives (see table 6.1). This allows the educational outcome to be observed, measured, planned for, and evaluated in a valid and reproducible manner (Pittenger et al, 2009). Moreover, the instructional coach must collaborate with the site administration to determine the perceived needs of the staff members (Danks, 2011)

It was also observed that there is generally, poor nurse tutor interactions during teaching in most of the nursing colleges. Behaviours such as rudeness, talkativeness, aggression, arrogance, sensitivity and depression were common among both the nurse tutors and the students during teaching. It was therefore agreed to include them as characteristics of negative behaviour during teaching, and level them accordingly. These characteristics were debated in groups, to classify them as high, medium or very low needs. It was also agreed that the characteristics of willingness, consideration, accommodative, honest, open-minded, nurturing, social distance, non-judgemental, constructive and trustworthy should be among the list of motivating characteristics for both nurse tutors and students during teaching. These were also classified according to the level of needs by the nurse tutors in the group discussions.

As presented in chapter five, students had a considerable role to play at the very beginning of the teaching strategy development process. In each college, students had to complete the questionnaire where they had to discuss the teaching strategies, competences, interaction and performance of the nurse tutors and how these can be improved to raise their learning standards. Students were involved in the focus groups, at least 10 students per college, where they were able to discuss their needs and how the teaching and learning process in their colleges could be improved. The students' analysis of the main concepts above helped to determine the characteristics of the main themes as found in table 6.1. Koneru (2010) noted that the analysis phase of the ADDIE model targets the users and user groups, their learning needs, language preferences and accessibility to the learning platform and needed to be analysed too.

Based on the main themes that were analysed on the nurse tutors and students, and through a task force at Nkhoma Nursing College, performance objectives were developed that focused mainly on the teaching strategies, teaching aids, nurse tutor and student interaction challenges, nurse tutor teaching competence and teaching performance. The members of the task force were comprised of 8 nurse tutors, 6 registered staff nurses and 2 clinical officers. The Dean of the college was selected as the coordinator, while 1 of the nurse tutors was selected as the secretary.

The terms of reference for the task force were discussed and an agreement reached to meet twice a week, to refine the characteristics of each objectives. Members were reminded that the new teaching strategy must be goal-oriented, practical and encourage nurse tutor-student interactions both in the classroom and at the clinical area. The teaching strategy had to be participatory, where students and nurse tutors would share the responsibility on any activity in the teaching process. Moreover, it was also agreed that most of the activities must be focused on a *clinical, hands on* approach, where patients would be used for much of the teaching process. This is in line with Arkun (2008) who concurs that the analysis phase of the ADDIE model must determine the *technological, economical, and duration constraints* of the programme.

The learning objectives were classified according to Blooms taxonomy which was designed to include *cognitive, psychomotor and affective* domains. The objectives were made to be action-oriented. Therefore, most of the objectives were designed to have *active verbs*. It was

agreed that the method of approach to the goals and objectives would need to illustrate the characteristics of each objectives. Further brainstorming of the cognitive, psychosocial and physiological characteristics on each objective was done by the task force.

Another important area which was explored, was the identification of common needs and avoidance of some non-verbal cues during teaching. Elements such as *nodding*, *humming* and *pointing* were considered to be acceptable and should be encouraged during teaching. Motivating skills such as *humour*, *jokes* and *good advance organizers* during teaching were also identified as characteristics of the objectives (see table 6.1). This included the “dos and don’ts” of the teaching process. Shiang-Kwei Wang (2009) pinpointed that the analysis should include learning characteristics, *motivations*, *technology affordance* and the *learning goals*. Moreover, assessment of the learners’ attributes in a comprehensive manner makes the learning process more effective (Koneru, 2010).

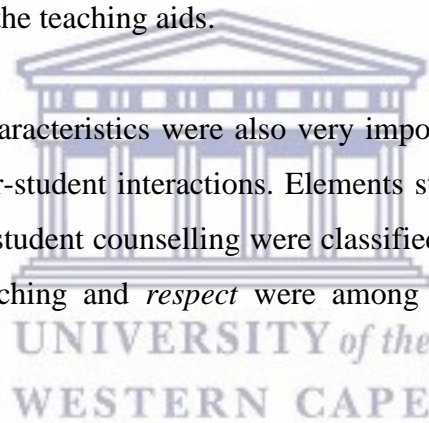
The task force was advised to work in pairs when observing teaching to ensure the maximum identification of problems and difficulties that nurse tutors encounter during teaching. This led to further identification of characteristics such as *lack of punctuality*, *classroom uncontrollability*, *prolonged time of teaching*, *electrical failure* and *students leaving a class* due to boredom. In this way the nurse tutors and student’s background, knowledge level and learning motivation were determined. Robinson et al (2012) notes that nurse tutors are charged with ensuring the well-being of students and preserving the life of clients, and in so doing there are instances when classroom and clinical instructors must forgo teachable moments in the traditional patient care settings.

The task force also carefully reviewed the curriculum and lesson compatibility for all nurse tutors. This was done by checking the student’s notes and comparing them with the elements in the curriculum book. It was also noted that some nurse tutors were not following the order of the instructional content in the curriculum. They often combined topics and some topics were under-prepared. It was also found that student notes were faulty and contained some jargon language and miss-spellings. It was also noted that the use of teaching aids was still a problem for most nurse tutors as they had difficulties in connecting to the LCD when they were using the PowerPoint presentations. The clarification of the needs of the students and the nurse tutors was done in a format that ensured the analysis phase of the model was qualitative.

Furthermore, it was found that most tutors followed the traditional method of content approach to nursing education, whereby they started with the introduction of the topic, signs and symptoms, or clinical manifestations, contribution factors, incubation period, nursing diagnosis and clinical diagnosis, nursing interventions and treatment of the disease followed by the complications. Some nurse tutors, however, were not following the method properly, particularly when the teaching strategy involved a group discussion or presentation, where nurse tutors would miss one or two traditional steps.

The nursing colleges also have limited technological driven teaching aids such as LCDs. The accessibility to the teaching aids was also found to be limited as they were mostly kept in the skills laboratory, where only one nurse tutor had the authority to retrieve them. This meant that when she was off duty the other nurse tutors who did not have the authority to access the laboratory, could not retrieve the teaching aids.

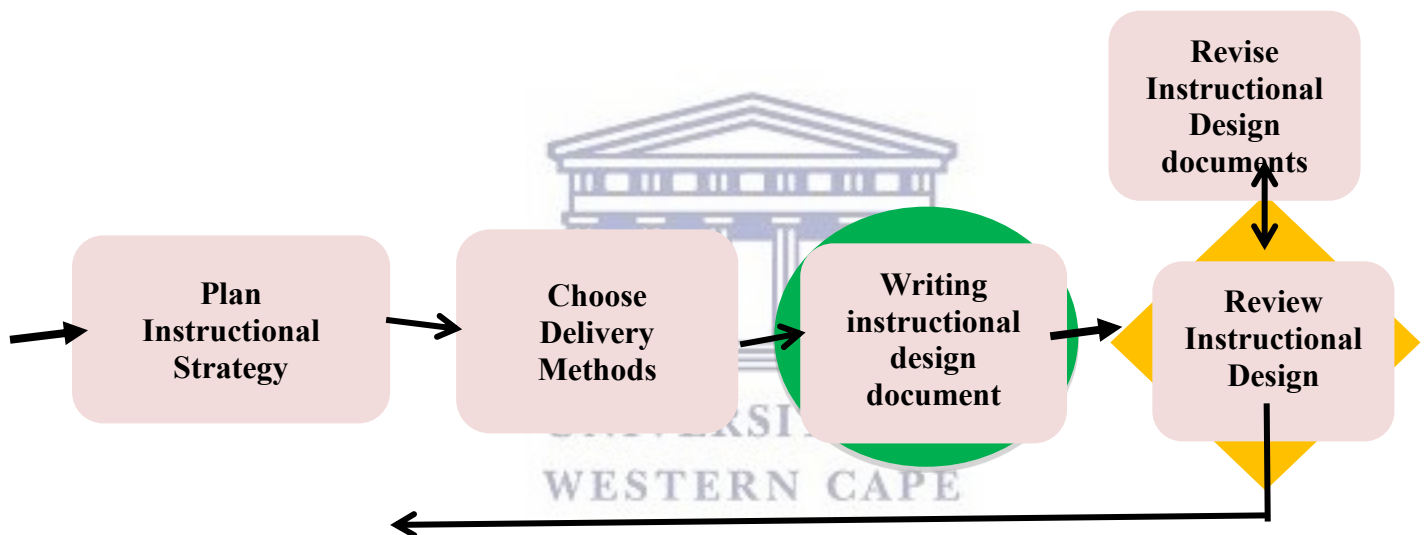
In addition, social cultural characteristics were also very important and should be included, particularly during nurse tutor-student interactions. Elements such as, maintenance of *social distance* during teaching and student counselling were classified and included. Issues such as *gender sensitivity* during teaching and *respect* were among the characteristics that were levelled in the analysis phase.



The last step of this phase was the determination of the time frame for the completion of the development of the teaching strategy. It was agreed upon that the task force must ensure that the completion occur in stages, where, after designing the strategy, nurse tutors must use it in class as a pilot programme, with a view to using it nationally at a later stage. It was decided that the pilot programme would be conducted over two semesters and later evaluated to see if it was indeed an effective teaching strategy. The intervention followed the college teaching calendar, and the pattern of the clinical allocation of students remained the same as it had been previously. The teaching strategy was named Nkhoma Teaching Strategy. It was agreed that the use of St. Johns Nursing College as the control would reduce recall bias during the evaluation phase.

## 6.2.0 THE DESIGNING PHASE OF NKHOMA TEACHING STRATEGY

The main purpose of the designing phase was to articulate the learning objectives, plan and develop the instructional objectives that were started in the analysis phase and authenticate the teaching strategy. There was a need to assess the tools to be used in the development of the effective teaching strategy. It was also important that the delivery method of the teaching strategy was designed (see figure 6.3). Koneru (2010) points out that learning objectives specify the *anticipated outcomes* of the project. Therefore, it was very important for the task force to articulate the proper planning of the learning objectives in performance behavioural terms.



**Figure 6.3: The designing phase**

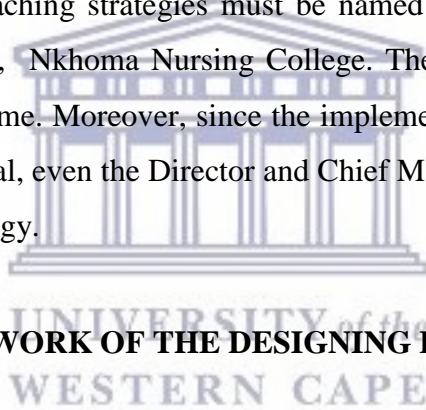
This is a second level of the ADDIE model that has five different stages

This was done to emphasize the need of the new teaching strategy to be action oriented. During meetings at Nkhoma Nursing College, members of the task force were re-arranging the attributes or characteristics in table 6.1 to fall in the appropriate level according to the percentage attained during needs assessment. All the characteristics were made to be action oriented by formulating the tenses with an action verb.

During phase two, the design phase (see figure 6.3), the main activities focused on instructional planning for the strategy, and the task team had to select the best delivery



method that would ensure the realisation of an effective teaching strategy for nurse tutors in Malawi. Since there was no single best teaching strategy found during needs assessment at any of the nursing colleges in Malawi, it was agreed that the new teaching strategy must be blended in nature, where theoretical and practical knowledge, attitudes and skills would be delivered to the students in a simple manner but to a high standard. This means that during the allocation of the attributes to the objectives care was taken to include all the five main teaching strategies that were found to be commonly used in the teaching strategy analysis (see table 6.1). These teaching strategies were the delivery methods and included: lecture, group discussion, demonstration, role-play and brainstorming. These teaching strategies were considered and had their attributes added into the new teaching strategy because they were found to have some elements of teacher-student interactions, tutor competences and tutor performance as key areas for the new teaching strategy. It was from this point of view that members of the task force agreed that the name of the new teaching strategy, which had a blend of different existing teaching strategies must be named NKHOMA in honour of the implementing nursing college, Nkhoma Nursing College. The principal of the college and management approved this name. Moreover, since the implementation of the strategy was to be done at the Nkhoma hospital, even the Director and Chief Matron of the hospital approved the name of the teaching strategy.



### **6.2.1 CONTENT FRAMEWORK OF THE DESIGNING PHASE**

Another important area was the content framework and planning. This step begun the process of project design and, therefore, each task was clearly supporting the objectives (see table 6.1). It was necessary to break each single objective into several sub-tasks. Generally referred to as a procedural task analysis (Jonassen, Tessmer, & Hannum, 2014), the characteristics previously profiled in the analysis phase were considered. All the types of the teaching strategies such as direct, indirect, interactive, independent and experimental teaching strategies were reviewed using websites and books to articulate the required attributes for the new teaching strategy. It was noted that interactive teaching strategy attributes were mostly adopted because of the working theme of nurse tutor and student interaction (see table 6.1). Members were assigned accordingly to work on the attributes based on the needs assessment questionnaire. All attributes that were not culturally sensitive were not adopted by the task force. The chairlady of the committee, who was also the Dean of the College, ensured that

members were punctual in submitting the assignments particularly on the different objective attributes. All members had to review, during the meetings, individual analysis of the objective attributes.

Different electronic and hard copy books were used to find and allocate the attributes to each objective. The library was also used when working in groups during the designing of the objective attributes.

Koneru (2010) pointed out that the task analysis in the designing phase of the ADDIE model enables the designer to design simple learning practices aimed at improving performance as decided in the goal and objective analysis.

Another important area of the content framework was to review the syllabus of the nursing students and decide whether the new teaching strategy would fit into the syllabus. It was noticed that all courses were focusing on interaction and experimental strategies. Therefore, the new strategy was seen as the main solution to the previous problems that were encountered during teaching.

## **6.2.2 AUTHENTICATION PROCESS OF NKHOMA TEACHING STRATEGY**

The most important part of this phase was the authentication process, which was one of the planning requirements for the development of the Nkhoma teaching strategy. Apart from the initial authentication by the University of Western Cape through senate research approval, there were different professional members in Malawi who participated in the authentication process (see table 6.2 below). This process started with seeking the informed consents from different departments that deal with health in the country. This committee not only looked at the ethical implications of the research but also the professional competence in different areas. Therefore, some corrections were made that tailored the questionnaire to the required attributes framework. Most of the expert judgement of the questionnaire, objectives and specific attributes were solicited from Kamuzu College of Nursing (KCN) where senior experts in curriculum development are found.

At KCN, the initial budget of the implementation of the design was also solicited. Senior lecturers and students also assisted in the refining of the objectives and the attributes allocation. KCN provided further expert ruling on the designing of the Nkhoma teaching

strategy, as the curriculum experts and test and measurements experts reviewed and commented on the attributes. Some attributes were refined, allocated and restructured by these professional nursing educators. Ministry of Health in Malawi also assisted in the *expert judgement* of the Nkhoma Teaching Strategy (NTS). The senior officers in the Ministry's nursing department provided professional knowledge on the objectives and attributes of the Nkhoma Teaching Strategy. The attributes were sent to them individually and they were given one week to review a 14-page document. The response rate was very high with a lot of suggestions that were again reviewed by the working task force at Nkhoma Nursing College during meetings and were mostly adopted. Nurses' council of Malawi (NCM) headquarters also played a key professional role by reviewing the characteristics and the attributes of the Nkhoma Teaching Strategy. Senior officers (see table 6.2) received the questionnaire where the attributes were designed. A one-week period was again given for them to edit and give professional feedback. The feedback was also reviewed during the weekly task force meetings at Nkhoma Nursing College.



**TABLE 6.2: AUTHENTICATION PROCESS OF THE NEW TEACHING STRATEGY**

INSTITUTION	ACTIVITIES	RESPONSIBILITY/RANK	OUTCOME PROCESS
University of Western Cape, Cape Town	<ul style="list-style-type: none"> <li>• Proposal review</li> <li>• Proposal review</li> <li>• Weekly marking and progress review</li> <li>• PhD student conference meeting</li> </ul>	<ul style="list-style-type: none"> <li>• High Degree Board (professors)</li> <li>• Script review professors</li> <li>• Supervising professor</li> <li>• Postgraduate seminar (15 PhD students)</li> </ul>	<ul style="list-style-type: none"> <li>• Approval of the proposals document</li> <li>• Editing of the proposal</li> <li>• Approved the proposal</li> </ul>
University of Malawi, Kamuzu College of Nursing (KCN)	<ul style="list-style-type: none"> <li>• Proposal review</li> <li>• Proposal review</li> <li>• Budgeting management</li> <li>• Proposal review</li> <li>• Tests and measurement review</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Local RPC</li> <li>• Deputy principal (supervisor)</li> <li>• Principal, Dean, Finance officer, Registrar</li> <li>• RD (Research Director)</li> <li>• 3 senior lecturers</li> <li>• 15 senior lecturers</li> <li>• 5 Heads of Department &amp; Dean</li> </ul>	<ul style="list-style-type: none"> <li>• Approved the proposal</li> <li>• Edited and approved</li> <li>• Approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> </ul>
Ministry of Health Headquarters, Malawi MOH	<ul style="list-style-type: none"> <li>• Consent letter</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Director of Nursing</li> <li>• Deputy chief Nursing Controller</li> <li>• Director of nursing education</li> <li>• 3 senior nursing officers</li> </ul>	<ul style="list-style-type: none"> <li>• Approved the letter</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> </ul>
Christian health Association of Malawi (CHAM)	<ul style="list-style-type: none"> <li>• Consent letter</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Director of health services</li> <li>• Director of education</li> <li>• Director of Clinical services</li> </ul>	<ul style="list-style-type: none"> <li>• Approved the letter</li> <li>• Edited and approved</li> <li>• Edited and approved</li> </ul>
College of Medicine Research and Ethical Committee (COMREC)	<ul style="list-style-type: none"> <li>• Proposal review</li> <li>• Characteristics review questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• National committee</li> <li>• Dean of faculty</li> </ul>	<ul style="list-style-type: none"> <li>• Edited and approved</li> <li>• Edited &amp; approved</li> </ul>
Nurses Council of Malawi	<ul style="list-style-type: none"> <li>• Consent Letter</li> <li>• Proposal review</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> <li>• Characteristics review questionnaire</li> </ul>	<ul style="list-style-type: none"> <li>• Controller</li> <li>• Deputy controller</li> <li>• Director of research and public.</li> <li>• Director of Education</li> <li>• Director of examinations</li> <li>• Director of Clinical services</li> </ul>	<ul style="list-style-type: none"> <li>• Approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> <li>• Edited and approved</li> </ul>
Nkhoma Nursing College	<ul style="list-style-type: none"> <li>• Consent meetings /letter</li> <li>• Characteristics review questionnaire</li> <li>• Objective and attributes formation</li> </ul>	<ul style="list-style-type: none"> <li>• Principal</li> <li>• Dean and Heads of department</li> <li>• 8 Senior nurse tutors</li> </ul>	<ul style="list-style-type: none"> <li>• Approved/ funded/participated</li> <li>• Participated</li> <li>• Participated</li> </ul>
Nkhoma Hospital	<ul style="list-style-type: none"> <li>• Consent letter</li> <li>• Objective and attributes formation</li> </ul>	<ul style="list-style-type: none"> <li>• Director/Chief matron</li> <li>• 6 senior nurses</li> </ul>	<ul style="list-style-type: none"> <li>• Approved</li> <li>• Participated</li> </ul>
St. Johns Nursing College	<ul style="list-style-type: none"> <li>• Intervention Control centre</li> </ul>	<ul style="list-style-type: none"> <li>• Deputy Principal</li> </ul>	<ul style="list-style-type: none"> <li>• Approved/participated</li> </ul>
All other 8 nursing colleges	<ul style="list-style-type: none"> <li>• Needs assessment, consent</li> </ul>	<ul style="list-style-type: none"> <li>• Principals/ tutors/students</li> </ul>	<ul style="list-style-type: none"> <li>• Approved/participated</li> </ul>

The Christian Health Association of Malawi (CHAM) was also a key stakeholder in the designing and implementation of the Nkhoma teaching strategy. Informed consent and expert judgement were solicited from their senior members at the headquarters.

*Informed consent* was provided by the Chief Executive as the head of all the CHAM affiliated facilities in the country. Senior nursing professionals provided the *expert judgement* of the objective attributes that were personally sent to them in their offices and given one week to articulate the recommendations. The officers provided expert judgement by editing the questionnaire and attributes in each section after being given one week to review the materials. These corrections on each objective were also adopted through the task force weekly meetings at Nkhoma Nursing College.

Nkhoma Nursing College played a key role in designing the teaching strategy, as the Dean, the principal and 8 senior nurse tutors participated weekly on the refinement of the teaching strategy attributes. These meetings were very crucial for the teaching strategy, as the refinement of the attributes in each objective were completed. Nkhoma Nursing College students were also very active in participation not only with the questionnaire and the focus groups during needs assessment but also during the trial phases of the development of the teaching strategy.

The students also provided key information on the questionnaire checklists where they had to agree or disagree on the attributes that nurse tutors use in their class. During the training stage of the Nkhoma teaching strategy the students also provided prompt feedback on the competences and performance of the nurse tutors on the utilization of the new teaching strategy.

The Chief Matron of the hospital and her senior nursing officers also played a very crucial role in the teaching strategy. During the designing phase, the 6 members of the task force were from the nursing department in the hospital. This was very important as the clinical department was where most of the attributes were solicited, therefore, the senior nursing officers of the hospital kept the task force abreast with current clinical skill attributes.

The evaluation process of the new teaching strategy was designed to be two-fold, the *student examinations* and the nurse tutor checklist form on teaching performance evaluation. The results of the students from main courses was compared with the results of the students from

the control nursing college. Once the nursing students from the intervention centre namely the Nkhoma nursing college obtained higher grades than those from the control colleges, it would be possible to infer that the new teaching strategy was effective. The performance checklist of the nurse tutors and students included the common indicators of nursing education (see table 6.3).

### 6.2.3: BASELINE INDICATORS ON NKHOMA TEACHING STRATEGY

There were different attributes used to evaluate the new teaching strategy to examine its effectiveness. This included: student performance, nurse tutor performance and improved conditions in the teaching and learning process. The students and nurse tutor performance indicators were used to determine the level of characteristics and attributes status (see table 6.3).

#### Developing effective classroom and clinical teaching strategy for nurse tutors in Malawi

**TABLE 6.3: Baseline indicators:**

**INSTRUCTION: Please fill in semester one indicators of your college:**

BASELINE INDICATORS	NKHOMA		St. JOHNS	
	Semester 1	Semester 2	Semester 1	Semester 2
1. Number of tutors teaching both clinical and classroom nursing	11	13	14	16
2. Number of students in year two	-	-	97	96
3. Number of students in year one	77	74	54	54
4. Number of students in year three	49	49	61	61
5. Number of modules in year three	5	4	5	4
6. Number of modules in year two	5	4	5	4
7. Average hours per tutor in class	2 hrs	2 hrs	2 hrs	2 hrs
8. Average hour for student in clinical	840 hrs	840 hrs	840 hrs	840 hrs
9. Average hours for tutor at the clinical area per week	8 hrs	8 hrs per day	8 hrs per day	8 hrs per day
10. Total weeks for classroom theory	15 wks	5 wks	15 wks	5 wks
11. Total weeks for clinical practices	9 wks	12 wks	9 wks	12 wks
12. Total number of tutors teaching year two	4	3	5	3
13. Total number of tutors teaching in year three	13	11	9	11
14. Number of tutors who have been absent more than 5 days in a semester	3	1	3	2
15. Number of students who dropped out or missed 5 days in a semester	1	0	3	2
16. Number of tutors who are reprimanded on academic grounds	0	0	0	0
17. Number of students who passed end of first semester exam	66/77	69/74	41/54	40/54

18. Number of students who fail the end of first semester exam	<b>11</b>	<b>5</b>	<b>13</b>	<b>14</b>
19. Number of students who repeated the module	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>
20. Number of hours allocated for sports	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
21. Number of hours allocated for laboratory activities	<b>154</b>	<b>154</b>	<b>154</b>	<b>154</b>
22. Number of students who passed the OSCE exam	<b>77/77</b>	<b>74/74</b>	<b>49/54</b>	<b>51/54</b>
23. Number of students who fail the OSCE exam	<b>0</b>	<b>0</b>	<b>5</b>	<b>3</b>
24. Number of students who withdraw	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>
25. Number of tutors who resign	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

These indicators were compiled by the Dean of the colleges to act as baseline before the intervention process

The researcher believed the number of nurse tutors teaching and the number of students in each year to be important as it remained as a baseline during the evaluation in test performance and behaviour change during teaching and learning (see table 6.3). Robinson (2013) pointed out that the test performance of the students determines the skill acquisition, proficiency, sound clinical decision making and self-confidence of the students in nursing education. This phase also helped to plan the time allocation for both classes and at the clinical area. The tutors' participation in the teaching process was also planned so it was known at the end of the teaching block. This is because different nurse tutors have different courses in which they participate. Since weightages for different modules were known, some modules were allocated to more than two nurse tutors. These indicators were made in such a way that they were user friendly to both the nurse tutors and the students. This is because Castagnolo (2010) noted that designing a user-friendly interface and indicators, facilitates delivery of learning modules and enhances usability to nurse tutors and students.

It was also agreed that the evaluation of the students on tests would not only be on *multiple-choice items* but also on *simple essay questions*. Thereafter, a blue-print was designed to classify the content, type of tests, type of questions, topics to be asked and student activities to be done. Each learning module was designed to have its own reflective learning module activities as an assessment criterion that facilitated constructive learning among students. Each nurse tutor was given the template of the blue print to fill in the content and type of questions expected on each topic. Koneru (2010) pointed out that reflective exercises help in formative evaluation of the learners whereas the summative evaluation requires assignments, exercises and quizzes. Thus, the content area (topics), the objectives and type of questions were critically weighted based on Bloom's Taxonomy of educational objectives. Koneru

(2010) adds that professionals need to design an interface with the instructional matter experts that focus on knowledge level, comprehensiveness, applicability, analytical level, synthesis level and evaluation levels.

Another important task that was completed during the design phase of the ADDIE model, was that of sequencing the teaching and learning instructions. This was an easy task as the module delivery at Nkhoma is done in semesters. There are two semesters per year and the curriculum was already designed to fit modules into specific week allocations within the calendar year. Each module was already designed to have a specific number of weeks, therefore, for each topic, nurse tutors designed what approach they would use when delivering the content to students in class. This means that the Nkhoma teaching strategy succeeded in accommodating all the topics for all modules. All modules that were to be given to first-year students in the first semester were also properly allocated to potential nurse tutors. Even the modules that were for third-year students in the first semester were allocated to the nurse tutors who had adequate experience in similar areas. Nurse tutors were also advised to sequence the assessment criteria from easiest to most difficult. This was done to allow knowledge integration that starts from known to unknown and from simple to complex.

After a thorough designing of the instructions and evaluation, including the sequencing of teaching and the learning materials levelling, there was need to review the programme process of the teaching strategy delivery. This affected the planning process on how the nurse tutors would be teaching using the new teaching strategy. The module format was maintained as this was seen not to affect the delivery of the material in class. The review of the design phase included the *implementation* and *evaluation costs, efforts* required and a *schedule for each* module and the *examinations*. This means that nurse tutors were asked to devise a master plan for each module and examinations. These were then compiled by the Dean, resulting in an overall College teaching master plan.

*Grading and marking* of the exercise tests and essays from the students were also tabulated. This means that levelling of students' performance was also gauged. In each course or module nurse tutors were told to summarise the students' performance according to *Blooms taxonomy* (see table 6.4). These were ranged from the knowledge level performance of the students up to the evaluation level performance of the students. It was also agreed that since most of the examinations are done through multiple-choice as per curriculum requirement,



such examinations must be evaluated on comprehension and application depending on the level of the multiple-choice items in the examination. Koneru (2010) notes that Blooms taxonomy of the education evaluation helps not only with the weightage of the content but also the levelling of the examinations.

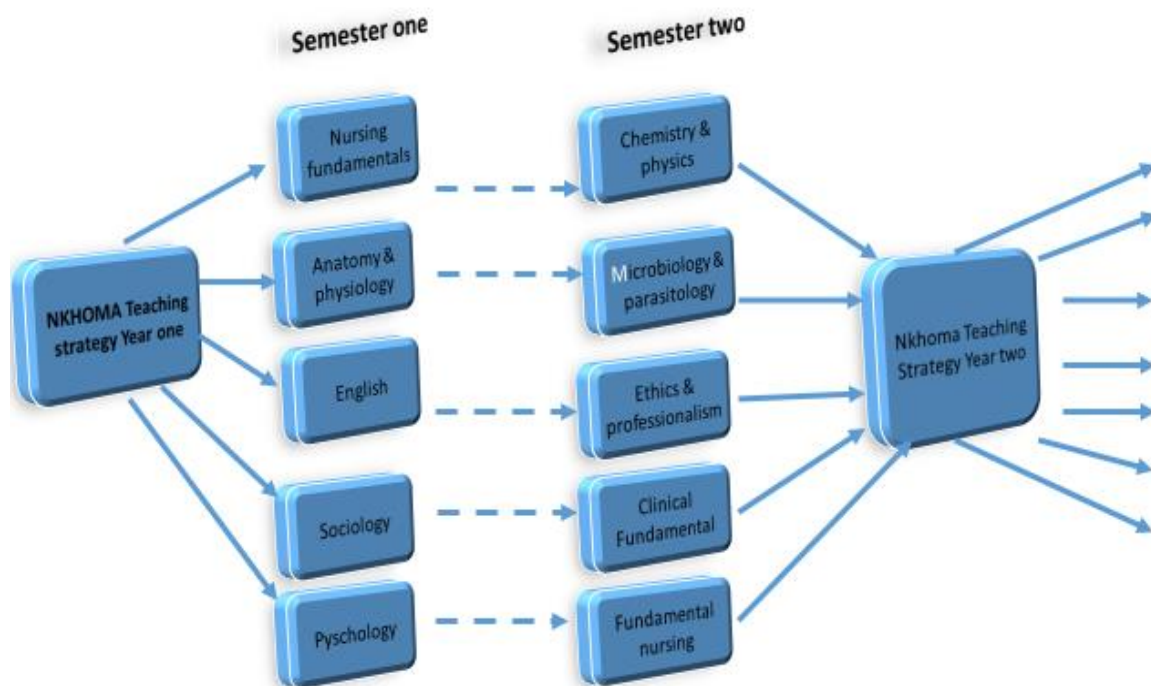
The delivery evaluation was also designed to be done after every class with the use of oral questions and after every semester through a written evaluation on a formatted teaching strategy evaluation form. Nurse tutors could copy items from the teaching strategy checklist and give these to students at the end of the module before writing the examinations, in order to evaluate the method of teaching. This type of assessment was done to encourage nurse tutors to evaluate their own behaviour as well as students reaction to the teaching and learning experience. Wang (2009) explains that multilevel reviews help to determine the multilevel students teaching interaction achievements.

The form of evaluation was graded according to Blooms Taxonomy. There are six levels of evaluation in the Blooms Taxonomy. Each level was designed to have a ranking criteria of student performances. The performance was measured from undoubted failure to outstanding. The undoubted failure represented a score of 40% or less and required students to repeat the module. A fail was between 41-50%. Those students who failed, could write supplementary examinations. Marginal pass was from 51 to 55%. A moderate pass was from 56-60% and was deemed as satisfactory. While 61-75% was above satisfactory, any grade from the students above 76% was deemed as outstanding.

**TABLE 6.4 NKHOMA EXAMINATION GRADING USING BLOOMS TAXONOMY**

<b>Blooms Taxonomy</b>	<b>Undoubted Failure</b>	<b>Fail</b>	<b>pass</b>	<b>Moderate pass</b>	<b>Satisfactory</b>	<b>Above Satisfactory</b>	<b>Outstanding</b>	<b>TOTAL</b>
	>40%	41-50%	51-55%	(56-60%)	61-65%	66-75%	76%>	
<b>Knowledge level items:</b>								
Year one								
Year two								
Year three								
Midwifery								
<b>Comprehension level items:</b>								
Year one								
Year two								
Year three								
Midwifery								
<b>Application level items:</b>								
Year one								
Year two								
Year three								
Midwifery								
<b>Analysis level items:</b>								
Year one								
Year two								
Year three								
Midwifery								
<b>Synthesis level items:</b>								
Year on								
Year two								
Year three								
Midwifery								
<b>Evaluation level items:</b>								
Year on								
Year two								
Year three								
Midwifery								
<b>GRAND TOTAL</b>								

Another important area that was completed during the designing phase was the creation of flowcharts for the performance process of the new teaching strategy, the administration leadership, the clinical leadership and the student leadership. The creation of flowcharts also helped to create tangible face validity to the teaching strategy development. The flowcharts included content served to demonstrate alignment between the instructional flow and the content focus during teaching in each year (Strickland, 2014). This suggests that in each year of student study, nurse tutors were designing the flowcharts of the module being taught.

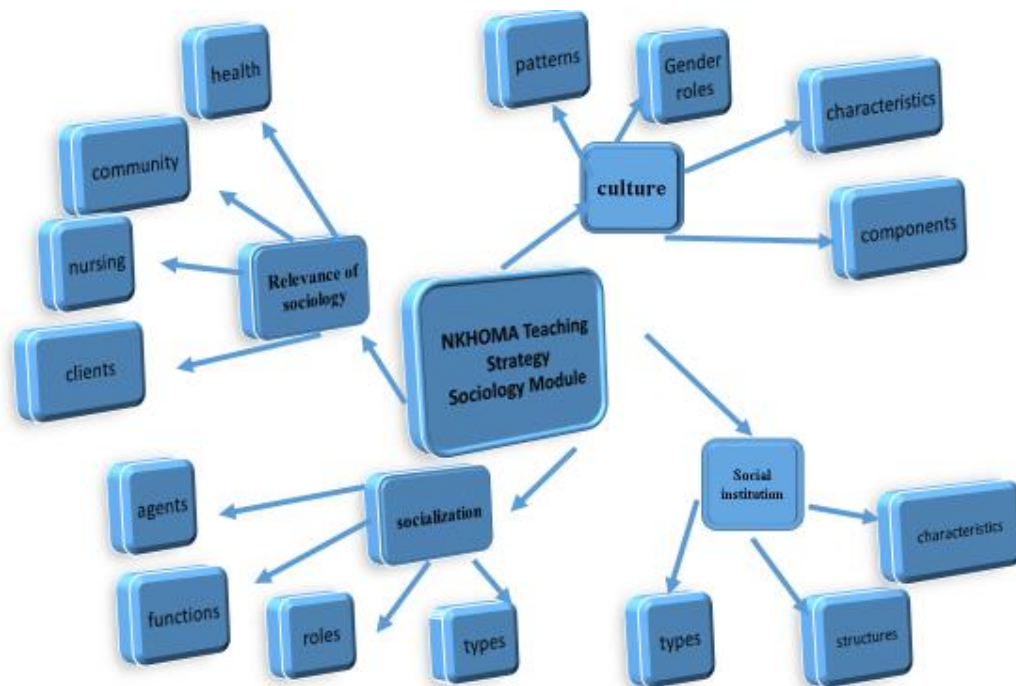


**Figure 6.4: Nkhoma teaching strategy and the year one modules**

This is a reflection of the modules and teaching strategy utilization

In each year there were various modules that nurse tutors realised were fit for use in the new teaching strategy. This is because all the modules were seen to require nurse tutor *interaction*, improved *competences* and improved *performances*. For example, in the fundamentals of nursing module, students are taught basic nursing skills that require assessment of the patient diagnoses, the clients problems interventions and evaluation of care (See figure 6.4). In all these steps students must comprehensively and analytically interact with the patient or client. Therefore, it was agreed that the teaching strategy must be used in all the modules in all years. To this effect all years namely year-one, -two, -three and midwifery class nurse tutors

were told to design their reflective flowchart of the teaching strategy above for each module as in figure 6.5.



**Figure 6.5: Nkhoma teaching strategy and sociology module**

This is a reflection of the module and content on utilization of the teaching strategy

UNIVERSITY of the  
WESTERN CAPE

The designing of the teaching strategy was not only done in different modules but also for the teaching topics within a specific module. It was agreed that since knowledge acquisition is facilitated by successful nurse tutor–student interaction, there was need that in each module, topics must be delivered using the Nkhoma teaching strategy. For example, when a nurse tutor is teaching a sociology module to students, it is important for the nurse tutor and the student to interact successfully in order to ensure that the content of each topic within the module is successfully delivered and that the nurse tutors’ performance is of a high standard. McGriff (2000) concurred that in the designing phase of the ADDIE model, instructors must outline the methods of how to reach the instructional objectives determined during the analysis phase and comprehensively expand the instructional foundations. Moreover, Bichelmeyer (2005) analysed that ADDIE model helps to put discrete bits of programme information into an overarching conceptual framework that would assist students to internalise knowledge without strenuous synthesis.

The last component of the designing phase that was completed, was discussion and the designing of an appropriate lesson plan. It was noted that the previous lesson plan that included an introduction, manifestation contribution factors, medical treatment, nursing management and complications was successful, and it was agreed to continue using the lesson plan without any changes. Nurse tutors were told that in order to ensure consistency and accountability with the designing of the lesson plan, the Dean should be given a copy of the lesson plans in electronic format, so as to create the electronic data for each module.

### 6.3.0 DEVELOPMENT PHASE OF NKHOMA TEACHING STRATEGY USING THE ADDIE MODEL

The main activity of the development phase of the Nkhoma Teaching Strategy (NTS) was to develop a prototype in order to trial run the new teaching strategy. This was done through the practical training of nurse tutors who were to take part in the implementation phase. The development phase of the ADDIE model started with the step by step activities of rapid prototype development. Rapid development focused mainly on the progressive advancement of the Nkhoma Teaching Strategy attributes.

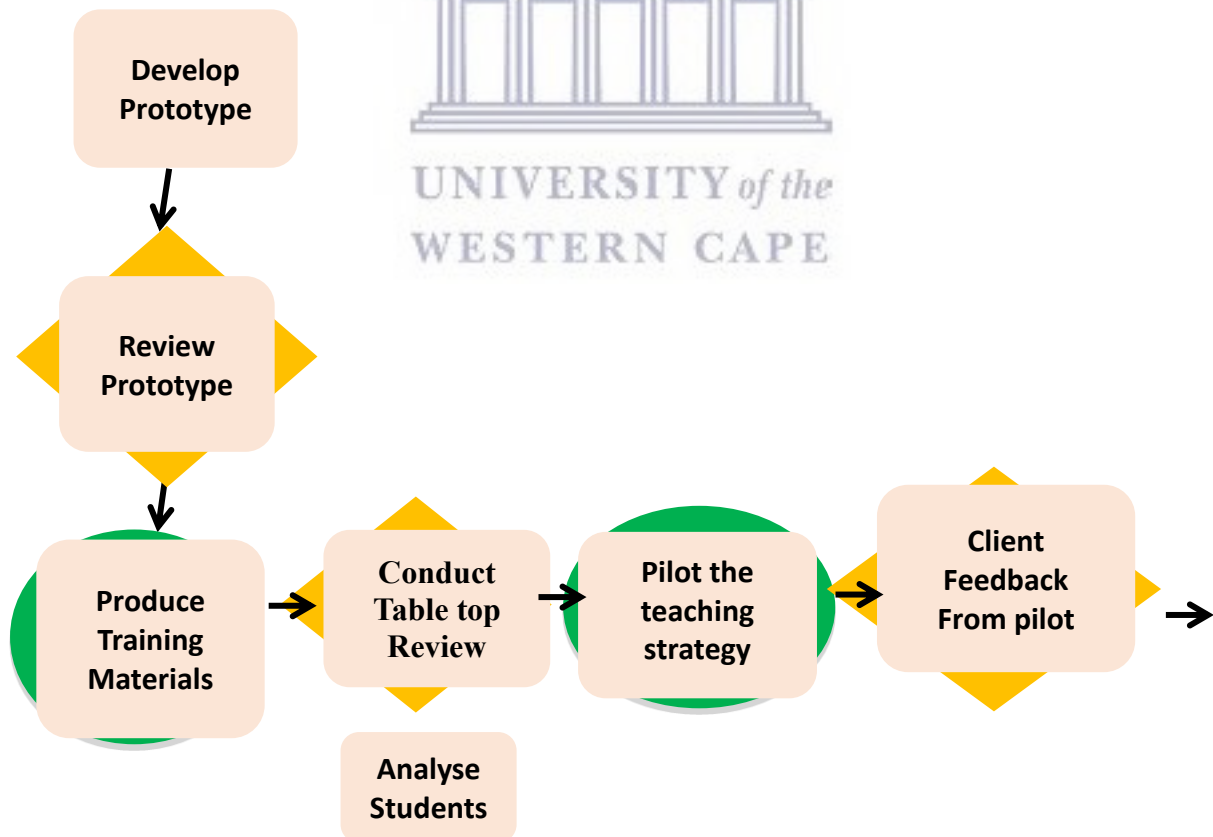


Figure 6.6: Development phase of the ADDIE model

These were the cycles of revisions during the designing phase that offered clear guidance for the new Nkhoma Teaching Strategy. Rapid prototype also offered nurse tutors with intrinsic, logical pathways in the teaching strategy.

These intrinsic pathways focused on how the nurse tutors would familiarise themselves with the teaching strategy that focused on nurse tutor-student interactions, nurse tutor competences and nurse tutor performance. The rapid prototype in the development phase relied on the use of quality information from the attributes of the main areas. Boulet (2010) concurred that quality information during the development phase allows the designers to feel confident that the instructional context is stable, and there are no unforeseen events that may hinder implementation of the programme.

Therefore, nurse tutors from Nkhoma Nursing College were encouraged to familiarise themselves with the attributes during the designing phase. Moreover, the nurse tutors found it easy to internalise the attributes as they had been working closely with the task force groups during the designing phase.

It must be pointed out that the rapid prototype assumes that there is *expertise of the designers* when designing the new teaching programme. To this effect, only experienced nurse tutors, with more than two years' experience, and who showed a high level of professionalism, were involved in the designing and development phase. This was done because Boulet (2010) pointed out that nurse tutors can master the process of the teaching strategy and will not make errors during the implementation phase.

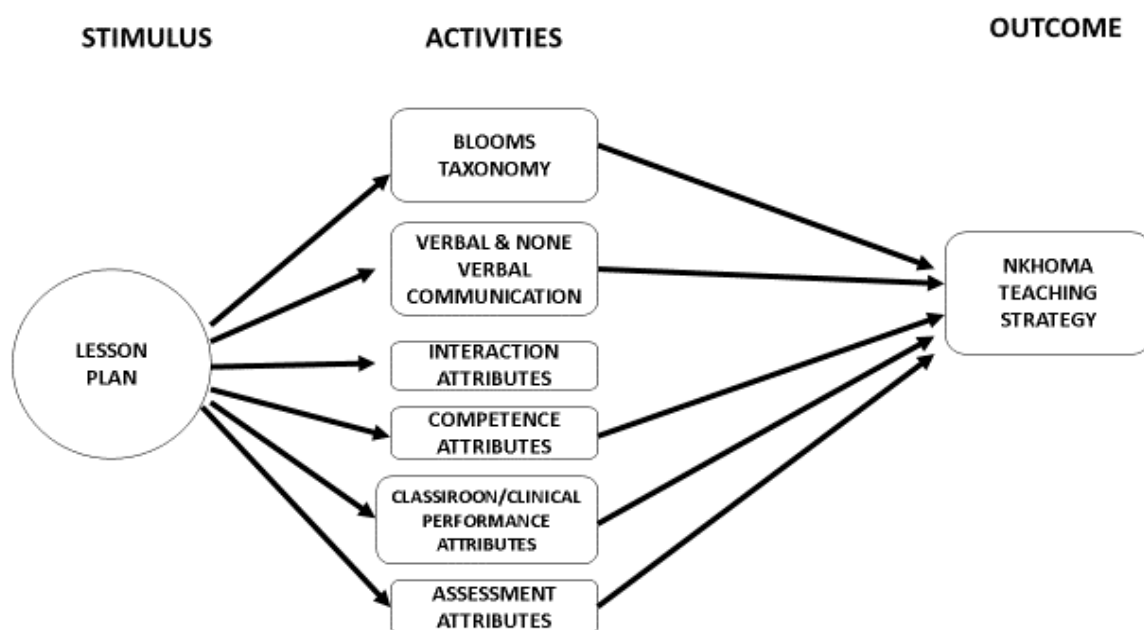
The most important element completed was the reviewing of the rapid prototyping activities. This was a thorough, step by step review of the progressive advancement of the new teaching strategy attributes, from the designing phase to the development phase. Nurse tutors were given the task, through cycles of revision, to re-examine each objectives' attributes collected during the designing phase. It was very important to review the attributes as it highlighted some errors which could be corrected, particularly with the flow of the attribute in each area.

### 6.3.1 DEVELOPMENT FRAMEWORK OF NKHOMA TEACHING STRATEGY

The *reviewed attributes* of the new Nkhoma Teaching Strategy provided the bench mark for the technology-based training to nurse tutors. This process allowed for the promotion of discussion within the nurse tutor groups in a focussed way. This is because nurse tutors were able to concentrate on the facts and the results of the training, with an emphasis on the attributes in each training area.

The development phase allowed for building shared understanding and responsibilities among nurse tutors from different departments. The shared understanding was mainly based on the use of the development framework of the Nkhoma Teaching Strategy.

The most important element of the Nkhoma teaching strategy framework in the development phase was the *identification of the type of lesson plan* for use in the Nkhoma teaching strategy development. The lesson plan acted as a driving force for the initialisation of types of activities required for the strategy to be delivered. Boulet (2010) added that developing a prototype is the first step while *front end analysis* is generally viewed as an on-going, interactive process between subject matter, objectives and the materials (See figure 6.7).



**FIGURE 6.7: Development Framework of Nkhoma Teaching Strategy**

This means that with respect to the development framework, there was a lesson plan, which triggered specific activities that needed to be introduced in a specific order, to ensure that the teaching strategy was effectively delivered. These activities were the specific objectives that generated the attributes. However, *levelling* of the activities became paramount. Therefore, the selection of the level was made by using *Blooms taxonomy*. If the lesson plan was aimed at first-year nursing students, then the nurse tutor would be required to use lower levels of the Blooms taxonomy, such as comprehension and application, but if the lesson plan was being presented to third-year students, there was a need to use upper levels of the Blooms taxonomy. This means that the check list of the Nkhoma teaching strategy was also selective on most parts. It was agreed that each nurse tutor must develop a lesson plan that is comprehensive before going to class. The checklist for each lesson plan should include: the topic, objectives, introduction, content, formative student assessment, break time, period time, and the level of Blooms taxonomy. It is imperative that the content reflects the learning material. The lesson plan must keep in mind the student level of learning to prevent diversion from the objectives. Therefore, there must be suitable selection of teaching content that focuses on the objectives. For this to be consistent, nurse tutors were reminded to make use of the teaching modules as a guide in content development.

They were also reminded that there would be a need to monitor the content. The organization of the content should also reflect the cognitive, psychomotor and affective domains. It was also pointed out that nurse tutors must resist the temptation to add more than what is normally required at the particular student level of the teaching module or syllabus. In this way delivery of the Nkhoma Teaching Strategy proceeded smoothly during the training.

Nurse tutors were advised, during the training, to familiarise themselves with the content before going into class. It was agreed that each nurse tutor must make a clear distinction between the dispensing of information and performance enhancement. The nurse tutors, during the training, agreed that performance enhancement must be their main goal when teaching. This means that they must take cognisance of the need to use the Nkhoma Teaching Strategy attributes.

Another important area covered during the delivery of the Nkhoma Teaching Strategy, was the use of verbal and non-verbal communications during teaching. Attributes such as *nodding*, *eye contact* and *moving* were felt to be important non-verbal communication



techniques by students during teaching, (see the table 6.5), while voice tone and word repetition were seen as important verbal communication attributes. Boulet (2010) added that verbal and non-verbal communication interaction establishes expectations and solidifies stakeholder buy in of the programme.

The interactive attributes were also added as an important activity during the implementation of the teaching strategy. Stien (2007) pointed out that if the interactive attributes are not comprehensive and are overly complex, this can derail successful results during the working sessions and demotivate students during teaching. The interactive attributes are the key activities during delivery of the teaching strategy since learning is highly facilitated by active interaction among students as well as between the nurse tutor and the students. The interactive attributes are very important for nurse tutors during teaching as they make the lesson come alive.

Nurse tutors' competence attributes are another important group of activities that facilitate teaching. To this end, all nurse tutors at Nkhoma Nursing College were familiarised with the competence attributes. These activities allow the nurse tutor to deliver the lesson plan with a smooth teaching strategy. Competence attributes focus on how nurse tutors should prepare before going to teach. Organisation of the lesson plan, student presentation and her/his conduct in class or clinical area was very important as part of the competence activities.

The classroom and clinical nurse tutor performance, was another important activity group that was identified as part of the smooth delivery of the lesson plan. Nurse tutor performance attributes help to determine the teaching strategy outcome level.

If the performance attribute of the nurse tutor during teaching, did not meet the expected standard required by students, demotivation would result.

Another important area that was resolved were the assessment attributes. This is the systematic and thorough student evaluation format used to evaluate students' progress with regards to their performance in both the classroom and clinical areas. In this regard, the nurse technician curriculum, which is being used at Nkhoma Nursing College, clearly stipulates that multiple-choice questions must be paramount in student assessment. This was arrived at due to the large number of students versus the shortage of nurse tutors in the nursing colleges.

Therefore, the task force for the Nkhoma Teaching Strategy agreed that they would continue to use the formative and summative assessment, with multiple-choice items as the main option to students' assessment. United Nation Institute for Training and Research (UNITaR) (2014) pointed out that a student must have a consistent method of student assessment before they move into a higher level of training. This would suggest that Nkhoma Nursing College uses a successful method of assessment when applying the Nkhoma teaching strategy.



**TABLE 6.5: NURSE TUTOR TRAINING ACTIVITIES OF NEW TEACHING STRATEGY IN THE DEVELOPMENT PHASE**

DATE	MAIN ACTIVITIES	SPECIFIC RESPONSIBILITIES	OUTCOME
<b>Day one</b>	Review of the development of the <b>Lesson plan</b>	-Process of the normal lesson plan -Resources of good lesson plan -Advantages, disadvantages and implications of lesson plan	Nurse tutors appreciated on implication discussion.
	Review of the <b>Blooms taxonomy</b>	-Steps of Blooms taxonomy i.e. knowledge, comprehension, application, analysis, synthesis and evaluation	Some members found this step to be new and adopted.
	Review of steps in <b>disease condition</b>	-Steps involved introduction, aetiology, contributing factors, manifestations, medical diagnosis, medical management, nursing diagnoses and nursing management, complications	Very easy session as members discussed in groups.
<b>Day two</b>	Review of <b>verbal and none verbal</b> communications	Practical sessions on: eye contact, tutor movement, facial expressions, smiling, dress code, hair, word repetition, voice tone, leaning, nodding, irritating mannerisms, seating plan	Members were very happy with facial expressions.
	Review of <b>the teaching strategy</b> attributes	-Comparison of the new and old teaching strategies -Emphasis on the new attributes on the new teaching strategy, reality teaching, hands on, use of patient	Some components of the old teaching strategies were adopted to the new teaching strategy.
	Review of the nurse tutor-student <b>interaction attributes</b>	-Emphasis was on practical session on: the common attributes: cheerful, academically sociable, being rude, being talkative, over-familiar, reserved, aggressive, considerate, reflective, arrogant, accommodative, apologetic, non-judgemental, open-minded, empathetic, respectful, enthusiastic, humour, commitment, approachable, trustworthy, sensitive, advocates, honest, nurturing person, cooperation, human rights, role models, social distance, warmth, goal oriented	Member reduced fear of unknown on the new teaching strategy.
	Review of <b>the teaching aids</b>	-Emphasis was on practical session on: uses posters, uses whiteboard, uses LCD, uses training CD/DVD/Videos, uses figurative models, uses research articles, uses manual or module, uses computer, uses internet, uses patient	Resource limitation affected this area.
<b>Day three</b>	Review of nurse tutor <b>competence attributes</b>	-preparation, opportunities, identifies goal, questions, motivation, keeping track, decision mapping, facilitation, key points, objectives, content, organization, stimulating interests, clarifies material, communication, guided student time, visual/audio stimulus, significant class discussion, problem solving, student presentations, knowledge base, community liaisons, participation, stakeholders, administration support, educational materials, process monitoring	Practice session were lively with real patient brought in class sessions.
	Review of Nurse tutor <b>classroom performance attributes</b>	-Emphasis was on practical sessions on: instructional time, use of books, objectives, relevant examples, questions, gives tests, exam, marks examination, evaluates the lesson, module, resource mobilization, collaborative, constructive feedback, punctuality, tolerance, crisis, procedures, networks, skills, holistically, myths, values, constructive criticism, reinforcement, time, participation, appraisal tool, laboratory exercise, programme outcomes, gender-sensitivity	Practical sessions were lively with students' participation in class.
	Review of the <b>clinical</b> nurse tutor <b>performance attributes</b>	-orientation, expectations, objectives, learning issues, procedures, student interest, resource mobilization, communicate, clinical needs, students stress, teamwork, critical thinking, self-evaluation, skill adjustment, case study, perform skills, feedback, staff meetings, clinical tutorials, clinical group, case information, reflection, change agents, quality improvements	This was very effective when nurse tutors were taken to the clinical area practices where there were students.
<b>Day Four</b>	Review of the Nurse tutor student <b>assessment attributes</b>	-use of exhibitions, laboratory, essays, journals, short answer items, multiple-choice, projects, portfolios, interviews, concept mapping, systematic observation, long-term investigation, manipulative skills	Examinations were set in advance and members were happy with the new setup.
	Preparation of implementation	-meetings, lesson plan, coordinator selection, peer review agreement, student involvement	Members observed readiness.
<b>Day Five</b>	<b>Return demonstration</b>	-classroom and clinical sessions evaluation, distributed the checklists of attributes	5 outstanding nurse tutors

### 6.3.2 NURSE TUTOR ATTRIBUTES TRAINING

Table 6.5 above details the important training details that depict the attributes for each main activity covered during the training of the nurse tutors. This was a one-week orientation programme which was conducted to familiarise the nurse tutors on how to use the **Nkhoma Teaching Strategy** during teaching in class and at the clinical area. Nurse tutors were trained, using the main activities and the attributes on each main activity to instil a goal-oriented mind set. This was why the review of the lesson plan was done to acquaint the nurse tutors with the stimulus of the Nkhoma Teaching Strategy. In the lesson plan, the importance of the framework was discussed. It was agreed that a good lesson plan must include the teaching strategy on how the content of the lesson plan is going to be delivered. A well tabulated lesson plan must have columns for time, objectives, activities, teaching strategy attributes the assessment criteria and expected outcome. This was done in groups where nurse tutors discussed the importance of each column.

Blooms taxonomy orientation was explored during the nurse tutors training. This was an important exercise as some of the nurse tutors were clearly showing that it was the first time they had encountered this taxonomy. It was outlined that the Blooms taxonomy has six main levels that assist with teaching at different levels. Each level has a certain characteristic that must be followed to ensure that teaching has occurred at the expected level of student learning. The levels are: knowledge, comprehension application, analysis, synthesis and evaluation. The task force agreed that the levels must be utilised in accordance with the level of the students learning level during teaching. The arrangement of the levels is presented in such a way that they move from simple to complex. It was then agreed that students in year one should also be expected to express themselves using the lower levels of the Blooms Taxonomy. Students were expected to recall the facts at the relevant knowledge level during teaching. However, at the comprehension level, students were expected to demonstrate an understanding of the facts and ideas by organising, comparing, interpreting, giving, translating and stating main ideas during learning. It was also agreed that nurse tutors should expect nursing students to solve problems, both in class and at the clinical area, by applying the acquired nursing knowledge, facts and techniques or procedures during teaching which corresponds with the application level. At the analysis level, nurse tutors could expect students to break nursing information into parts, by identifying the motives and causes of the condition like development of the nursing diagnoses. Moreover, students were expected to

make inferences and provide evidence to support generation of the condition. It was then agreed that only students in year two and year three could be expected to meet the requirements of the analysis level. It was also noted that the synthesis level involves combining elements in a new pattern from the original pattern or proposing alternative solutions. While the last level of evaluation deals with defending one's opinion by making judgements about information, validity of ideas and quality of work based on the set of criteria. Therefore, the outcome of the discussion, during the training, was that the Blooms taxonomy was adopted as part of the instructional activity when using the Nkhoma Teaching Strategy.

Disease teaching process was also reviewed and agreement was reached on what to include during the teaching process. It was decided that the teaching process should be presented in the following order: introduction and aetiology of the disease, contributing factors and medical diagnosis of the disease, nursing diagnoses and nursing management, complications. It was then adopted using the Nkhoma teaching strategy, and this format would become a common student adaptation of the model very early on. This was an easy session as the members of the task force held discussions in groups. It highlighted that students are motivated by activities, appropriate challenge levels and a pace and style that is facilitative, rather than "instructive". To this effect, it was agreed, that based on the new teaching strategy, students should be given more activities on the disease process instead of merely giving them the material.

Utilization of the verbal and non-verbal communication during teaching was paramount. Nurse tutors then created the verbal and non-verbal attributes that assist during teaching. Nurse tutors even practised common irritating mannerisms that should be avoided during teaching, for example, slang, and mispronunciation of words, "Yoo" movement during teaching and inappropriate clothing. It was agreed that nurse tutors must be role models to nursing students, both in class and at the clinical area. For this to happen it was agreed that the use of appropriate verbal and non-verbal communication when teaching is very important for student learning. Nurse tutors should create classroom norms with regards to communication which should be reflected in their own teaching, to reduce uncertainty and anxiety among nursing students.

The training of the nurse tutors then progressed to the review of the previous teaching strategies and compared them with the new teaching strategy based on specific attributes. It was noted that the use of real patients during teaching was more successful when learning as opposed to using simulators or manikins. The patients were taken from the hospital to the learning environment, after thorough arrangements had been made with hospital management and the guardians. These were pre-arranged, with comprehensive informed consents, from the patients themselves as well as their guardians. At times the patients were given food a token of appreciation, for their participation. Only patients that were feeling better and in a stable condition were consulted and allowed to participate. This was done on only one patient per teaching condition or disease. Some days the task force went to the hospital to run the training sessions within the hospital premises. This ensured that all the new attributes were focused on direct patient learning. The direct teaching method allows for patient contact. This was mostly appreciated by students, as they were interacting directly with the patients and thus internalisation of the knowledge was easier. Robinson (2013) pointed out that the strategy that an instructor chose to use must always enhance the learning experience, allowing students to formulate connections through first-hand experience, improving their motivation to learn. The use of the direct teaching method, within the classroom environment, allowed students to become comfortable with patient care, before moving into the clinical area, resulting in a reduction of anxiety when initially faced with a new environment and many patients. This was regarded as the systematic desensitisation of the student towards patient care. It should be pointed out, that nursing students exposed to direct patient learning, show early skill development and improved motivation towards procedure performance.

Another main area in the training process was nurse tutor orientation on how to deliver the student-nurse tutor interaction attributes during teaching. Nurse tutors worked in pairs on the different interaction attributes. Positive interaction attributes when teaching was described as being cheerful, having a sense of humour and being open-minded. Nurse tutors practiced using positive interactions, such as being cheerful and open-minded during a lesson presentation. Negative teaching interactions were also discussed and practiced in pairs. The focus of the negative teaching interactions such as talkativeness, aggression, rudeness and arrogance, was on how to avoid and prevent them occurring during teaching. One of the important points brought up and agreed upon, during a practical session on the prevention of negative interactions with students, was the need to have break periods during the class period. Other elements such as being considerate, approachable and apologetic were

identified and agreed to be preventive interactive attributes to the negative interactive attributes. The challenges of negative interaction and how it would be possible to cope with or avoid such challenges were discussed. Elements such as being accommodative, apologetic, non-judgemental, open-minded, empathetic, respectful, enthusiastic, humour, commitment, approachable, trustworthy, sensitive, advocates, were seen as important attributes that could help towards coping with interaction challenges.

The review of the teaching aids was another important set of attributes that were properly classified during the training. Emphasis during practical sessions was on: uses of posters, whiteboard, LCD, Training CD/DVD/Videos, figurative models, research articles, manual or module, computer, internet and use of patients. It was noted that most of the nurse tutors use PowerPoint presentation with LCD. Therefore, challenges experienced with PowerPoint presentation were also discussed. This mainly focused on how they should inspect and operate the LCD. This also included the use the computer and the need to reduce the amount of content on the slides. This was done to ensure that the Nkhoma Teaching Strategy is delivered to students with minimum problems. It was agreed that the teaching aids that would be used should be clearly stated in the lesson plan. This would ensure consistency and avoid confusing the student. They also reminded the nurse tutors of the importance of appropriate use of the teaching aids. It was agreed that direct teaching focuses on real patients. Therefore, it was agreed that most of the time nurse tutors must organise with hospital staff when they need to take students to the hospital for proper patient demonstrations of procedures. This was debated, as nurse tutors also felt that at times, it would be beneficial for some patients to be brought to the clinical laboratory, if the patients' condition was stable enough for demonstration. In this case, the challenges of patient involvement in teaching, such as the provision of tokens of appreciation was discussed. It was agreed that provision of monetary indices and other items such as food should not be encouraged, however, the condition of the patient and the situation when the patient is required, should be taken into account when deciding the appropriate token of appreciation.

Nurse tutors spent further time discussing how to use patients as teaching aids during teaching. It was noted that use of a patient when teaching is indeed useful, but only when the nurse tutors are well conversant with the content to be taught. If the demonstration of a procedure requires private parts exposure, it was agreed that the nurse tutor should prepare the patient in advance. The patient should receive a clear and thorough explanation of the

procedure and their written consent to the procedure must be given. Any demonstrations involving the private parts of a patient should take place in a secure, private room with a small group of.

The main practical session was spent on the competence and performance attributes. These were found to be the key elements for the nurse tutor if the Nkhoma Teaching Strategy was to make an impact to the student learning. Most of the time nurse tutors were involved with discussing: objectives formulation, content focusing, material organization, stimulating students interest, clarifying material to students, appropriate communication, guiding student time management and visual/audio presentation. It was also noted that nurse tutors must also focus on: significant class discussions, student problem solving, student topic presentations, assessment of student knowledge base, community liaisons, student participation, stakeholders' coordination, administrative support, educational materials mobilisation, learning and teaching process monitoring. Nurse tutors agreed that teaching competence enhances the students' core values of learning and motivation. This also translates to patient outcome which is directly related to student nursing care. It was also noted that the competence that a nurse tutor has with the facilitation of relevant learning activities can lead to a higher level of student motivation and knowledge transfer (Robinson, 2013).

The performance attributes also allowed nurse tutors to spend more time on how they internalised the attribute, thus allowing for proper delivery of the Nkhoma Teaching Strategy. According to Sweetin (2005) performance objective is a detailed description of what the learners will be able to do when they complete the unit of instruction. One or more objectives should be written for each of the skills identified in the procedure flowchart. Therefore, the test items were based on these objectives during the instructional implementation process. The training of the nurse tutors in the development phase of the ADDIE model reached its peak when the nurse tutors focused on classroom activities such as: use of books, objectives, relevant examples, appropriate questions, giving of relevant tests, provision of genuine marks from examinations, proper evaluation of the lesson, utilisation of the module, resource mobilization and collaborative teaching. It was also noted that nurse tutors needed to have classroom performance based on constructive feedback, punctuality, student tolerance, crisis management, procedures performance, teaching networks, teaching skills, holistic presentation, myths avoidance and student values adaptation. It should be mentioned that nurse tutors were also reminded of the need to have constructive criticism, teaching



reinforcement, time management, reinforcing student participation, appropriate student and peer appraisal tools, laboratory exercises, programme outcomes and gender-sensitivity. Molenda (2009) noted that if the instructors are well versed with the content, face-to-face delivery becomes easy and if required, last minute changes can occur before teaching begins in the classroom. Therefore, having a high level of competences would assist the nurse tutors to deliver the face-to-face content with minimal problems.

Clinical nurse tutor performance attributes were also discussed during the training. It was noted that orientation, student expectations, lesson objectives, learning issues must be paramount during teaching in the clinical area. There was a need to have checklists on procedures which would promote student interest. There was also a need for the nurse tutors to have resource mobilization, good student communication with regards to patient management and be able to meet the students' clinical needs. Nurse tutors agreed that a student become stressed if they are not properly supervised. There was need to differentiate between student policing and independent student clinical teaching. It was agreed that teamwork would help to reduce student problems. Critical thinking, self-evaluation and skill adjustment must be encouraged in students during teaching. In the clinical area, it was agreed that students should perform case studies and skills assessment through OSCE, and nurse tutors must provide relevant and timely feedback to students within the clinical departments. For peer review, nurse tutors, during the training, agreed to have periodical staff meetings, periodical clinical tutorials with students and clinical nursing staff, where case information and student reflections would be discussed. It was agreed during the ADDIE model development phase training, that nurse tutors must act as change agents to nursing students not only in class but also at the clinical area. This would ensure that the quality of student nursing care improved.

### **6.3.3 STUDENT ASSESSMENT PREPARATION**

During the fourth day of the nurse tutor training the focus was on student assessment preparation. It was noticed that not much emphasis was placed on the evaluation of practical skills as part of the nursing student assessment. Therefore, time was spent discussing how to assess the student's abilities in the *laboratory skills department*. It was noticed that they already had a good student assessment clinical programme called OSCE (Objective

structured Clinical Evaluation). In this type of assessment, student clinical acquisition of skills is assessed. This occurs at the end of each students' clinical allocation, after each level of learning. At the end of each year, students receive a summative assessment on the skills and procedures that they have studied during the year. Therefore, members of the task force during training, agreed that assessment tools should also be reviewed to align the new teaching strategy with the existing clinical assessment. It was also agreed that those clinical nursing staff, who were not at the training, must also be familiarised on the *new assessment tools*, thus ensuring consistent student clinical assessment. Robinson (2013) noted that student assessment, in the ADDIE model process, must start in an earlier phase of development. This would allow time for careful planning with suitable reflective contemplation. It was agreed that the Blooms taxonomy would assist in student assessment to avoid under or over assessing the student at their level of training.

During the training, nurse tutors were informed of the importance of assessing the student, using the material that they were exposed to during teaching. It was agreed that mid-semester examinations must always focus on the material covered during that time-period and it would be part of the formative assessment. It was agreed that end of the year examinations be conducted after module completion and clinical student exposure, and this would form part of the summative student assessment. It was agreed that the effectiveness of the Nkhoma Teaching Strategy would be achieved through assessment of knowledge transfer, such as skill proficiency, mainly demonstrated through clinical student performance. The effectiveness of the teaching strategy would also be found in the objective test performance. Therefore, the OSCE results of the students would be used to evaluate individual nurse tutor delivery of the content using the Nkhoma Teaching Strategy. The classroom test performance of the student would also give a clear picture of the individual nurse tutor utilization of the Nkhoma Teaching Strategy. To this effect, it was agreed that there should be a common checklist of the main indicators of the student performance in class and at the clinical area. All the nurse tutors therefore, were asked to review the main indicators that were identified during the designing phase of the ADDIE model (see table 5.3). It was agreed upon, that the method of student assessment would focus mainly on multiple-choice examinations. This was implemented due to the number of students in each class, 60 students to one nurse tutor, per teaching module. However, it was agreed that the *Blooms taxonomy* must be used when designing the *multiple-choice questions* for each student assessment level. Robinson (2013) concurred that standardised student assessment is highly correlated with success. Therefore, it

was agreed that nurse tutors who were unable to formulate effective multiple-choice questions must also undergo comprehensive training.

After noting that nursing requires comprehensive critical thinking, members in the training agreed that while multiple-choice should be the main assessment criteria, there was need to include some essay questions in class, and use the portfolio assessment, at the clinical area. Each examination essay question should be written concurrently with the development of the content. This is because in test construction, the test questions should correspond directly to the performance objectives. In this way it was ensured that the test questions were valid, that is, they measured what needed to be measured. Each *essay question* was classified according to the module and the specific instructional objectives it assessed. Therefore, nurse tutors agreed that they would allocate 30% of the examination to essay questions and another 30% of the clinical examination, to the portfolio assessment. Sweetin (2005) added that the most important factor in *test construction* is that the questions must directly correspond to instructional materials covered in the module. To alleviate the difficulty of marking many scripts due to the large number of students, it was agreed that departmental heads should organise pool-marking as soon as possible after examinations had been written. *Pool-marking* is where more than one member of staff assemble and in a deliberate and coordinated manner, mark and exchange student examination scripts. In this way, it was then agreed, that it would effectively evaluate nurse tutor performance during the use of the Nkhoma Teaching Strategy both in class and at the clinical area.

Portfolio assessment was based on student clinical evaluation. Members agreed that students should provide portfolio assessments in the clinical area. This would focus on patient management and decision making during patient care. The purpose of developing a portfolio was to provide evidence to the nurse tutors, of student experience, education, and personal and professional development during patient care, in the field of professional nursing. It was also observed that nurse tutors should help students identify, not only those areas where they had sufficient experience, but also those clinical areas where they could benefit from increased exposure. Therefore, a checklist on portfolio development for students was made. Students were supposed to reflect on their management of patients, as well as what they had learnt during this process and how it might influence their patient management approach in the future. Issues to consider were: obtaining consent, patient access, nursing management of medical conditions and pharmaceutical needs. The structure of the portfolio guided the

students in accurately recording clinical experiences and continuing professional development in the area. This was a formative clinical assessment that would benefit the final clinical summative student assessment called OSCE.

It was also agreed that nurse tutors should provide prompt feedback to students. Once the students have written the examinations and these have been assessed, then script distribution should follow immediately and the correct answers should be provided to students as well as an oral discussion in order to promote and improve their performance during the next examination. Those students who pass with high grades, should have their efforts acknowledged in class to further motivate them. A Student Deans list could be established and a token of appreciation shown to the top ten achievers during each semester. It was agreed that those students who were failing should receive verbal and written warning. The feedback must include both correct and incorrect answers and it should be explained how the questions link to the learning material. It was also discussed that students should be given time to evaluate the examinations and to provide feedback as to whether they felt they were in line with the curriculum. This must be done after completing the module in class or at the clinical area.

Based on the results of the examination, the college agreed to offer remedial strategies to the students who did not perform well, either by allowing them to write supplementary examinations, or repeating the year, depending on the extent of failure. The students would be given a chance to sit for a supplementary examination no earlier than 2 weeks after release of examination results and it was graded as 55% (pass). It was also agreed that supplementary examination shall be permitted if a student has a marginal failure in one or two core courses, and 50% of supporting courses, or has passed all core courses but has failed 40% of supporting courses. These rules are compatible with what is stipulated in the curriculum.

#### **6.3.4: EVALUATION PREPARATION**

The training culminated with nurse tutors discussing the way forward after training, with a focus on implementation. It was agreed that periodical meetings should be conducted, under the leadership of the Dean, to check if the members were utilizing the Nkhoma Teaching Strategy properly. Reflective exercises, both with the nurse tutors and students should be

done. These should include both formal and informal assessments of the content delivery and utilization of the Nkhoma Teaching Strategy. Nurse tutors and students should be asked, independently of each other, to assess the important points that had been examined, with a focus on interaction challenges, teaching competence and teaching performance areas. This type of assessment was included, to encourage nurse tutors to actively engage in evaluating their own teaching experience in the use of the new teaching strategy. Students would be given an evaluation form at the end of each semester to evaluate, anonymously, the nurse tutors use of the teaching strategy.

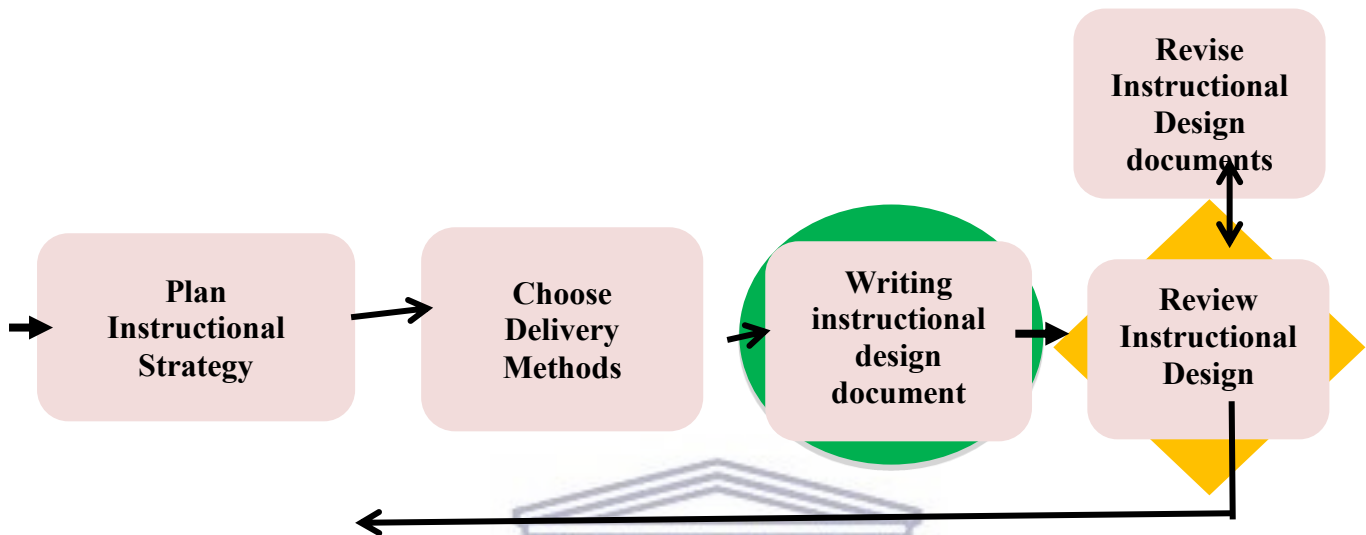
Curriculum review was another important area that the nurse tutor would need to complete after every semester. It was agreed that during this period, the progress of the nurse tutors in the utilization of the Nkhoma Teaching strategy would be reviewed. In the curriculum review meetings, nurse tutors would have the opportunity to discuss the teaching module, time frame, content of each module, teaching strategies and student assessments.

Direct consumer marketing was another important area that was discussed as part of the evaluation. It was agreed that parents of prospective students should be approached through media marketing. Both radio and television stations should be approached and provided with the marketing themes. Parents of existing students should be invited to an orientation day at the beginning of each year, to review both student performance and the curriculum. This meeting would also include stakeholders such as the ministry of health, CHAM headquarters, Chiefs, Religious leaders, secondary school leaders and business people. It was noted that these are community influencing members who would help to uplift and spread the good reputation of the teaching process of the nursing college.

Quality assurance meetings were also discussed, and it was felt that heads of department and the Dean should have monthly meetings on the utilization of the teaching strategy. This would look at nurse tutors' peer and student reviews with regards to their classroom and clinical performance. The Checklist of the Nkhoma teaching Strategy should remain as a guide during the discussion.

It was agreed that all the teaching schedules must be given to the Dean who would collate them into a semester master schedule for all teaching modules. This master plan should be presented in such a manner that it clearly communicates to both students and nurse tutors, the

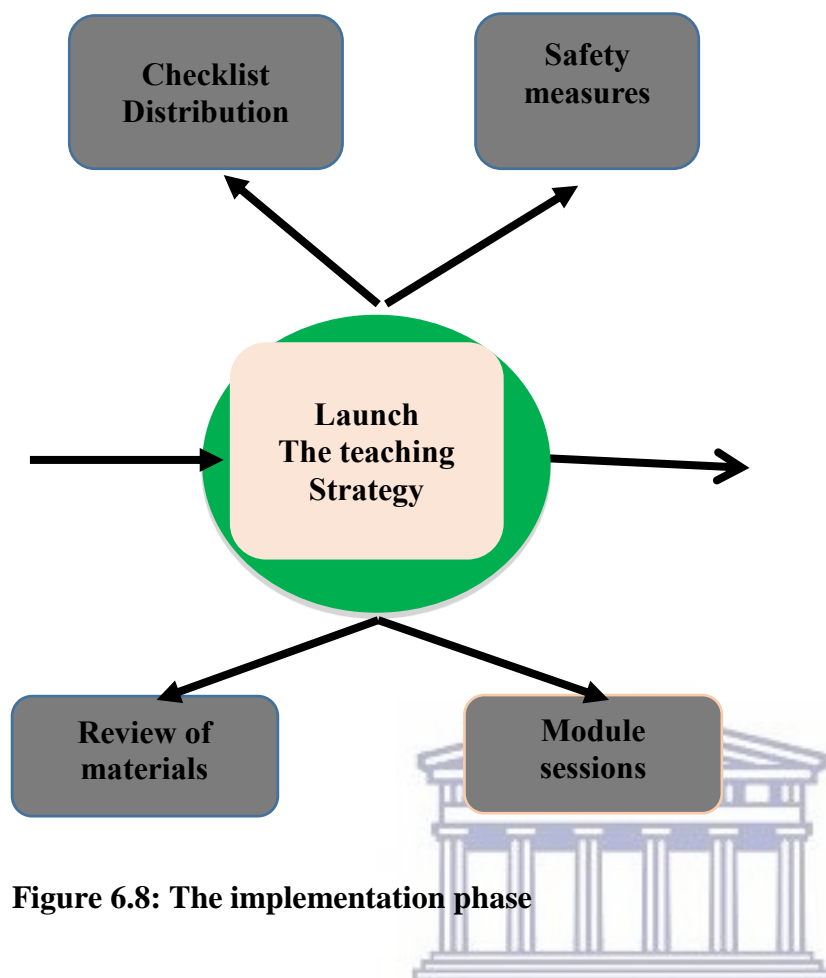
criteria for each module as well as the assessment and evaluation schedules for both classroom and clinical modules.



**Figure 6.3: The designing phase**

This is a second level of the ADDIE model that has five different stages

In this phase the actions of the Nkhoma Teaching Strategy were put into effect. After thorough training of the nurse tutors, the Nkhoma teaching strategy commenced both in class and at the clinical area. Second- and third-year students were actively selected to participate in the Nkhoma Teaching Strategy as planned in the design phase. During the first four weeks, nurse tutors taught in pairs and did peer evaluation after every class, using the *Nkhoma Teaching Strategy Checklist*. During this time needs and errors that were discovered during the development phase continued to be corrected.



**Figure 6.8: The implementation phase**

The checklist distribution was provided to all nursing staff who were taking part in the implementation phase of the Nkhoma Teaching Strategy. The Dean of the College was responsible for distributing the material to all nurse tutors. After every class that the nurse tutors had taught, they had to conduct a self-evaluation of the teaching session, using the checklist. In this checklist, it was agreed that achievement of 50% of the guidelines would be considered average success. This means that during self-assessment nurse tutors had to ensure that they achieved more than 50% of the attributes in the checklist during teaching. There were seven sections in the checklist: nurse tutor competences, teaching aids, verbal and none verbal communications, teaching interactions, classroom and clinical teaching performance and student assessment criteria. In each section nurse tutors were required to achieve at least 50% of the attributes.

The second important activity during the implementation phase was a review of the materials being used. One of the activities was on behavioural objectives for the module follow up. On each behavioural objective, nurse tutors were asked to check the materials that would assist

them in delivering the content successfully. Training materials include: flip charts and markers, hand-outs for students, job aids such as tables and chairs, placards, well prepared PowerPoint slides with a working LCD, script for nurse tutors, transparencies, white board and markers. It is worth repeating that adults learn best when they have a crystal clear understanding of their projects and the teaching aids are used effectively; hence we use behavioural objectives in all lesson plans (Welty, 2008). It was agreed that depending on the size of the class, class time-constraints and the limited resources available in the college, the material review must be done a day before class presentation. This would be done in coordination with the student class presidents. The classroom allocation was also made clear on the time schedule and the type of topic that the students were going to study was also included on the class schedule. This was done to allow the student time to prepare for the class in advance.

Process materials review was an important element that needs to be done and this includes equipment review. Laboratory equipment, which included fridges, manikins, beds and mattresses and classroom equipment, which included chairs, desks PowerPoint screen and notice-boards were made available and updated every time. The review of these materials also included their control. This required students to register and sign for any equipment they borrowed, such as manikins or any other laboratory equipment. The Class Presidents were the only individuals who had permission to collect the LCD and other classroom utilities from the stores. This was done to limit the chances of equipment loss or theft.

Another important review area was the establishing of end-users in the teaching process or the target audience, namely the nursing students, for this learning product. It was agreed that the students, who form the scope of this teaching process, must have comprehensive training packages. This must originate from well prepared content for each module, using a diverse selection of current, prescribed and required books from the curriculum. Danks (2008) added that a teaching strategy that does not have comprehensive content does not produce a quality outcome. There was a need to have wide coverage of all significant topics in the syllabus within the scope of the nursing profession. The students were not only provided for in classroom but also at the clinical area. This included extra curriculum activities such as sports, cafeteria and religious activities. This extracurricular care took cognisance of: differing technical skill levels; different cultural, language, and ethnic groups, different sites and facilities; different years of study.



It was important to estimate the percentage of students that were attending class regularly. This was done through a student class register. This type of register helped to estimate student participation in the modules and determine how many dropped out. Such records provided reliable and credible data on the outcomes and utilization of the teaching strategy. It was discovered that the number of students attending a class corresponded to nurse tutors experience, training and development. Although rules of the Nkhoma Nursing College require that students must attend classes, some students will miss a class when it is boring, or if they feel they would not benefit from the learning process. They would prefer to go to the library or study at the hostels.

Student performance records were to be kept by the Dean of the college as a safety measure. The student records, such as personal files, clinical performance, skill acquisition, material records and nurse tutor personal files were kept privately by the Dean. Maintenance of accurate records of each activity, the documenting of ideas, and contributions to key work functions, allows the college to improve the teaching safety measures and enhance college reputation (Danks, 2011). The students have rules and regulations that they need to follow at the college as part of the safety measures.

Another important safety measure was on the use of protective wear within the clinical area. Students were provided with gloves, gumboots, masks and aprons when they were in the clinical area. This was done to ensure they were protected from the deadly HIV and AIDS. The student clinical leader was tasked every morning with collecting the safety materials from college stores and had to sign for them in the record book. All students were required to abide by the ethical codes and etiquettes with regards to a patient's right to privacy. With this in mind, the Professionalism module is studied in the first year so that students can adopt the discretion which is needed during patient care. In this module patient safety measures with regards to privacy and confidentiality was emphasized.

Nurse tutors were also encouraged to invite questions or concerns from the students during teaching. In each module session, students were encouraged to ask questions if they required clarification on the topics. Nurse tutors also posed different questions after every session with the students. This promoted the learning process and increased the interaction among the students and the nurse tutor.

Nurse tutors were also encouraged to encourage the feedback process during every class session by asking the students to evaluate the content delivery at the end. In this process improved interaction and reduction of the nurse tutor and student stress was noted, as feedback after every class was welcomed. Koneru (2010) added that the main purpose of an implementation is to elicit feedback for programme improvement. Therefore, it was necessary to specify how the nursing students should make their feedback.

The assigned work in class consists almost entirely of questions disseminated via a classroom/student response system. Each student was required to select a question paper at the door when entering the class, as well as a transponder, commonly called clickers. The student clickers provide instant feedback to the student. During each class session, the clicker questions provide a platform for students as they answer less complicated questions first and work toward the more complex questions at the end of the class. The clickers also provide immediate feedback to the nurse tutor, who could decide how best to proceed. The use of the clickers allowed students to prepare the answers in advance to the time of questioning during the session. Some students could select the answers as the nurse tutor was teaching. If students performed well on several similar questions, then the nurse tutor could skip a few questions and move to the next concept.

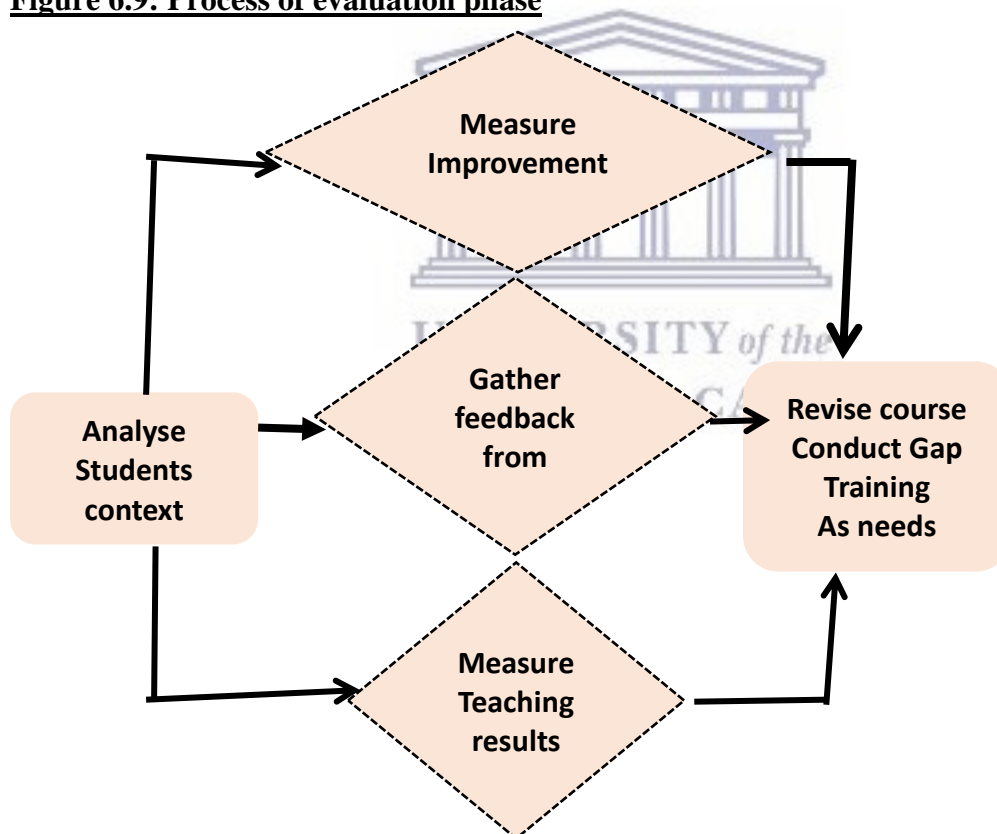
The use of collaborative group work began prior to the first class, as the nurse tutor module coordinator divided the students into equal groups, and all topics under group discussions were given to the students to work through in advance. Students were assigned to heterogeneous groups by their module instructor. Criteria for assignment included each student's intended major and gender, with no student being the sole male or female in his or her group. The groups were assigned during the very first class, and the groups were immediately engaged in activities designed to break the ice. If the groups were not selected with care, the lesson was unsuccessful. Students don't understand, or they seem unmotivated and disengaged (Strickland, 2010). This is often when behaviour issues start because students are either over- or under-challenged by the material and become bored.

#### 6.4.0 THE EVALUATION PHASE OF THE ADDIE MODEL IN NKHOMA TEACHING STRATEGY

The process of evaluation started during the implementation of the formative evaluation. Final evaluation, however, was completed after 10 months of continuous implementation in Nkhoma Nursing College. As a control college, St. Johns Nursing College was involved in the final evaluation process.

This college also had the same type of students and are taught by nurse tutors of the same level as those from Nkhoma Nursing College. St. Johns Nursing College is in the northern region of the country about 500 km away from Nkhoma. The selection of this college as a control was based on numerous factors.

**Figure 6.9: Process of evaluation phase**



It is very far from Nkhoma Nursing College, which creates better control of recall bias from both students and the nurse tutors in all stages of the model. In both colleges, nurse tutors use the same curriculum, which helped to determine the effectiveness of this model and promote reliability of this experimental study. The nurse tutor and student study experience are of a

similar nature in all levels of teaching and learning. Therefore, determining the effectiveness of the **ADDIE** model teaching strategy at Nkhoma Nursing College was scientifically sound.

#### **6.4.1 ANALYSIS OF STUDENTS CONTEXT**

The main area of the ADDIE model evaluation was to analyse the students' and nurse tutors' perceptions through questionnaire and examinations. During formative evaluation, students were given a form for evaluation after every class session. As a form of prompt module feedback to the specific nurse tutor, there were continuous reflective exercises. The blue print giving the weightage of each topic and content area, objectives and the type of questions helped to evaluate the students during mid-semester and final examinations. Koneru (2010) pointed out that deciding on the type of test (objective and subjective) depends on the curriculum guidelines. Therefore, according to the Nurse Technician's curriculum in Malawi, most of the module assessment criteria is designed in the objective format (see table 6.6).

During evaluation nurse tutors determine the instructional effectiveness of the Nkhoma Teaching strategy through a series of meetings and classroom student feedback analysis. During these meetings, which were chaired by the Dean of Nkhoma Nursing College, it was noted that students' participation improved due to the use of the new strategy. Nurse tutors themselves expressed motivation during teaching due to improved student participation that promoted nurse tutor interactions. This indicated that the new Nkhoma teaching strategy brought the desired classroom and clinical teaching and learning outcome. The learning context needs analysis during the nurse tutors' meetings helped to improve the nurse tutors approach to the new teaching Nkhoma model. The mobilization of the teaching resources improved which also helped to facilitate teaching and learning process. The gauge of the effectiveness was determined after reviewing the teaching and learning objectives during the semester, in each module and for each class.

Student performance was also determined by module performance (see table 6.6). The main areas involved the compulsory semester modules that students undertook during learning process. Both students from Nkhoma Nursing College and St. Johns Nursing College results from year one and year three were summarised. Koneru (2010) pointed out that learners participation should be evaluated by guaranteeing hassle-free navigation and usable learning modules. Therefore, in this Nkhoma Teaching strategy evaluation the learning context needs

analysis was done. The input availability and adequacy of the learning and teaching resources was also done. The process formative evaluation of the teaching programme was also done using the checklist. There was also product summative evaluation that focused on gauging the effectiveness of the teaching strategy.

To determine the Nkhoma Nursing College performance of the nursing students on the new teaching strategy implementation, their learning reactions, were evaluated in both the class and at the clinical area. Students expressed contentment during learning in class. At the clinical area, students were very happy as they saw the improvement of the nurse tutors availability during the clinical teaching process. The learning process and the adaptation to class work and clinical procedures were also evaluated. It was noted that students were doing class assignments very well with maximum consultations to nurse tutors in different specific modules. At the clinical area students were performing demonstrations for the nurse tutors with minimum anxiety. The skills that students showed to nurse tutors reflected understanding and confidence on the different procedures. Students' behaviour both in class and at the clinical area reflected development of the novice to the professional nurse, in all students. There were no cases brought to the attention of the nurse administration on any misconduct of the students during the implementation of the Nkhoma Teaching Strategy. There was improved interaction both in class and at the clinical area. Students demonstrated improved communication with their nurse tutors. All nursing students reported having consultations with their personal tutors on their academic improvement criteria. There was also improved nurse tutor punctuality in every class compared to the previous year. Students were also conducting meetings with their clinical nurse-in-charge for every allocation which had not been done in the previous year.

The students' examination results were summarised for both the control and the intervention nursing college. The analysis was based on the first year and third year students' results. Year one was taken as unexperienced students with limited knowledge and nursing skills, and third year, was considered as students with vast study experience.

After two semesters, the module summary of the year one group, consisting of inexperienced students in nursing , showed that students from the intervention area, Nkhoma Nursing College, had passed with better grades than students from the control area, St. Johns Nursing

College. This also applied to the experienced students in year three where the grade results showed that they had an even higher pass rate than those from St. Johns Nursing College.



**TABLE 6.6: STUDENT PERFORMANCE IN YEAR ONE FOR MODULE OUTCOMES**

Type of module YEAR ONE MODULE	No of students		No of passes		No of failure		Highest grade		Lowest grade		No of repeaters		No dropped out		Supplementary	
	NKHOM	St.	Nkhoma	St.	Nkhoma	St.	Nkhoma	St. Johns	Nkhoma	St.	Nkhoma	St. Johns	Nkhoma	St. Johns	Nkhoma	St.
	A	Johns		Johns		Johns				Johns						Johns
Fundamentals	73	54	69	53	04	01	85	81	44	49	nil	2	nil	nil	04	01
Clinical Fundamentals	73	54	70	51	03	03	72	75	57	52	nil	nil	nil	nil	03	03
Basic sciences	73	54	66	31	07	23	85	71	43	36	nil	nil	nil	nil	07	23
Principles practice Nur communication	73	54	67	46	06	08	77.8	79	36.9	42	nil	nil	nil	nil	06	08
sociology	73	54	73	46	0	08	90	83	60	51	nil	1	nil	nil	0	08
community	73	54	70	43	03	11	80	75	52.8	43	nil	nil	nil	nil	03	11
Communicable DIS	73	54	63	42	10	12	88	91	39	35	nil	nil	nil	nil	10	12

**STUDENT PERFORMANCE IN YEAR THREE FOR MODULE OUTCOMES**

YEAR THREE MODULE	No of students		No of passes		No of failure		Highest grade		Lowest grade		No of repeaters		No dropped out		Supplementary	
	Nkhoma	St.	Nkhoma	St.	Nkhoma	St.	Nkhoma	St. Johns	Nkhoma	St.	Nkhoma	St.	Nkhoma	St. Johns	Nkhoma	St.
		Johns		Johns		Johns				Johns		Johns				Johns
Medical Surgical	49	69	46	64	3	05	83	81	50%	48	nil	1	nil	nil	3	05
Medical Surgical	49	69	48	65	01	04	79	76	56	52	nil	1	nil	nil	01	04
Principles & Practice of Management	49	69	49	65	0	04	85	80	60	53	nil	nil	nil	nil	0	04
Midwifery Science Part	49	69	49	60	0	09	77	81	58	51	nil	nil	nil	nil	0	09
CLINICAL MIDWIFERY	49	69	49	64	0	05	86	82	61	52	nil	nil	nil	nil	0	05
Neonatology	49	69	47	61	02	08	72	78	48	48	nil	nil	nil	nil	02	08
Clinical Neonatology	49	69	48	68	01	01	78	80	57	49	nil	1	nil	nil	01	01
Community Midwifery	49	69	45	68	04	01	75	72	47.2	46	nil	2	nil	nil	04	01
Clinical Midwifery	49	69	46	67	03	02	75	74	52	50	1	nil	nil	nil	03	02

Summary of the first semester grades from the two nursing colleges as process of evaluation of the ADDIE model utilization on development of teaching strategy in nursing colleges

Eight indicators were compared in the two colleges for each module to determine the performance of the students for year one and year three. It is encouraging that the number of students who passed in these two nursing colleges were showing a big gap in each module. For example, in Nkhoma Nursing College 9.5% (7)n=73 of the students failed the Basic Science module in year one while 42.5%(23)n=54 of the students from St. Johns Nursing College failed the same module. This means that more students from the intervention college of Nkhoma passed the examinations than in the control college. Although the objective examination questions were different at these colleges, the content and level of enquiry according to Blooms taxonomy were similar. In the Communication module, the number of students who failed the examinations at Nkhoma Nursing College were 4.1%(03)n=73, while at St. Johns Nursing College 25.9%(14)n=54 of the students failed. This clearly demonstrates that students from Nkhoma Nursing College performed better in these two modules than those students from St. John Nursing College.

Moreover, in the Community Basic Nursing module in year one at Nkhoma Nursing College 4.1%(03)n=73 of the students failed the examinations while 20.3%(11)n=54 of the students from St. Johns Nursing College failed the same module. In the Communicable Disease module 13.6%(10)n=73 of the students from Nkhoma Nursing College failed the module, while 22.2%(12)n=54 of the students from St. Johns Nursing College failed the module. This also clearly suggests that the performance of the students from the intervention area, Nkhoma Nursing College, was better than those students from the control centre of St. Johns Nursing College. The grades that the students attained in the first semester of year one was also compared in the two colleges. In the Fundamentals of Nursing module, the highest grade for students in Nkhoma Nursing College was 85% while the highest grade in St. Johns Nursing College was 81%. In the Principles and Practice of Nursing module, the highest grade from Nkhoma Nursing College was 85% while at St. Johns Nursing College it was 71%. In the Sociology module, the highest grade for students in Nkhoma Nursing College was 90% while the highest grade of the students in St. Johns Nursing College was 83%. The difference in the high scoring grades also gave a clear impression that students in the intervention college were learning more effectively than students in the control college.



When the lowest performing grades were compared, it was noticed that in Fundamentals of Nursing Science module in year one at Nkhoma Nursing College the lowest was 44% while the lowest at St. Johns Nursing College was 49%. In Clinical Fundamentals, however, the lowest grade at Nkhoma Nursing College was 57% while at St. Johns Nursing College it was 52%. In the Principle and Practice of Nursing Science module, the lowest grade at Nkhoma Nursing College was 36.9% and in St. Johns Nursing College the lowest was 42%. While the lowest grade in Sociology at Nkhoma Nursing College was 60% while at St. Johns Nursing College it was 51%. From these grades it clearly shows that students from Nkhoma Nursing College performed better than students in St. Johns Nursing College in year one modules. This was in line with what Konero (2010) pointed out that the learning summative evaluation must involve collaborative individual or group assignments and tests that focus on reflecting the knowledge and skills learners absorb. In this case, it indicates that students from Nkhoma Nursing College had acquired more knowledge and skills during the learning process than those from St. Johns Nursing College. Therefore, the use of the ADDIE model in the development of the Nkhoma teaching strategy was effective.

Furthermore, nursing students who repeated modules in year one at St. Johns Nursing College were four in total while at Nkhoma Nursing College there was no students who repeated modules. Repeating a module means that student had failed in no less than three modules of the curriculum. However, in both colleges there were no drop outs. No student went away for that year. In the third year, at Nkhoma Nursing College the number of student passes for the Medical Surgical module was 93.8%(46)n=49, while the number of passes in the same Medical Surgical module in year three at St. Johns Nursing College was 92.7%(64)n=69. In the Midwifery Science Part One module the number of student passes in Nkhoma Nursing College was 100%(49)n=49 while the number of student passes in the same module at St. Johns Nursing College was 86.9%(60)n=69. In these modules, more students from Nkhoma Nursing College passed the modules than those from St. Johns Nursing College. In the Neonatology module at Nkhoma Nursing College the number of student passes was 95.9%(47)n=49, but in the same third year module, the number of student passes at St. Johns Nursing College was 88.4%(61)n=69. Therefore, Nkhoma Nursing College, as an intervention area for the development of the new teaching strategy, using the ADDIE model, produced higher

examination results than those results that St. Johns Nursing College, as the control college of the study, achieved. This implies that using the ADDIE model to develop a new teaching strategy for nursing students in a nursing college is very effective.

Moreover, in the Neonatology module, the number of students who failed the module in Nkhoma Nursing College was 4%(2)n=49, while in St. Johns Nursing College the number of the students who failed the Neonatology module were 11.5%(08)n=69. In the Midwifery Science module the failure rate for students at Nkhoma Nursing College was 0%(0)n=49 while the failure rate of students in the same Midwifery module in year three at St. Johns Nursing College was 13%(09)n=69. This also suggests that more students were failing the modules at St. Johns Nursing College than those who were failing the modules at Nkhoma Nursing College. Therefore, using the new teaching strategy at Nkhoma Nursing College resulted in students improving their grades, thereby reducing the failure rate of the students. It is also clear that the results at St. Johns Nursing College, where nurse tutors were using the same curriculum and syllabus to teach the students, show that it was the control area, where no training or implementation of the new teaching strategy, using the ADDIE model, was done.

When the highest students' grades were compared in table 6.6, it was noted that at Nkhoma Nursing College, in the Medical Surgical module, the highest student grade was 85% ,while in the same third year class at St. Johns Nursing College, the highest grade was 81%. In the Principles and Practice module in year three at Nkhoma Nursing College the highest grade was 85%, while the highest grade in the same module at St. Johns Nursing College was 80%. Even in the Clinical Midwifery module, the highest grade at Nkhoma Nursing College was 86% in year three while the highest grade in St. Johns Nursing College was 81%. In the Community Midwifery module, in year three, the highest grade at Nkhoma Nursing College was 75%, while at St. Johns Nursing College the highest grade was 71% in Community Midwifery. These differences in the highest grades highlights the importance of the utilization of the new Nkhoma teaching Strategy in nursing education. Mondela (2009) pointed out that the high grades in student examinations reflect that instruction to students was done properly where the content information, student interest and study experience were qualitatively achieved.

The nursing student evaluation also involved the achievement in the modules by classifying the lowest grades. At Nkhoma Nursing College the lowest grade in the Medical Surgical module was 56% in year three, but in the same Medical Surgical module at St. Johns, the lowest grade was 52%. In the Principles and Practice module at Nkhoma Nursing College the lowest grade was 60%, while the lowest grade at St. Johns in the same third year class of Principles and Practice of Nursing was 53%. Robison (2013) emphasised that the movement of the classroom from novice to graduate nurse is portrayed on the number of failures and the number of lowest marks in summary. Therefore, in this study, students from Nkhoma Nursing College reflected successful movement from novice to the graduate level because of quality and effective use of the new teaching strategy.

Another area that was assessed, to reflect the performance of the students, was how many students were involved in the supplemental examinations. In the year three Medical Surgical module, there were only 3 students who wrote the supplementary examinations at Nkhoma Nursing College, while at St. Johns Nursing College, there were five students who wrote the supplementary examination for the Medical Surgical module. In the Midwifery Part One module, there were no students who wrote the supplementary examination at Nkhoma Nursing College. At St. Johns Nursing College, however, there were 9 students who wrote the supplementary examinations in year three. In the Neonatology module at Nkhoma Nursing College only two students wrote the supplementary examinations, while at St. Johns Nursing College eight third year nursing students, wrote Neonatology supplementary examinations. This also indicates that the use of the new teaching strategy helped the students in Nkhoma Nursing College to score better grades, resulting in no, or a limited number of students, having to write supplementary examinations. Therefore, the Nkhoma teaching strategy has been proved to be effective in teaching nursing students in Malawi.

#### **6.4.2 ANALYSIS OF NURSE TUTOR CONTEXT AT NKHOMA NURSING COLLEGE**

Nurse tutors at Nkhoma were also evaluated summatively to determine whether the Nkhoma teaching strategy was becoming fully integrated into their normal teaching process, and to

understand their actual performance during teaching, both in class and at the clinical area. Nurse tutor formative evaluation revealed high levels of motivation as was demonstrated through self- and peer-evaluation, both in class and at the clinical area. Formative self-evaluation was mainly done after every class period of teaching, while clinical evaluation was done after supervising students in the afternoon, during nurse tutor clinical meetings.

**TABLE 6.7: TUTOR COMPETENCY ATTRIBUTES EVALUATION**

NO	Characteristics/ Attributes	Tutor1	Tutor2	Tutor3	Comments
A1	Prepares and provides an excellent strategy for practising skills during class	75%	90%	80%	
A2	Provides opportunities for students to learn	80%	90%	90%	
A3	Positions seating so that members can see and hear each other	50%	80%	60%	Poor space. Congestion
A4	Identifies and states the goal of the discussion and communicate it clearly	70%	95%	70%	
A5	Poses meaningful, open-ended questions	80%	100%	95%	
A6	Motivate student to work hard	80%	100%	90%	
A7	Keeps track of discussion progress	80%	95%	95%	
A8	Makes decision mapping or problem trees	70%	80%	70%	
A9	Describes the situation to be role-played by students effectively	90%	85%	80%	
A10	Selects facilitators in advance	70%	70%	65%	
A11	Gives instructions to role-players on time	90%	85%	70%	
A12	Evaluates what happened after skill	65%	90%	70%	
A13	Gives guiding questions to stimulate thinking	70%	95%	95%	
A14	Vigilant at teasing out the key points	70%	90%	95%	
A15	Acts as the main facilitator and coach	70%	95%	95%	
A16	Provides opportunities to expose students to material not usually available	50%	75%	80%	Not clear
A17	Precisely determine the Objectives	70%	100%	90%	
A18	Precisely determine content	70%	95%	98%	
A19	Precisely determine organization	65%	90%	90%	
A20	Precisely determine pace and direction of a presentation (students taking 60% of work and 40% by tutors)	70%	95%	95%	
A21	Stimulates interest in a subject.	90%	95%	98%	
A22	Complements and clarifies material.	70%	100%	95%	
A23	Facilitates large-class communication	90%	95%	80%	
A24	Places students in an active role, that promotes learning	90%	85%	90%	
A25	Encourages non-verbal and verbal 2-way communication to students	90%	95%	95%	
A26	Provides a considerable amount of guided student time outside of the classroom.	70%	95%	95%	
A27	Responsible to create an environment of respect and rapport	80%	100%	90%	
A28	Leads a class discussion focused on a visual/audio stimulus	90%	95%	98%	
A29	Assigns an in-class reading activity followed by a significant class discussion	70%	90%	60%	
A30	Had students complete a problem-solving game or simulation in class session	50%	80%	60%	
A31	Assigns individual student presentations	90%	90%	90%	
A32	Establishes adequate knowledge base about the issues to be addressed	80%	90%	90%	
A33	Establishes safe and supportive training and programme environment effectively	70%	85%	80%	
A34	Assists in accessing and assessing referral and support networks	50%	80%	70%	
A35	Assists in community liaisons	60%	70%	50%	
A36	Facilitates local participation	60%	85%	60%	
A37	Integrates knowledge, attitudes, and skills in teaching	95%	97%	90%	
A38	Relates support services accessible to the audience/participants	70%	90%	80%	
A39	Involves stakeholders are regularly	50%	60%	50%	
A40	Reinforces administration support	80%	60%	70%	
A41	utilises educational materials	100%	90%	98%	
A42	Encourages programme impact and process monitoring and evaluation in place	60%	70%	60%	

In table 6.7, there is a summary of the nurse tutor competency evaluation that was compiled by three independent evaluators for the different nurse tutors.

The three senior nurse tutors, who included the Principle (PhD), the Academic Dean (MSc) and the Student Dean (MSc), sat in the classroom and observed the nurse tutors teaching for an entire class. Scores were given for each attribute on the competency section. After the class an average was calculated in order to arrive at the average score for each attribute for the nurse tutor. In the analysis for Nurse Tutor1, most of the scores given on the competence attributes were above 70%. For example, provision of student opportunity, posing of questions, stimulating interest and utilising educational materials were scored above 80% for Nurse Tutor1. There were only a few attributes where Nurse Tutor1 scored around 50%. For example, attributes such as, student seating plan, problem solving stimulation and involving the stake holders. However, these attributes, are difficult to achieve in the classroom environment. Therefore, the average score in the competency attributes for Nurse Tutor1 were above 70%. This indicates that nurse tutors were able to use the new teaching strategy during teaching. This gave extensive opportunity for the students to learn and score high grades.

For Nurse Tutor2, the competency attribute scores were very high in most of the areas. The average score was 90%, with more than 5 attributes scoring 100%. Nurse Tutor2 attained 100% in the attributes such as posing open-ended questions, motivating students, determining objectives, creation of environment for respect and rapport and the utilization of the educational material. The evaluators, during their scoring of Nurse Tutor2, noted that the lowest score was 60% and the highest score was 100%, after averaging the three evaluators scores. This also clearly indicated that the nurse tutors' standard of teaching in class was above average with regards to their competences.

For Nurse Tutor3, the competence attributes scores were also very high. The average score was 75%. The lowest score, after averaging the three evaluator's scores, was 60%, for seating position of students in class, completing a problem-solving exercise with students, assisting community liaison and on involving stakeholders. It should be noted, however, that the competences, assisting community liaison and involving stakeholders, nurse tutors were not scoring high grades, as they are not a direct classroom or clinical competence attribute. Poor space in class and congestion of students caused nurse tutors not to score very high on some preparatory classroom attributes.

**TABLE: 6.8: TEACHING AND LEARNING AIDS EVALUATION**

NO	ATTRIBUTES / CHARACTERISTICS	Tutor1	Tutor2	Tutor3	Comments
B1	Uses posters	100%	70%	90%	
B2	Uses whiteboard with different marker- colours	80%	95%	95%	
B3	Uses LCD – PowerPoint- Presentation	100%	100%	100%	
B4	Uses Training CD/DVD/Videos	40%	50%	60%	
B5	Uses figurative Models from clinical Laboratory	100%	100%	100%	
B6	Uses research articles	60%	65%	50%	
B7	Uses manual or module guides	100%	80%	85%	
B8	Uses computer laboratory	100%	50%	20%	Not working
B9	Uses internet when teaching	80%	30%	20%	No net
B10	Uses patient	100%	85%	95%	clinical

**STUDENT-TUTOR VERBAL&NON-VERBAL CUES**

NO	ATTRIBUTES / CHARACTERISTICS	Tutor1	Tutor2	Tutor3	Comments
A	Eye contact	100%	85%	95%	
B	Tutor movement	100%	80%	90%	
C	Facial expressions	100%	80%	90%	
D	Smiling	100%	90%	100%	
E	Dress code	100%	75%	100%	
F	Hair	100%	80%	100%	
G	Word repetition	80%	80%	80%	
H	Voice tone	90%	90%	90%	
I	Learning	60%	70%	75%	
J	Nodding	80%	85%	85%	
K	Avoids irritating mannerisms	100%	85%	80%	
L	Seating plan	100%	60%	60%	

In table 6.8, nurse tutors were also evaluated on the use of verbal and non-verbal communications. Nurse Tutor1 at Nkhoma Nursing College performed very well on the use of the teaching aids. During the evaluation from the three professional nurses the average of Nurse Tutor1 showed 100% score rate for seven attributes such as use of posters, LCD, models, manuals, and use of patient at the clinical area when teaching. Nurse Tutor2, also scored 100% after averaging the three senior tutor evaluators' grades for the use of LCD and use of models during teaching. However, Nurse Tutor2 showed lowest grades on the use of videos when teaching, use of internet and use of computer laboratory. The low grades were scored as the nurse tutor had expressed a lack of such amenities at the college. On the evaluation of Nurse Tutor3, the average score was 100% for use of LCD and the use of figurative models in the clinical laboratory, however, it was also noted that scores for the use of research articles, internet and computer laboratory were low. Generally, nurse tutors were found to make adequate utilization of the teaching aids during teaching, both in class and at the clinical area.

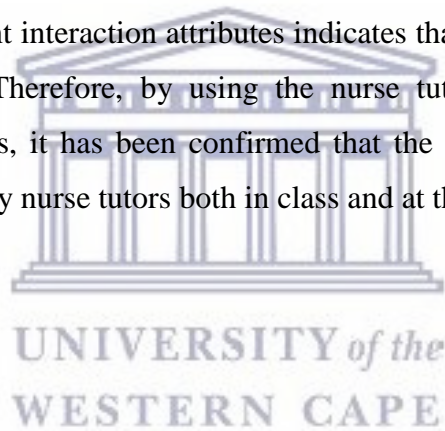
Use of non-verbal cues by nurse tutors during teaching received high scores during final evaluation. Nurse Tutor1 scored 100% on average to eight attributes under non-verbal cues.

Attributes such as eye contact, tutor movement, facial expression and tutor smiling were some of the attributes that achieved a score of 100%. Nurse Tutor2 did not score 100% in any of the non-verbal cues. The highest score was only 90% which was for voice tone and smiling. The lowest score for Nurse Tutor2 was for the attribute of seating plan. This suggests that nurse tutors demonstrated good non-verbal cues during teaching, using the ADDIE model. Even Nurse Tutor 3, in table 5.8, received a 100% average score from three different professional evaluators for the attributes of non-verbal communication such as smiling, dress code and hair. Nurse Tutor3 scored high grades, as the lowest was 60%, for seating plan attributes. The seating plan attribute has been a problem for all nurse tutors, due to small classrooms versus many students.

**TABLE 6.9: TUTOR –STUDENT INTERACTION ATTRIBUTES EVALUATIONS**

NO	Characteristics/ Attributes	Tutor1	Tutor2	Tutor3	Comments
C1	Cheerful to students	100%	80%	90%	
C2	Academically sociable in class & clinical area	100%	85%	95%	
C3	Must not be rude to students in class	100%	90%	95%	
C4	Must not be talkative in class when irritated	100%	90%	95%	
C5	Friendly but not over-familiar to students	100%	90%	95%	
C6	Must not be reserved from students	100%	90%	95%	
C7	Must not be aggressive to students	100%	90%	100%	
C8	Mostly considerate to student	100%	85%	95%	
C9	Very reflective in teaching	90%	95%	95%	
C10	Listen attentively before answering student question	100%	95%	100%	
C11	Must not be arrogant to student	100%	90%	95%	
C12	Accommodative to students' problems	100%	85%	95%	
C13	Be apologetic to students	90%	0%	95%	
C14	Feel non-judgemental to students	100%	70%	90%	
C15	Have fluent non-verbal skills in communication	100%	75%	100%	
C16	Open-minded on student needs	100%	80%	100%	
C17	Have clear language articulation	95%	85%	95%	
C18	Empathetic to students	100%	85%	90%	
C19	Respectful on students' ideas	100%	90%	95%	
C20	Enable students to get to know each other better and extend relationship	100%	90%	90%	
C21	Enthusiastic when teaching	100%	85%	90%	
C22	Have a good sense humour in class	100%	90%	95%	
C23	Commitment to job	100%	95%	95%	
C24	Approachable by students	100%	95%	95%	
C25	Trustworthy to students counselling	100%	95%	100%	
C26	Sensitive tutor to my students	100%	90%	95%	
C27	Advocates for students' welfare	100%	95%	95%	
C28	Honest on student counselling	100%	90%	95%	
C29	Nurturing person to students	100%	95%	95%	
C30	Promote cooperation rather than competition	100%	90%	95%	
C31	Support equity among students	100%	80%	90%	
C32	Advocate human rights on my students	100%	90%	95%	
C33	Role models for healthy behaviours to students	100%	90%	95%	
C34	Respond to student misbehaviour	100%	90%	90%	
C35	Respectful when talking and turn to student	100%	85%	90%	
C36	Maintain social distance with my students	100%	90%	100%	
C37	Provide warmth and caring speech to students	100%	85%	95%	
C38	Polite in approaching students	100%	85%	90%	
C39	Good at monitoring of student behaviour	100%	85%	95%	
C40	Goal oriented-Tutor to my students	100%	90%	95%	

In Table 6.9, Nurse Tutor1 scored very high on the tutor-student interaction attributes. In 37 of the possible 40 attributes of nurse tutor-student interaction, Nurse Tutor1 scored 100%. For Nurse Tutor1, the lowest score was 90%. The highest score for Nurse Tutor2, was 90% in the nurse tutor-student interaction attributes. Nurse Tutor2, however, received the lowest averaged score from the three evaluators of 0%, for the, apologetic to students, attribute. It is a poor reflection on nurse tutors, as their behaviour should be exemplary when teaching adult students and show humility when wrong. Nurse Tutor2, however, scored 90% for most of the attributes on student-tutor interaction, for example: talkative, friendly, not reserved, not aggressive and not arrogant. Furthermore, Nurse Tutor3 scored 100% in more than five attributes such as: not aggressive, fluent non-verbal skills, open-minded and trustworthy. The lowest score for Nurse Tutor3, was on, the non-judgemental during teaching attribute, where she scored 90%. Nurse Tutor3 also scored 100% on, the maintaining social distance from students, attribute. The high scores on the nurse tutor-student interaction attributes indicates that nurse tutors adopted the new teaching strategy very well. Therefore, by using the nurse tutor evaluation from the three professional senior nurse tutors, it has been confirmed that the Nkhoma Teaching Strategy is very effective and easy to use by nurse tutors both in class and at the clinical area.





**TABLE 6.10: TUTOR PERFORMANCE ATTRIBUTES EVALUATION**

NO	Characteristics/ Attributes	Tutor1	Tutor2	Tutor3	Comments
F01	Tutors provides adequate instructional time to students	80%	90%	95%	
F02	Tutors gives enough information in class	90%	90%	95%	
F03	Have enough internet resources	50%	50%	40%	
F04	Have enough books to use for learning that are up-to-date	60%	70%	60%	
F05	Students have personal tutor as advisor	100%	85%	100%	
F06	Tutors gives good objectives when teaching		85%	90%	
F07	Tutor vary on teaching strategy in class and at the clinical area	100%	85%	95%	
F08	Gives relevant examples when teaching	100%	90%	95%	
F09	Asks questions when teaching	100%	95%	100%	
F10	Gives tests from what he/she taught	100%	95%	100%	
F11	Gives appropriate time before exam for preparation	100%	95%	100%	
F12	Marks examination effectively	100%	95%	100%	
F13	Evaluates the Lesson after class	100%	85%	90%	
F14	understands her/his course/module	100%	90%	90%	
F15	Facilitates self-directed learning to student	80%	90%	90%	
F16	knows learning resource mobilization	100%	75%	75%	
F17	Applies collaborative learning to students with other disciplines	50%	75%	75%	
F18	Gives constructive feedback to students	100%	95%	100%	
F19	Observes punctuality in class and clinical area	100%	85%	80%	
F20	Promotes tolerance and understanding	100%	85%	90%	
F21	Handles crisis professionally	100%	90%	90%	
F22	Demonstrates competently on procedures	100%	90%	95%	
F23	Establishes an adequate knowledge base	100%	90%	95%	
F24	Establishes networks of experts to draw information from	70%	85%	70%	
F25	Addresses the skills used in the curriculum	100%	90%	90%	
F26	Focuses on the student holistically.	100%	90%	90%	
F27	Analyses student perceptions of myths	100%	85%	90%	
F28	Clarifies students values	100%	80%	90%	
F29	Provides constructive criticism to students	100%	90%	90%	
F30	Provides positive reinforcement to student learning	100%	90%	100%	
F31	Provides adequate time to demonstrate skills to students.	60%	90%	80%	
F32	Allows students to practise skills	100%	90%	95%	Self-study
F33	Active participation of students in making decisions	100%	90%	90%	
F34	Pairs experienced skilled clinical staff with new students	100%	90%	80%	
F35	Provides an appraisal tool to students	100%	85%	80%	
F36	Assigns laboratory exercise to students	100%	80%	80%	
F37	Participates in curriculum design and evaluation of programme outcomes	20%	50%	10%	Rare
F38	Prioritises the programme that address relevant health and social issues	70%	70%	75%	
F39	Demonstrates gender-sensitivity	100%	80%	100%	

In table 6.10, Nurse Tutor1 scored 100% in many performance attributes during evaluation. Performance attributes such as, giving good example, varying the teaching strategy, lesson plan evaluation, asking of questions and giving of constructive feedback, are some of the examples where Nurse Tutor1 scored 100%.The lowest score was 20% on performance attribute, participating in curriculum design and implementation.

However, Nurse Tutor2 did not score 100% for any attributes. The highest grade received was 95%. The lowest grade for Nurse Tutor2 in the performance attributes was 70%. The performance attributes that Nurse Tutor2 scored 95% include: asking questions, giving tests, marking examinations, and giving appropriate time before examinations to students. This means

that Nurse Tutor2 succeeded in adopting the teaching strategy as she scored extremely well on the performance attributes.

Nurse Tutor3 managed to score 100% in eight performance attributes. This included: having personal tutor, attentive listening, asking questions, giving appropriate time for examination and marking questions appropriately. The lowest score for Nurse Tutor3 was a grade of 10% for the performance attribute, participating in curriculum design and implementation and 40% for the performance attribute, having enough internet. Nurse Tutor3 scored high in most of the performance attributes. This shows that nurse tutors were effectively using the new teaching strategy after understanding it properly.

**TABLE 6.11: CLINICAL STUDENTS NEEDS ATTRIBUTES EVALUATION**

NO	Characteristics/ Attributes	Tutor1	Tutor2	Tutor3	Comments
H01	Facilitate the student's orientation to clinical setting	100%	85%	90%	
	Clarifies clinical objectives at the beginning of the clinical allocation	100%	90%	95%	
H02	Guides student in meeting objectives at clinical area	100%	85%	95%	
H03	Identifies student learning issues in clinical area	100%	90%	100%	
H04	Demonstrates on clinical procedures on the patient/clients	100%	90%	100%	
H05	Stimulates student interest in clinical learning	100%	85%	100%	
H06	Guides on Clinical student resource mobilization	100%	85%	90%	
H07	Communicate to students in clinical area clearly	100%	85%	95%	
H08	Identifies students clinical needs	100%	90%	95%	
H09	Influence student clinical confidentiality on patient care	100%	90%	100%	
H10	Alleviates students stress and fear of unknown on clinical learning	100%	90%	100%	
H11	Facilitates teamwork to students	100%	90%	100%	
H12	Facilitates critical thinking to student at the clinical area	100%	85%	100%	
H13	Encourages student self-evaluation	100%	85%	100%	
H14	Encourages student skill adjustment	100%	90%	90%	
H15	Collaborate with course coordinator in planning individualized learning	100%	80%	90%	
H16	Assists students identify an appropriate case study	100%	90%	100%	
H17	Assists students to perform skills in accordance with professional judgment	100%	90%	100%	
	Provide ongoing feedback to the student for growth	100%	90%	100%	
H18	Conducts students and staff meetings to discuss student's performance	100%	80%	90%	
H19	Evaluates student objectively on clinical	100%	90%	100%	
H20	Participates and attends at all clinical tutorials on time	50%	75%	50%	
H21	Collaborate with ward in-charge in planning individualised patient care	100%	85%	86%	
H22	Moves clinical group actively in positive direction	100%	85%	100%	
H23	Controls students effectively in the clinical.	100%	90%	95%	
H24	Brings new case information to the clinical tutorial	50%	85%	80%	
H25	Relates new and old case information to learning issues	100%	85%	80%	
H26	Engaged students in analysis of learning issues	100%	90%	90%	
H27	Formulated questions to stimulate student further clinical inquiry	100%	85%	80%	
H28	Encourages closing reflection in assignments	100%	80%	90%	
H29	Provides helpful information for future tutorials	50%	70%	90%	
H30	Contributes quality and helpful comments in clinical meeting	100%	90%	95%	
H31	Respects/validated input from others	100%	85%	100%	
H32	Professionally presented to the group	100%	80%	100%	
H33	Assists students write a well-written, theory-based scholarly product	100%	75%	70%	
H34	Evaluates the students' achievement of objectives after an allocation	100%	80%	80%	
H35	Functions within the educational clinical environment	100%	80%	85%	
H36	Functions as change agents and leaders in the clinical area	100%	85%	90%	
H37	Pursues continuous quality improvements in the clinical nurse educator role	100%	90%	90%	

In table 6.11, the attributes of student clinical needs were evaluated. Nurse Tutor1 scored 100% for most of the attributes on the clinical student needs list. The lowest score grades were 50%, which were obtained for the attributes: attendance of clinical tutorials, bringing in new case information for the tutorials and providing helpful information for tutorials. The performance by Nurse Tutor1, in the utilization of the new teaching strategy through the use of clinical attributes was very high. This suggest that Nurse Tutor1 adopted the new teaching strategy at the clinical area effectively and was able to teach nursing students, using the new clinical attributes, competently.

Nurse Tutor2 scored many attributes at 90% which included: clarifying objectives, identifying learning issues, demonstrating clinical procedures, identifying case studies and providing feedback to students. The lowest grade received from the average of the three professional evaluators was 75%, which included, assisting students to write theory based scholarly assignments. From the results of Nurse Tutor2, it is clear that nurse tutors are using the new teaching strategy effectively.

Nurse Tutor3 scored 14 clinical needs attributes at 100%, these included: identifying learning issues, demonstrating clinical skills, stimulating student interests, providing feedback and evaluating students objectives. The lowest grade for Nurse Tutor3 was 70% for assisting students with writing of theory based scholarly assignments. This attribute was also scored very low for Nurse Tutor1 and Nurse Tutor2. However, due to high scores in most of the clinical needs attributes it is clear that the new Nkhoma Teaching Strategy is an effective tool to use in teaching nursing students in Malawi.

**TABLE 6.12: ASSESSING NURSING SKILLS ATTRIBUTES EVALUATION**

NO	Characteristics/ Attributes	Tutor1	Tutor2	Tutor3	Comments
J01	Uses exhibitions	70%	50%	60%	
J02	Uses laboratory performance	100%	75%	70%	
J03	Utilises essays	100%	90%	80%	
J04	Utilises journals	40%	80%	40%	
J05	Uses short answer items	100%	85%	100%	
J06	Uses multiple-choice items	100%	90%	100%	
J07	Uses projects	80%	20%	70%	
J08	Uses portfolios	20%	20%	20%	
J09	Uses interviews	50%	20%	40%	
J11	Uses concept mapping	50%	20%	50%	
J12	Utilises systematic observation	60%	70%	70%	
J13	Uses long-term investigation	40%	20%	30%	
J14	Uses manipulative skills	20%	30%	30%	

Nurse tutors were also assessed summatively on the student assessment methods both in class and at the clinical area. The same professional three nurse tutor evaluators who assessed the nurse tutors on competence, performance interaction and clinical needs, were used to assess the nurse tutors on the use the assessment tools on student evaluations. Nurse Tutor1 had scored four attributes with 100%. These attributes included: use of laboratory, use of essay questions, use of short answer items, and use of multiple-choice items. However, the lowest grade from Nurse Tutor1 after averaging from the three professional senior nurse tutors was 20%, for use of manipulative skills and use of portfolios during assessment .This suggests that Nurse Tutor1 has been effective in the use of the various student assessment skills that are attached to the new teaching strategy.

Nurse Tutor2 scored 90% for use of multiple-choice items during student assessment. Nurse Tutor2 did not perform very well on the student assessment methods, as there were five attributes that received the lowest grade of 20%, after the average of the three professional evaluators. Although Nurse Tutor2 scored above 80% for four attributes, generally the performance was below expectation.

Nurse Tutor3 scored 100% for two attributes under student assessment. These attributes included: use of short answer items and use of multiple-choice items. However, Nurse Tutor3 also had a low score of 20% for the, use of portfolio attribute. Notwithstanding, most grades scored were above 50%, therefore, Nurse Tutor3 has been effective in the use of the various student assessment skills.

As a note, nurse tutors at Nkhoma Nursing College, use multiple-choice items during student examinations. This is a prescribed format of student assessment in the curriculum, due to the large ratio of students to nurse tutors. To ease the work load, nurse tutors were advised to use multiple-choice items during student evaluation, however, a few essay questions are included in an exam to strengthen the critical thinking of the students.

## 6.5 SUMMARY

The emphasis of this chapter has been to show how the new Nkhoma Teaching Strategy was developed using the ADDIE model. It clearly indicated how nurse tutors have adopted the Nkhoma Teaching strategy without problems. This teaching strategy has proved to be very effective, as the results observed at the Nkhoma Nursing College and St. Johns Nursing College clearly demonstrated significant differences in: nurse tutor competences, nurse tutor performance, nurse tutor interactions and nurse tutor teaching strategy utilizations. Although the duration of the development phase was 8 months, the students and nurse tutors at Nkhoma showed that the Nkhoma Teaching practice is dynamic.



UNIVERSITY *of the*  
WESTERN CAPE

## **CHAPTER SEVEN**

### **CONCLUSION, LIMITATIONS AND RECOMMENDATIONS**

#### **7.0 INTRODUCTION**

This chapter highlights the main conclusions of the thesis which focused on the need for new teaching strategies. The study limitations have been expounded to show the extent of the complexities in the study. A significant portion of the chapter focuses on the recommendations based on the research findings on student nurse tutor interactions, teaching strategy, student nurse tutor competences and performance.

#### **7.1 CONCLUSION**

The study has been a milestone for teaching strategy development in the nursing colleges, as it has helped in shedding light on the problems the nurse tutors and students face in the teaching and learning processes. The study findings, as well as the implementation of a few changes during this study, have had a positive impact on the professional growth of both the nurse tutors and the students. Interaction of nurse tutors and students remain the most important element that will help to promote effective teaching and learning. Interaction challenges between nurse tutors and students impinge effective teaching and learning process. It is therefore mandatory to design teaching strategies that foster increased interaction between nurse tutors and students in Malawi nursing colleges to promote quality nursing.

As the provision of health care becomes more culturally diverse, it will be necessary for nurses to build cultural competencies and skills, after a thorough professional training, in order to deliver effective teaching both in class and at the clinical area. Increased knowledge sharpens attitudes and practices that inform culturally competent practice. This is clearly seen when reflecting on the performances of the graduates at the clinical area.

There has been a need to develop teaching strategies that suit the limited resources and economic hardship that the country is going through. If nurse tutors were motivated by their management,

they would be willing to strive for higher levels of teaching competence both in the classroom and at the clinical area.

Direct teaching strategies are commonly used by nurse tutors in Malawi nursing colleges, which are not interactive, and yield limited nurse competences in the clinical area. As such, when the lecture teaching strategy is combined with other teaching strategies, nursing students in Malawi demonstrate an improved learning outcome. Therefore, there is need to develop a teaching strategy that incorporates attributes from different methods of teaching instruction, in order to improve classroom and clinical nursing in Malawi.

Nurse tutors find teaching difficult due to the lack of teaching aids as a result of shortages and poor funding. The availability of adequate funding for materials such as manikins and LCD, would result in a remarkable improvement in teaching, both in the classroom and at the clinical area. The custom of using a patient as a teaching aid, if ethically followed, remains the most viable method for the teaching of nursing in developing countries, where the availability of simulation technology for Best Emergency Medical Education (BEME) is still limited. Therefore, the development of the Nkhoma Teaching strategy has come at the right time, where quality of nursing care is strived for.

Based on the effectiveness of a new teaching strategy, nurse tutors can now effectively deliver teaching content both in the classroom and at the clinical area. Without a student-centred approach to learning it has been clearly seen that the performance of students is less effective and results in no, or limited, competences. This was reflected in the controlled portion of the experimental design, during the evaluation of the ADDIE model. Only those nurse tutors that utilised the new Nkhoma teaching strategy, which focuses on frequent student / tutor interaction, achieved higher grades from their students in class.

## 7.2 LIMITATION OF THE STUDY

The following limitations have been identified from this study:

Findings from the study reflect the type and nature of perceptions that nurse tutors and students participating in this study hold about learning and teaching strategies in Malawi when following the context-based ADDIE model. The use of these findings for classroom situations beyond those involved in this study should only be interpreted as indicators of possible perceptions that may be held by students and nurse tutors in those classrooms. This limitation should not, however, undermine the contribution of the study to improving teaching strategies in the classroom and clinical area

Context-based in-depth interviews and focus group discussions required nurse tutors and students to have a certain level of speaking and reading ability as well as an ability to analyse and understand the scenarios presented to them before they could respond. English as a second language may have contributed to the problems experienced during the interpretation and understanding of the tasks, as well as the poorly expressed responses from the students. These problems were minimised using a mixture of the local language and English in order to avoid lengthy explanations. The use of local labels for certain concepts as well as the inclusion of some questions requiring shorter answers also helped to minimise interpretation problems. Language related problems and poor expressions of answers may have affected the study of participant's perceptions in this thesis.

The use of the ADDIE model in nursing education and alternative assessment tasks was a new experience for the all participants. Since their previous encounters with practical performance assessments may have been limited, a long period of fieldwork training was required in order to ensure an understanding of the process. There is a possibility that more time was needed for nurse tutors and students to express their perceptions of the new teaching strategy.

The questionnaire was designed to measure the students' attitude towards the use of teaching strategies. This should have provided useful information about the impacts of communicative strategies, but unfortunately sufficient evidence could not be provided as a result of the difficulties students' experienced during their oral performance, resulting in recall bias.



However, it is felt that another experimental design, with a prolonged implementation phase of the ADDIE model, would further validate the use of the Nkhoma Teaching Strategy. This would enhance the scientific magnitude of model development in nursing education in Malawi.

### 7.3 RECOMMENDATIONS

Based on the results of this study, the researcher proposes several recommendations as a way of contributing to the area of study and the profession of nursing, and by giving back to the community. If implemented, these recommendations will help to transform the nursing colleges' teaching and learning strategies, which will in turn improve service delivery in the Malawian health system. The sections below are indicative of these recommendations.

#### 7.3.1 ADDRESSING THE COLLEGE TEACHING NEEDS (EDUCATION)

- The nursing colleges, through nurses' council, must update and redefine the curriculum and instructional methods deployed to nursing students in the country and provide evidence that the new teaching strategy is effective and appropriate for classroom and clinical teaching.
- The Nurses Council of Malawi must promote and maintain a high standard and quality of nursing and midwifery education and training. This must be done through periodical supervision of all nursing colleges in the country. Without supervision, the malpractice of the nurse tutors and poor performance with limited interactions that has been discovered in this research will not be reduced.
- Nurses Council of Malawi must monitor, enhance and maintain professionalism and professional ethos amongst members of the nursing and midwifery professions. This must be done through a series of educational meetings with the nursing colleges, where nurse tutors would be oriented on the nursing education ethos. This could lead to an increase in the quality of competences and interaction of the nurse tutors during teaching.
- All Nursing College administrations must promote and maintain an enabling, well-resourced, positive practice classroom and clinical environment for nursing and

midwifery so that the nurse tutors can function effectively. This could be done with increased funding to the college teaching resources.

- Nurses' Council of Malawi should have improved data quality on nurse tutors and ensure a database which details qualifications, location of employment, country of employment, employer and time worked daily and other relevant details determined in conjunction with nursing stakeholders. This would improve the tracking system of all nurse tutors in the country there by promoting their performance both in the classroom and at the clinical area.
- The current Nurses Council database does not record whether nurses are in fact employed in Malawi, where they are employed or their qualifications. By negotiating with Nurses Council to improve the data fields they collect when nurses reregister annually, there will be a considerable improvement in the quality of data available on nurses. This would help to promote good performance of the nurse in the colleges.
- Different colleges must totally enable strong leadership at all levels of nursing and midwifery practice. This can be effective if college administrators recruit nursing college principals who have high nursing management qualifications. This would assist in the efficient and effective running of the nursing programmes in the colleges.
- There must be active and urgent engagement between the Nurses Council, CHAM and the Department of Education and Training to facilitate the process of incorporating public nursing colleges and their programmes in higher education, to enable them to continue to produce nurses. This can be done by establishing a task team to draft a public nursing colleges Act that will reflect the current teaching strategies implemented in all colleges of nursing in the country.
- There must be an accreditation framework for all nursing students, using Nurses Councils criteria and the national core standards, with regards to where they should work and at which clinical training facilities after receiving their qualification. This will help to reduce nurses who always prefer to work in NGOs where they experience limited bedside nursing.
- There is a need for funding, which includes not only the minimum prescribed period of a nursing programme, but also an additional year. This would provide a one-year extension

to the study programme, allowing those students, with a valid reason, to repeat the programme at any level.

- The college administration must develop a specific recruitment and retention strategy for nurse tutors in the colleges. This will help to improve staff retention and reduce staff turnover which is very high in the colleges. This can work effectively if there is an attractive academic advancement programme for nurse tutors. This means that the majority of nurse tutors should be enrolled for the Masters' programme at Kamuzu College of Nursing.
- The college administration must also improve incentives to promote retention and recruitment of nursing staff in every college. These incentives should be in the form of salary adjustments for all nurse tutors.
- The Nurses' Council in coordination with the CHAM secretariat must create an attractive merit-based promotion path. For example, principal nurse tutor, chief nurse tutor, superintendent nurse tutor, senior nurse tutor and a nurse tutor with a minimum degree in nursing education as a starting point.
- There is need to create a sound and efficient mentoring programme for nurse tutors. Those that have many years of service in the nursing profession should be paired with those that are new to the profession. Emerging nurse tutors should be identified and allocated mentors from a pool of experienced nurses of a senior rank, who are respected and keen to teach and assist.
- Nursing college administration must recognize the different levels of the nurse tutor and their qualifications. There should be recognition of the different levels of nursing competencies such as experience in STI, Safe motherhood, HIV and other emerging conditions, depending on whether it is an executive nursing manager, an area nursing manager or a unit / facility nursing officer.
- There is a critical need to review the content of nursing management courses and the teaching methods. This means that competencies for different levels of nursing management should be defined, and should include competencies in human resources, care management, quality/ patient/ community.
- There is strong need to form nurse tutors' forums. These should be set up at college level where tutors from different colleges can share successes and challenges and learn from

each other on the utilization of the Nkhoma Teaching Strategy. These forums should be allocated resources and formally recognised.

- Moreover, the administrators must make sure that students have direct and adequate representation on decision-making structures within the institution and student activities and student organization should be encouraged and facilitated.
- Nurse administrators must increase access to education and in-service training for the nurse tutors. Access to education and training programmes for clinical specialisation must be made available to enable practitioners to enrol and complete programmes. This includes the provision of study leave and financial support.
- Develop a framework for the recognition of post-graduate qualifications, specialities and sub-specialities in the colleges and hospitals. There must be a clear clinical career path for nurses to specialise. This will help to retain specialist nurses in the clinical area who can be role models to students. Career paths must be created to ensure that practitioners have equal opportunity to remain in clinical practice through the availability of Masters and PhD degrees. This requires the negotiation of positions for clinical specialists and advanced nurse practitioners at healthcare establishments in the ministry of health.
- The college's capital budget should make provision for the building of additional classrooms as well as increasing the resources in the library for each college. This would facilitate the teaching and learning process in each college.
- There must be a clear evaluation system of the new teaching strategy in each college, for both the classroom and clinical area, to ensure reliable and valid evaluation results that effectively address academic and professional outcomes on tutor competences and interactions.
- The college administrators must make sure that there is a clear policy on the process and structure of clinical placement and supervision/teaching to ensure that this component of the curriculum is used effectively for learning and professional development; and that theory and practice are optimally linked.
- In each college, there must be clear assessment principles, methods and practices that match with the new teaching strategy and these must be clearly compatible with educational objectives and must promote learning.

- The nurse tutor must make sure that they are implementing the new comprehensive teaching strategies programme, to reinstate the professional ethos in the profession. This will also help to market the profession positively as a career choice to potential recruits for nursing programmes. The main focus must be on the proposed teaching strategy on nursing and midwifery practice, nursing education and training, nursing associations and the regulatory body.
- The administrators must make sure that the size of the student intake is defined and related to the capacity of the nursing colleges at all stages of education and training and is reviewed in consultation with relevant stakeholders and regulated periodically to meet the needs of the community and the society.
- Nurse tutors must promote nursing education as a career of choice, focusing the implementation of the proposed new teaching strategy on both current nurses and prospective nurses or recruits into nursing.
- The college administrators must make sure that there are clear human resource policies including recruitment, job descriptions, staff appraisals, continuing education and promotion that support the mission of the institution.
- The college administrators must make sure that the student to staff ratio is in line with national norms, and that the qualifications, experience and research activities of academic staff match their teaching responsibilities.
- The college administrators must make sure that the staff profile shows continued productivity in the fields of teaching, research and community service for all nursing staff including students.
- College administrators must select nursing students through CHAM using Nurses Council minimum requirements. This will help to evaluate prospective students against the established values of nursing profession. Selection of students should be the responsibility of the nurse tutors in each college.
- There must be adequate teaching space, office space, and communal space that allow for optimal achievement of educational and research objectives in an appropriate and safe environment for nurse tutors in the colleges. This would enhance the motivation of the nurse tutors during teaching.

- Nurses see their uniforms as a way of improving the image of nurses both on duty and in the public. In the past, nurses were issued with a white uniform but gradually moved to buying their own when the quality deteriorated. Therefore, there is a need to re-introduce a uniform allowance which would result in nurses dressing in quality material, colours, and styles of uniform.
- Moreover, popularise and propose the wearing of contemporary white uniforms. Popularise the decision of the summit for high quality and durable white uniforms through communication campaigns and meetings. Consider centralising procurement and vouchers for uniform acquisition provided for by employers.
- There is a need to develop a database which details education institutions and their output on the deployment of nurse tutors in the nursing colleges. This can be done by developing a project relating to safe nurse staffing guidelines in the colleges based on the draft of college guidelines. This can also improve the nurse staffing gap by category and determine the training implications based on safe nurse staffing guidelines.
- Determine the financial implications of nurse training and nurse employment to meet college policy requirements and safe staffing guidelines for colleges and hospitals in the public sector.
- There is need to facilitate the return of retired nurses and nurses who left the profession, back into nursing education to help improve the experience and quality of the education.
- In each college there must be organisational charts that reflect a governance structure, which allows for the inputs of all-important stakeholders, as well as for efficient and effective decision making, planning and monitoring at different departmental levels.

### **7.3.2 COMPETENCE FOR NURSING PRACTICE**

The purpose of nursing education and teaching strategy is to develop, reconstruct and revitalize the nursing profession so that nursing and midwifery practitioners are equipped to address population health needs in the healthcare system in Malawi.

- Therefore, based on the results of this thesis, the nursing colleges must define the *competencies* that students should exhibit after graduation from each programme, in relation to their subsequent training and future roles in the health system particularly in the clinical area.

- Nurses' council must position nursing education and training as a national competence accounting, to the Councils Registrar to address provincial inequalities, norms and standards, quality, clinical training, student status and fragmentation between NEIs and provinces. The office of registrar for the nurses' council is instrumental in facilitating the task to develop national policy for the nursing education and training of nurses for professional practice in the country. This would help to monitor the nurse tutor competences, nurse tutor and student interaction and their performance.
- Initiate the new teaching strategy for clinical education and training with structural support to all nursing colleges to help improve the nurse tutor teaching competences. This can be done by orienting the nurse tutors on how to use the Nkhoma Teaching Strategy throughout the country. This can promote the standards of nursing education in the country thereby promoting the nurse tutor and student teaching and learning performances respectively.
- There is a need to establish clinical teaching departments at all hospitals supported by a coordinated system of preceptors and clinical supervisors from each college in the country. This can start with the central hospitals as big referral centres where critical patients are found. This will enhance clinical student teaching thereby using the new developed teaching strategy effectively in the clinical area.
- There is a need to appoint a working group to champion the implementation of this teaching model and this should also consist of the nursing education stakeholder (NES) group and two Human Resource representatives from the national and regional departments of health including the different nursing colleges.
- There is need to appoint dedicated nursing professional personnel, reporting to the chief nursing officer in the hospitals teaching the student nurses and who would become effective preceptors. This can be effective if there are sufficient registered nurses employed in each hospital.
- The educational CHAM coordinators must develop a national plan to update all nurse educators to meet requirements of the various nursing education reforms in coordination with the nurses' council personnel for the promotion of clinical teaching in the country.
- There is need to develop and implement a CPD system for nurse tutors and midwives. This may include the development of a framework to recognise post graduate nursing

education qualifications in the ministry of health and CHAM hospitals. This means that Nurses' Council should prioritise CPD for nurse educators to promote their behaviour in the colleges. The Council requirements should be revised to take into account the science and art of teaching and graduating nursing students throughout the nursing colleges. The core competencies, and interactive attributes required for prospective nurse educators should be stipulated, to include inter alia: competencies in interpersonal relationships (including conflict resolution); clinical specialty or area of instruction; teaching and learning methodologies; supervision of theoretical learning and clinical practice; research methods, knowledge of technology in education; ability to teach/mentor in a clinical environment (not just clinical competence); assessment methods; involvement in policy development and implementation; and leadership.

- The practical teaching component in each college should be increased and all nurse tutors should ensure ongoing clinical competence by practicing nursing even during student academic holidays. This can be done by encouraging nurse tutors to spend more hours on bedside nursing with the students in the clinical area as well as during holidays.
- There is a strong need to review the training of nurse tutors by government, increasing the number of those who receive degrees in Nursing from resident universities. This will help to increase the number of nurse tutors in every nursing college.
- There is need also to introduce an integrated approach to the education of nurse educators involving education, service and nursing experts in the curriculum planning and presentation, as well as the teaching and learning experiences. This will ensure that nurse tutors become acquainted with clinical nursing, rather than focussing on classroom work alone. This also suggests that there is a need to review the career path of nurse tutors. Only those that have had previous clinical experience should be allowed to undertake further degree studies in nursing education.
- Lecturers should be encouraged to attend workshops and undergo training in the new teaching strategy to augment their knowledge in the use of teaching strategies, documented in the literature as leading to the personal development of learners.
- Nurse tutors should attend short and long-term courses and international conferences on facilitation of learning using the student-centred approach to teaching and learning. This



would help nurse tutors to appreciate the importance of the new student-focused teaching strategy.

- Nurse tutors should have structures at their workplace, either by means of user-friendly protocols and/or funding of research activities, to encourage them and learners to embark on research matters that facilitate adult learning.
- It is mandatory to make sure that the nursing school defines the competencies that students should exhibit, on graduation from each programme, in relation to their subsequent training and future roles in the health system. This would enhance the importance of the new teaching strategy on the competence attributes.
- The nursing colleges must also define the curriculum, incorporating the new instructional method, to show evidence of the efficient use of a variety of appropriate classroom and clinical attributes in the new teaching strategy.
- There is need to make sure that the curriculum documentation reflects a coherent learning programme that clearly shows the outcomes achieved and the educational process supporting these outcomes to tutors in the colleges.
- There is need to have evidence of approval of the curriculum by the university and the professional regulatory body, and of regular curriculum review and evaluation.
- It is very important to ensure that the course or module outlines are comprehensive documents that allow the students to become active partners in the learning-teaching process by clarifying expectations and requirements of the new teaching strategy.
- College administrators must make sure that the curriculum is adequately reflecting the priority health problems or issues identified by the WHO Regional Office and the country's Nurses' Council. They must also make sure that the nursing colleges teach the principles of scientific method and evidence-based nursing, including analytical and critical thinking, throughout the curriculum when they are using the new Nkhoma teaching strategy.
- This includes making sure that they identify and incorporate in the curriculum the contributions of the biomedical sciences to create an understanding of scientific knowledge, concepts and methods fundamental to acquiring and applying nursing science.

- The college administration must also make sure that they identify and incorporate into the curriculum, the contributions of the behavioural sciences and social sciences that enable an understanding of contextual factors of health and health services.
- The college must ensure that students have adequate theoretical nursing science knowledge to prepare as a generalist nurse (including community and psychiatric nursing); patient contact and acquire competence to assume appropriate nursing responsibility upon graduation. This is well designed in the new teaching strategy.
- The administration must make sure that the nursing college ensures access to an adequate range and depth of clinical learning opportunities for the programmes offered. This implies the need to ensure good working relationships with the different district hospitals where the students are sent for clinical skills.
- The college administration must make sure that the quality of staff and services in clinical facilities used for training enhances the educational outcomes.

### **7.3.3 STUDENT AND NURSE TUTOR INTERACTION**

- Good communication should be regarded as important in all nursing colleges because it would open doors for negotiation regarding the use of the new teaching strategies between lecturers and the students. This can help to improve the interaction between students and nurse tutors.
- The nursing colleges must ensure that students have adequate patient contact and acquire sufficient competences and active interactions from different nursing departments to assume appropriate nursing responsibility upon graduation.
- Promote collaborative interactive partnerships to unify the nursing profession.
- Strengthen links between societies, organisations and NGOs for human caring, to enhance their work. This would help in potential programme funding for programmes such as STI, Safe Motherhood and Family Planning. Profile the role of professional organisations and employers in assisting nurses to work together.
- There is need to encourage nurse tutors to revive and coordinate the professional associations which give the professional a sense of belonging and enhance motivation.

- Nurse tutors must comply with the Malawi Nurses' Council Standards in terms of leadership and governance in nursing education. This means that nurse tutors who aim for leadership positions such as principal, dean and heads of departments are selected on merit, with the ability to meet health service delivery demands.
- Ensure that the minimum service level agreement recommended in the Nursing CHAM Bonding Agreement is signed to prevent nurse tutors' participation in strikes. This would ensure a continued teaching and learning process in the colleges.
- Capacitate nurse leaders through executive management programmes rather than focusing on nursing management only. This would also facilitate improved interactions at all levels in the colleges.
- The colleges must make sure that they improve the use of Information Communication Technology (ICT) in nursing and midwifery care provision. This would help the nurse tutors to use the teaching aids in the colleges effectively and efficiently.
- There is need to establish an Advisory Committee comprising of education, public and private healthcare stakeholders to assist with developing guidelines to implement and monitor the new teaching strategy implementation, which will be used by nurse tutors in the colleges.
- Therefore, it is important to take cognisance of required improvements within and between college institutions to ensure that they are able to attract and retain well qualified nurses and consistently provide quality education to students. This can be done by maintaining adequate funding to the colleges that would facilitate enough teaching resource availability.
- Each college must have Information, Communication and Technology (ICT) training for nurses and midwives. Revitalise the CHAM and Nurses Council database to create a useful tool to strengthen the National Health Information System and inform planning for nursing and midwifery services. This can be done if ICT competencies are incorporated into curricula, improving the competency level of nurses and midwives. Moreover, improve access and provision of ICT systems in the colleges including the classrooms to capacitate all nurse tutors and students.
- There is a need to review the current nursing staffing norms and skill mix, in order to align the clinical practice pace of work of the nurse tutors to student and patient care

requirements and needs. This can be done if there is also development of policies on staffing ratios, occupational health and safety, including violence prevention, in the teaching hospitals.

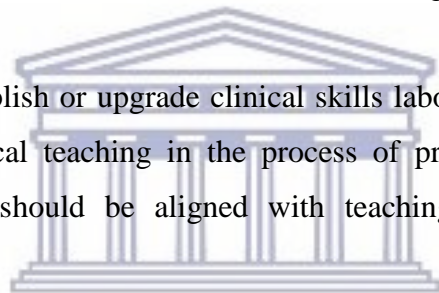
- Improving incentives for nurse tutors and students to promote retention and recruitment of nursing staff is mandatory. This can be done if there is effective Review of financial incentives such as danger allowance (currently only applicable to nurses working in psychiatric hospitals), to include other settings such as TB hospitals. Moreover, revisit designation for rural areas for the purpose of rural allowance for community student attachment. Extend rural allowance to all categories of student nurses and standardise the allowance across students and staff in the colleges.
- The college library must ensure adequate access for students to an appropriate and adequate range of information resources, particularly on current prescribed books for each module in the colleges.

#### **7.3.4 PERFORMANCE PROMOTION**

- There is a need to compel students to work for the state for the same period as they were funded for. This should be well documented in the bonding documents, inclusive of the community service year, to retain the skills. This will help the students to easily apply for the scholarship and work without questioning the bonding process.
- There is also a need to develop and re-orient new nurse tutors, who are just joining the college, to ensure sufficient numbers of well-trained educators in the country. This would promote cooperation of the nurse tutors in the utilization of the new teaching strategy and promote the outcome teaching performance.
- Increased access to technological services for both lecturers and students should be supported and implemented by the management of the college. This can be done by having enough teaching aids in the classrooms and at the clinical area.
- It is vital to make sure that a limited number of students be allocated to nurse tutors in the theoretical and clinical settings to enhance teaching and learning process in the utilization of the new teaching strategy.

- A similar evaluation study should be done periodically, in the colleges offering the same student registration, to determine whether the new teaching strategies are utilized to the fullest to ensure the personal development of student nurses.
- Inclusion of professional and work ethics as compulsory components of in-service education and CPD programmes for all levels of education and training and practice of nursing and midwifery is vital. This will help to streamline the nursing education where the new teaching strategy would be utilised effectively. This should include ethics, innovative teaching, group studies and electronic media in the development and reorientation of the nursing educators.
- There is a need to institute periodical performance appraisals for every nurse manager and nurse tutor who holds a position in the colleges. The renewal of contracts must be based on merit and performance. This means that effective performance management systems for all categories of staff in the colleges should be implemented and norms set for all categories and clinical areas which focus on best care practices of the nurse tutor and preceptors, staff satisfaction, and quality of services.
- There is a need to track performance over time on the use of the new teaching strategies by nurse tutors and students to determine the causal link between implementing improvement initiatives and achieving improved competent and interactive results. This can be done by implementing a benchmarking facility to enable sharing of best practices among nurse tutors and students in different colleges.
- In the clinical area, there is a need to ensure flexible student nursing shifts to suit practitioner and nursing unit needs. This would help to make sure that nurse tutors are able to meet the students during daytime for teaching.
- Each college must set up the responsibilities of the academic leadership of the college for the nursing educational programme in relation to the nurses' council requirements and these responsibilities must be clearly stated. This includes making sure that rules, procedures and policies are clear and accessible to both staff and students in every college for their performance.

- In each college, the administrators must make sure that the budget policy is clear and coherent, and the staff are active and informed participants in the budgeting process. This would enhance the nurse tutor performance both in class and at the clinical area.
- There is a need to make sure that clinical exposure to all levels of the health system is also significant. All the colleges should have productive international partnerships, which they can significantly benefit from. This can be done if the nursing programmes are in line with the needs of all countries and are informed by the WHO's priority areas. The stakeholders are involved in the planning of new programmes and in addressing some of their needs.
- Lack of adequate academic staff is a problem in some colleges, in particular the lack of adequately prepared mentors and role models in the clinical areas and must be addressed. Having a lot of preceptors in the clinical area would go a long way to solving this problem.
- The colleges must establish or upgrade clinical skills laboratories, which would provide useful support to clinical teaching in the process of promoting student performance. Programme outcomes should be aligned with teaching/learning methodologies and assessment strategies.



UNIVERSITY of the  
WESTERN CAPE

## 7.5 DISSEMINATION OF RESULTS

The dissemination of results has been done through submission of reports to the selected individual colleges in Malawi for the study sites. This research report has been stored on the university library repository for public use. Kamuzu College of Nursing, where the researcher is working, has also received copies for library usage. College of Medicine Research and Ethics Committee has also received a final copy. Copies have also been disseminated to the CHAM secretariat, who oversee all religious nursing colleges. Some divided reports will also be compiled for publications in different journals. Moreover, the presentation of findings will be done at various conferences and seminars conducted within and outside the country. There have been more than nine publications from this thesis. There are seven papers that have already been published, based on the results of the thesis. The papers are as follows: *Challenges of the nurse tutor teaching aids; Utilizations of the teaching strategies among nurse tutors in Malawi; The*

*future of lecturer methods in community nursing education; Challenges of nurse tutor interaction with students in Malawi nursing colleges; Challenges of classroom and clinical Nurse tutor performance with students*

## **7.6 SUMMARY**

This chapter has dealt with the key findings of the research on which this thesis is based. The needs of the nursing students and nurse tutors should be based on their different competences, interactive skills and their performance levels. The development of the new teaching strategy has proved to be enlightening to all nurse tutors, resulting in an effective teaching strategy that yields better results both in the classroom and the clinical area.



## 8. REFFERENCES

Aasen, K.H. & Naden, D. (2008). The tune of confirmation in guiding nurse students. *International Journal Human Caring*, 12 (4) p7–14.

Aliakbari, F., Parvin, N., Heidari, M. & Haghani F. (2015). Learning theories application in *Nursing Education*, 4(2) p33-41.

American Association of Colleges of Nursing (AACN) (2002). Nurse practitioner primary care competencies in specialty areas: Adult, Family, Gerontological, Paediatric, and Women's Health. Department of Health and Human Services Health; Division of Nursing 5600; Fishers Lane, Room 9-35 Rockville, MD 20857:HRSA 00-0532.

American Nurses Association. ANA (2000). continuing professional nursing competence; Nursing's agenda for the 21<sup>st</sup> century, Silver Spring, MD: [www.nursebooks.org](http://www.nursebooks.org)

American Nurses Association. ANA (2003). Nursing's social policy statement; 2<sup>nd</sup> edition; Washington DC: [www.nursebooks.org](http://www.nursebooks.org)

American Nurses Association ANA (2007). Position Statement on Competence and Competency; The Essentials of Baccalaureate Education for Professional Nursing Practice; Washington DC: AACN [www.europepmc.org](http://www.europepmc.org)

American Nurses Association. ANA (2010). *Nursing: Scope and Standards of Practice*, (2nd Edition). Silver Spring, Washington MD: [www.nursesbooks.org](http://www.nursesbooks.org)

Ammentorp, J. & Robinson, J. (2007). Establishing Effective Intercultural Communication Experiences from programmes in Denmark and Scotland, 1(3) p12-21 <http://www.hphconferences.org>

Angel, B.F., Duffey, M. & Belyea, M. (2000). An evidence-based project for evaluating strategies to improve knowledge acquisition and critical-thinking performance in nursing



students, University of North Carolina at Chapel Hill, *The Journal of Nursing Education*, 39(5) p219-228.

Applin, H; Beverly, W., Rene D. & Buro, K. (2011) A comparison of competencies between problem-based learning and non-problem-based graduate nurses, *Nurse Education Today*, Volume 31(2) p129–134. [www.nurseeducationtoday.com](http://www.nurseeducationtoday.com)

Arkun, S. & Akkoyunlu, B. (2008). A study on development process of multimedia Learning environment according to the ADDIE model and students opinions of the multimedia Learning Environment; *Interactive educational Multimedia*, 17(2) p1-19.

Aron, D.C., Aucott, J.N. & Papp, K.K. (2000). Teaching awards and reduced departmental longevity: Kiss of death or kiss goodbye. What happens to excellent clinical teachers in a Research Intensive Medical School? *Medical Education (Online)*. 5 (2) p1–7.

Arthur, W., Tubre T., Paul D.S. & Edens, P.S. (2003). Teaching effectiveness: The relationship between reaction and learning evaluation criteria; *Educational Psychology*, 23(3) p275.

Atack, L. & Rankin, J. (2002). A descriptive study of registered nurses' experiences with web-based learning; *Journal of Advanced Nursing*, 40(4) p457–465. <http://onlinelibrary.wiley.com/journal/10.1111/>.

Axley, L. (2008). Competency: A Concept Analysis; *Nursing Forum*, 43(4) p214-222. [www.ncbi.nlm.nih.gov/pubmed/19076465](http://www.ncbi.nlm.nih.gov/pubmed/19076465)

Banning, M. (2005). Facilitation of Teaching Strategies in Nursing; *Nurse Education Today*, 25,(2) p502–508. [www.nurseeducationtoday.com](http://www.nurseeducationtoday.com)

Banning, M. (2005). Approaches to teaching: Current opinions and related research; *Nurse Education Today*, 25(2) p502–508 doi:10.1016/j.nedt.2005.03.007

Barak, R. (2008). Five Meanings of Direct Instruction; *Center on Innovation &*

Improvement Twin paths to better schools; <http://www.centerii.org>.

Beach, M. C., Roter, D. L., Wang N., Duggan, P. S., & Cooper, L. A. (2006). Are physicians' attitudes of respect accurately perceived by patients and associated with more positive communication behaviours? *Patient Education and Counselling*, 62 (3) p347–354.

Beard, L. A., & Harper, C., (2002). Student perceptions of online versus on campus instruction; *Education*, 12(2) p658-663. [www.spiesforparents.cpd.usu.edu/Student](http://www.spiesforparents.cpd.usu.edu/Student)

Bednarz H., Schim S. & Doorenbos A. (2010). Cultural Diversity in Nursing Education: Perils, Pitfalls, and Pearls; *Journal of Nursing Education*, 49(5) p253–260.

Bee H. (2011) ADDIE Instructional Design Model, *Educational Technology* 23(4) p23-32. [www.slideshare.net/ccousear/addie](http://www.slideshare.net/ccousear/addie)

Beier-Holgerse R., Van Diest R. & Resti C. V. (2004). Evaluation of training of trainers courses for Oromia (Ethiopia) health professional schools' tutors, *International Nursing Review*, 51 (3) p185-192. [www.onlinelibrary.wiley.com](http://www.onlinelibrary.wiley.com)

Bjørk, I.T. & Kirkevold, M. (2000). From simplicity to complexity: Developing a model of practical skill performance. *Journal of Clinical Nursing*, 9(2) p620-631.

Binetti, P., De Marinis, M. G., Matarese, M. & Tartaglini, D. (1999). A specialization course for clinical tutors: Experience of the specialty course no. III at the University Campus of Biomedicine, Rome, Italy, *Professioni Infermieristiche*, 52 (2) p84-91.

Bichelmeyer, B.( 2005) “The ADDIE Model” – A Metaphor for the Lack of Clarity in the field of IDT, Ph.D. Thesis, Indiana University; IDT Futures Group Presentations IDT Record, New Delhi, India.

Bonnie, C., Claudia, S M., Jayne, B. J., Lutz, N., -Schott B., & Block D. (2013). Teaching/Learning Strategies for the Essentials of Baccalaureate Nursing Education for Entry-Level Community; Public Health Nursing, 30(6) p537–547.

Boulet, G. (2010). Rapid Prototype: an efficient way to collaboratively design and develop e-learning content; Navy E-learning Centre of excellence, Teaching report manual; New York.

Bradley, P. 2006). perceptions of Nurse Tutor teaching in a clinical skills learning programme; Nurse Education Today, 23(2) p302-309

Bradshaw, A. & Merriman, C. (2008). Nursing Competence 10 years on: Fit for practice and purpose; Journal of Clinical Nursing, 17(10) p1263-1279.  
[www.ncbi.nlm.nih.gov/pubmed/18416778](http://www.ncbi.nlm.nih.gov/pubmed/18416778)

Braine, M. E. & Parnell. J. (2011). Exploring students perceptions and experience of personal tutors. Nurse Education Today, 31(2) p904-910.

Braskamp, L.A., Brandenburg, D.C. & Ory, J.C. (2004). Evaluating teaching effectiveness: A practice guide London: Sage; BMC Medical Education. 5(29) p63-71  
[www.biomedcentral.com/1472-6920/5/29](http://www.biomedcentral.com/1472-6920/5/29)

Brigley, H. S. & Myemba I, (2009). Placing learning needs in context: Distance learning for clinical officers in Tanzania; Medical Teacher, 31(4) p169-176.  
[www.ncbi.nlm.nih.gov/pubmed/19288308](http://www.ncbi.nlm.nih.gov/pubmed/19288308)

Brennan, R. E, Ellis L, Higgins N. & Matthew T. (2010). Of a complex sensitivity in marketing ethics education; Journal of Marketing Management., 26(13) p1165-1180. [www.tandfonline.com](http://www.tandfonline.com)

Brennan, L. & Vos, R. (2010).Marketing simulation games: student and lecturer perspectives; Marketing Intelligence & Planning, 28(7) p882 – 897.

Bradshaw, A. (2007). Defining 'Competency' in nursing (part II): An analytical review; Journal of Clinical Nursing, 7(2) p103–111. [www.ncbi.nlm.nih.gov/pubmed/9582760](http://www.ncbi.nlm.nih.gov/pubmed/9582760)

Brink, H. I. L. (1989). Registered nurse tutors perception of their role; Curationis; Volume. 12 (2) p33-39.

Brown, S. T., Kirkpatrick, M. K., Annette, Greer, A. Mathews A.D. & Swanson M. S. (2009) The use of Innovative Pedagogies in Nursing Education: An International Perspective; Nursing Education Research; 30 (3) p153-166.

Bednarz, H., Schim, S. & Dooren bos, A. (2010) Cultural Diversity in Nursing Education: perils, pitfalls, and pearls. Journal Nursing Education. 49 (5) p253-260. doi: 10.3928/01484834-20100115-02

Busari, J.O., Prince, K.H., Scherpbier, J.A., van der Vleuten C.M. & Essed G.M. (2002). How residents perceive their teaching role in the clinical setting: A qualitative Study. Medical Teacher 24(1) p57–61.

Bultemeier, K. I. (2012). Nursing in Malawi: Nursing Theory in the Movement to Professionalize Nursing; Nursing Science 25(2) p184-189. <http://nsq.sagepub.com/content/25/2/184>

Caffrey, M. & Graeme, F. (2006). Health Workforce: Innovative Approaches and Promising Practices Study: Attracting and Retaining Nurse Tutors in Malawi; Capacity; Project USAID Global Health/HIV/AIDS and the Africa Bureau Office of Sustainable Development; Lilongwe; Malawi. [www.intrahealth.org](http://www.intrahealth.org)

Cant, R.P. & Cooper S.J. (2010) Simulation-based learning in nurse education: systematic review., 66(1) p3-15. doi:10.1111/j.1365-2648.2009.05240.x

Carlson, S; Kotze, W.J. & Van Rooyen, D. (2003). Accompaniment needs of first year nursing students in the clinical learning environment; *Curationis*, 26(2) p30-39.

Castagnolo, C. (2010). The ADDIE model, Why use it; Vol 5 (4) p8-13 <http://www.nwlink.com>.

Chiou-Fen, L. (2010). A comparison of problem-based learning and conventional; Teaching in nursing ethics education; *Nursing Ethics* 17(3) p373–382. [www.ncbi.nlm.nih.gov/pubmed/20444778](http://www.ncbi.nlm.nih.gov/pubmed/20444778).

Chirwa, M. (2007). Performance of CHAM nursing schools, Lilongwe; Malawi.

[www.norad.no/.../improved-health-training-education-in-malawian](http://www.norad.no/.../improved-health-training-education-in-malawian)

Clucas, C., & St Claire, L. (2010). The effect of feeling respected and the patient role on patient outcomes. *Applied Psychology: Health and Well-being*, 2(3) p298–322.

Christian Health Association of Malawi (2015) National health Report; Lilongwe; Malawi.

College of Nurses in Ontario (2015). Learning Modules; standards and learning; College of Nurses of Ontario; 101; Davenport Road; Toronto, ON; Canada M5R 3P1 [www.crnbc.ca/Standards/Lists/StandardResources/334DocumentationPracStd.pdf](http://www.crnbc.ca/Standards/Lists/StandardResources/334DocumentationPracStd.pdf).

Cowan, D.T., Norman, I. & Coopamah, V.P. (2007). Competence in nursing practice: A controversial concept--A focused review of literature. , 15(1) p20-26.

Danks, S. (2011). The ADDIE Model: Designing, evaluating instructional Coach effectiveness, ASQ primary and Secondary Education Brief, 4(9) p234-239 [www.asq.org](http://www.asq.org).

David M, M. & Irby, P. (2011). Educational Strategies to Promote Clinical Nursing; *Nursing Education*; 52(4) p311-317.

DeLong, S. (2009). Teaching Methods to Encourage Independent Learning and Thinking;

Excellence, United States Military Academy, West Point, New York; USA.

Dewar, B., Mackay, R., Smith, S., Pullin, S. & Tocher, R. (2010). Use of emotional touch points as a method of tapping into experiences of receiving compassionate care in a hospital setting. *Journal of Nursing. Research.* 15 (1) p 29–41.

Dorak, M. T. (2012). *Bias and confounding*. Wiley Publishing: Washington;  
<http://www.dorak.info/epi/bc.html>

DeLucia, P. R., Tammy, E. & Palmieri, P. A. (2009). *Performance in Nursing; Human Factors and Ergonomics Society*; DOI 10.1518/155723409X448008.

De Lisle, J. (2011). The benefits and challenges of mixing methods and methodologies: Lessons Learnt from Implementing Qualitatively Led Mixed Methods Research Designs in Trinidad and Tobago; *Caribbean Curriculum*, 18(2) p87–120.

DeLong, S. (2009). *Teaching Methods to Encourage Independent Learning and Thinking; the Master Teacher Programme, a 2-year faculty professional development programme conducted by the Centre for Teaching; United States Military Academy, West Point, NY.*

De Vos, A.S., Strydom, H., Fouche, C.B. & Delpont, C.S.L. (2011). *Research at grass roots for the social sciences and human service professions (2<sup>nd</sup> Edition.)*. Van Schaik Book Services; Pretoria.

Demographic Health Survey (2010), *Health indicators of Malawi*. National statistics of Malawi, government printing, Zomba; Malawi

Dobinson-H. A. (2006). Personal tutor encounters: understanding the experience; *Nursing Standard.* 20(50) p35-42; [www.ncbi.nlm.nih.gov/pubmed/16964774](http://www.ncbi.nlm.nih.gov/pubmed/16964774).

Eardley P. & Carla J. (2006). *Effective Tutoring for Nursing: A Guide for Peer Tutors*, El Camino Community Coll; Torrance; CA. USA. [www.fau.edu](http://www.fau.edu)

Elander, J. (2003). A discipline-based undergraduate skills module. *Psychology Learning and Teaching*, 3 (1) p48-55.

Epstein R.H. & Dexter, F. (2015) Management implications for the perioperative surgical home related to inpatient case cancellations and add-on case scheduling on the day of surgery. *Anaesthetic Analgesia Journal*, Vol.121 (1) p206-18. doi: 10.1213/ANE.0000000000000789.

Family Health International –FHI360 (2011). *Ethical issues in health science research*, New York; [www.epi.berkeley.edu/Ethics%20Training%20Manual.pdf](http://www.epi.berkeley.edu/Ethics%20Training%20Manual.pdf)

Field, A. (2009). *Discovering Statistics using SPSS, Third edition*; SAGE Publications Inc.; Washington. USA



Ford, S. (2009). Patients view smiling as 'best' indicator of nurse skill, *Nursing times*, 5 (3), p1-4.

Frei, J. R., & Shaver, P. R. (2002). Respect in close relationships: Prototype definition, self-report assessment and initial correlates. *Personal Relationships*, 9(2) p121–139.

Fredericksen, E., Pickett, A., Shea, P., Pelz, W., & Swan, K. (2000). Student satisfaction and perceived learning with on-line courses: Principles and examples from the Suny learning network. *Journal of Asynchronous Learning Networks*, 4(2) p56-64  
[www.adesignmedia.com/Online/](http://www.adesignmedia.com/Online/)

Freeth, D. (2005) Nursing students' and tutors' perceptions of learning and teaching in a Clinical skills centre; *Nurse Education Today*; 25(4) p272-82. [www.nurseeducationtoday.com](http://www.nurseeducationtoday.com).

Gaberson, K. B. & Oermann M. H. (2010). *Clinical teaching strategies in nursing Third Edition*; Springer Publishing Company, Philadelphia.

Gabbert W. L. (2007). Teacher-student interactions in online nursing education  
Proceedings Ascilite Singapore Journal, 3 (3) p300-309.

Gardner, L. D. & Lane, H. (2010). Exploring the personal tutor–student relationship: an autoethnographic approach., Journal of Psychiatric & Mental Health Nursing, Vol. 17 (4) p342-347. 6p. [www.ncbi.nlm.nih.gov/pubmed/20529185](http://www.ncbi.nlm.nih.gov/pubmed/20529185)

Gentry J. W. (2013). What is experiential learning? Guide to Business Gaming and Experiential Learning, Prentice Hall, UK. [www.wmich.edu/.../servicelearning](http://www.wmich.edu/.../servicelearning)

Gerrish, J. & Lacey, P. (2010). The Research Process in Nursing Sixth edition; Wiley-Blackwell, 18(5) p7-12

Gillespie, M. (2002). Student–teacher connection in clinical nursing education; Journal of Advanced Nursing 37(6) p566–576.

Glasser, S. P. (2008). Essentials of Clinical Research, Springer Science + Business Media B.V.; Alabama; ISBN 978-1-4020-8485-0; e-ISBN 978-1-4020-8486-7.

Gordon, W. (2008). Strategy and Tactics for Pilot Implementation in the ADDIE Model,” Journal of GXP Compliance; 12(2) p12-19.

Gordon, W. (2007). Strategy and Tactics of Task Analysis, Journal of GXP Compliance, 11(3) p231-236.

Gordon, W. (2007). The 'Design' Phase of the ADDIE Model, 11 (4) p46-55

Gordon, W. (2007). Developing Assessments of Trainee Proficiency, Journal of GXP Compliance, 12(1) p9-12.



Graym, M.A. & Smith, L.N. (2000). The qualities of an effective mentor from the student  
Curationis; 32 (3) p30-37.

Greaney, M. & Joanne, E. (2005). Using the ADDIE model for effective Pedagogical  
Interventions, Conseillère en Mesure et évaluation; aide pédagogique - Vanier College.  
[www.cdc.qc.ca/actes\\_aqpc/2005/ellis\\_joanne\\_608.pdf](http://www.cdc.qc.ca/actes_aqpc/2005/ellis_joanne_608.pdf).

Grigulis A. L. (2010). Lives of Malawian Nurses: stories behind the statistics, PhD thesis; Centre  
for international Health and Development; University College, London.

D'Souza ,S.L., Holub, J.L., Pavic B.T.& Rodriguez, S.A. (2016). Multicenter evaluation of the utilization of endoscopic ultrasound. Digestive  
Endoscopy Journal; 28(7) p738-743. doi: 10.1111/den.12659.

Grove, S.K., Gray, J.R. & Burns, N. (2015). Understanding Nursing Research: Building  
Evidence –Based Practice. 6<sup>th</sup> Ed. Elsevier. Missouri. USA

Hara, N., & Kling, R. (1999). Students' frustrations with a Web-based distance education course.  
First Monday, 4(12) p220-210 [www.firstmonday.dk/issues/issue4\\_12/hara](http://www.firstmonday.dk/issues/issue4_12/hara)

Haskvitz, L., Koop, E. (2004). Students struggling in clinical? A new role for the patient  
simulator. The Journal of Nursing Education, 43(2) p181–184.

Hendrick, S., & Hendrick, C. (2006). Measuring respect in close relationships. Journal of Social  
and Personal Relationships, 23(6) p881–899.

Hoke, M. M.; Leslie, K. R. (2005). Use of teaching aids in nursing; Journal of Holistic  
Nursing, 23 (3) p348-355. [www.jhn.sagepub.com/content/23/3/348](http://www.jhn.sagepub.com/content/23/3/348)

Hoke, M.M., Robbins, L.K. (2005) The impact of active learning on nursing students' clinical  
success; Journal of Holistic Nursing, 23(3) p348-55.

Hanft, S.J., Strozyk, D. Kellner, C.P., Meyers P.M. & Lavine, S.D. (2010) Training in endovascular surgical neuroradiology. *World Neuro-surgery journal*. 74(1) p28-31. doi: 10.1016/j.wneu.2010.04.006.

Hanifi, N., Parvizy, S., & Joolae, S. (2012). Nursing Challenges in Motivating Nursing Students through Clinical Education: A Grounded Theory Study Nursing Research and Practice; <http://dx.doi.org/10.1155/2012/161359>

Hwang, S.Y. (2014) Teaching and Learning for Intercultural Sensitivity: A Cross-Cultural Examination of American Domestic Students and Japanese Exchange Students; Doctoral thesis; Portland State University; Winter 3-7.

Howitt, D. & Cramer, D. (2011). Introduction to Research Methods in Psychology. Third Edition; Loughborough University press; prentice hall; London. [www.amazon.com](http://www.amazon.com)

Hord, S. (2008). Evaluating educational innovation; Croom Helm Publication. ISBN 0-7099-4703-8.

Hsu, L. S. (2005). Learning styles of community colleges nursing faculty and their use of technology in teaching (Doctoral Dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3192250).

Hussain, T. S. and Coleman, S. (2014). Designing and Development of training Games; Cambridge University Press; Amazon Book Services; California.

Intulogy (2013). Instructional Design Process for Custom Projects, Intulogy Ltd. [www.intulogy.com/wp-content/2013/09/ADDIE-Flowchart-by-Intulogy.pdf](http://www.intulogy.com/wp-content/2013/09/ADDIE-Flowchart-by-Intulogy.pdf)

Indira, K. (2009). Designing Information Literacy Modules for Distance Learners in India; Asian Journal of Distance Education; ISSN1347-9008 Asian JDE, 7(6) p35-42 [www.AsianJDE.org](http://www.AsianJDE.org).

Jan, H., Cleary, M. & Glenn E. H. (2012). Developing a pedagogy for nursing teaching– Learning; Nurse Education Today; 32(2) p930–933.

Jones, J. A. (2005). A study of nurse tutors' conceptualization of their ward teaching role; *Journal of Advanced Nursing*, 10(4) p349-360.

Jones, J. A. (2007). Putting practice into teaching: an exploratory study of nursing undergraduates' interpersonal skills and the effects of using empirical data as a teaching and learning resource; *Journal of Clinical Nursing* 16(2) p2297–2307.

Jones, J.A., Staib, S.A., Fusner, S. (2009). Expanding classroom time: teaching clinical intravenous skills in campus laboratory. *Teaching and Learning in Nursing*, 4(2) p94–97.

Johnson, M. (2009). Evaluation of Learning Style for First Year Medical Students; *International Journal for the Scholarship of Teaching and Learning*, 3(1) p112-118 ISSN 1931-4744  
<http://www.georgiasouthern.edu/ijstol>

Joyceann, F. (2011). Importance of Being Punctual; With careful planning and preparation, nursing students should have no trouble arriving to their clinical sites on time; *Advance Health care Network*, 12(3) p22-37.

Kayes, D. C. (2002). Experiential learning and its critics: Preserving the role of experience in management learning education. *Academy of Management Learning and Education*, 1(2) p p137-149.

Kayes, D. C. (2005). Internal validity and reliability of Kolb's learning style inventory version 3 (1999). *Journal of Business and Psychology*, 20(2) p249-257.

Kerri, W. (2010). Do calculation errors by nurses cause medication errors in clinical practice? A literature review, *Nurse Education Today*; 30(1) P85–97.

Khan, B. A., Ali F., Vazir, N., Barolia R. & Seema, R. (2012). Students' perceptions of clinical teaching and learning strategies: A Pakistani perspective; *Nurse Education Today*, 32 (2012) p 85–90; doi:10.1016/j.nedt.2011.01.016

Koneru, I. (2010) ADDIE; Designing Web-enabled information Literacy Instructional Modules; *Journal of Library & Information Technology*, 30(3) p23-34.

Koskinen, L., Tossavainen K. (2003). Relationships with undergraduate nursing exchange students - A Tutor Perspective; *Journal of Advanced Nursing*; 41 (5) p499-508.

Katja, Sočan & Pečjak (2007). The role of interpersonal relationships with peers and with teachers in students: Academic achievement; *Review of Psychology*, 14(1) p43-58.

Klenowski, V. (2002). *Developing Portfolios for Learning and Assessment*. Routledge, Falmer, London; [www.acsb.ca/.../Portfolios](http://www.acsb.ca/.../Portfolios).

Kreuger, L.W. & Neuman, W.L., i De Vos, A.S., Strydom, H., Fouche, C.B. & Delpont, C.S.L. (2011). *Research at grass roots for the social sciences and human service professions*. 2<sup>nd</sup> edition; Van Schaik book services; Pretoria; RSA

Kumar, A. J. (2013). Philosophical background of adult and lifelong learning nursing education philosophy, *Journal of Advanced Nursing*, 33(4) p211-22.

Laake, P, Breine H., Rhino B. (2007). *Research methods in Medical and Biological Sciences*; Academic Press; London. United Kingdom.

Lalljee, M., Laham, S. M., & Tam, T. (2007). Unconditional respect for persons: A social psychological analysis. *Gruppendynamik und Organisationsberatung*, 38(3) p451–464.

Lamba, S., Rawat, A., Jacob, J., Arya, M., Rawat, J., Chauhan, V. & Panchal, S. (2014). Impact of Teaching Time on Attention and Concentration IOSR Journal of Nursing and Health Science; 3(4)p01-04. [www.iosrjournals.org](http://www.iosrjournals.org)

Lee, L.Y.K., Lee, J.K.L., Wong, K.F., Tsang, A.Y.K. & LI, M.K. (2010). The establishment of an integrated skills training centre for undergraduate nursing education. *International Nursing Review*; 57(2) p359–364.

Leshin, C. B., Pollock, J. & Reigeluth, C. M. (1992). *Instructional design strategies and tactics*. Englewood Cliffs, NJ: Educational Technology Publications. 8(3) p211-219.

Levett-Jones, T., Lathlean, J., Higgins, I. & McMillan, M. (2009). Staff-student relationships and their impact on nursing students' belongingness and learning; *Journal of Advanced Nursing*; 65(2) 316-24. [www.wiley.jan.com](http://www.wiley.jan.com)

Liou, Shwu-R., Ching-Yu, C., Hsiu-Min, T. & Chia-Hao, C. (2013). Innovative Strategies for Teaching Nursing Research in Taiwan; *Nursing Research*, 62(5) p335–343.

Luhanga, F.L., Billay, D., Grundy, Q., Myrick, F. & Yonge, O. (2010). The one-to-one relationship: is it really key to an effective preceptorship experience? A review of the literature. *International Journal of Nursing Education Scholarsh*, 7(21) p22-31 doi: 10.2202/1548-923X.2012.

Li-Ling, H., Suh-Ing, H. & Hsiu-Win, C. (2014). Clinical teaching competence inventory for nursing preceptors: Instrument development and testing; e-Content Management Pty Ltd. *Contemporary Nurse*, 46(2) p214–222.

Maree, K. (2012). *First Steps in Research*. Van Schaik Book Services. Pretoria.

McCormack, B., Gowan, B., Gonigle, M., Goode, D., Black, P. & Sinclair, M. (2014). Exploring 'self' as a person-centred academic through critical creativity: a case study of educators in a

school of nursing; International Practice Development Journal, 4 (2) p2-4  
<http://www.fons.org/library/journal.aspx>

McGriff, S. J. (2000). Instructional System Design (IDS) Using the ADDIE model; Instructional System College of Education, Pennsylvania State University. [www.seas.gwu.edu](http://www.seas.gwu.edu).

Mabuda, B. T., Potgieter E. & Alberts, U. U. (2008). Student nurses' experiences during clinical practice in the Limpopo Province; Curationis; 31(1) p9-27.

Mabunda, M.M, Swart L.A. & Seedat, M. (2008). Magnitude and categories of pedestrian fatalities in South Africa. Accidental Analgesia Preview; 40(2) p586-93. doi: 10.1016/j.aap.2007.08.019;

Makhathini, J.T. (2002). The problem-solving process with special application to the clinical setting; Address delivered at the Nursing Education Association Conference on Clinical Teaching: Broederstroom; Curationis; Vol. 15(2) p39-46.

McCready, T. (2007). Portfolios and the assessment of competence in nursing: A literature review; International Journal of Nursing Studies; 44(1) p143–151.

Malik, M, Salahuddin M. (2000). Students, tutors and relationships: the ingredients of a successful student support scheme; Medical Education, 34(8) p635-641.

Manley, K., & Garbett, B. (2000). Paying Peter and Paul: Reconciling concepts of expertise with competency for a clinical career structure. Journal of Clinical Nursing 9(3) p347–359.

Mangala, G. (2014). Nursing Theory Vocational Education. Tamilnadu Textbook Cooperation, College Road, Chennai 600 006. India.

Manzini, H.N. (2009). Student nurses drop out; Medical Sciences: Nursing - Nursing as Profession [21414] D Litt et Phil; [www.thestudentroom.co.uk](http://www.thestudentroom.co.uk)

Mashaba, H. & Brink T. G. (2014). *Nursing Education: An International Perspective*; Juta and Company Ltd, 332. New York, USA

Maunye T.J., Meyer S. M. & Velden C.E van. ( 2009). An assessment of Teaching Strategies used by lecturers at a Nursing College in Mpumalanga; *Curationis* 32(3) p30-37; [www.ncbi.nlm.nih.gov/pubmed/20225742](http://www.ncbi.nlm.nih.gov/pubmed/20225742)

Merrill, R., Reinckens W., Yarborough, T., and Robinson, T. (2006). Retaining and Assisting Non-traditional Nursing Students in a Baccalaureate Nursing Programme Utilizing Blackboard & Tegrity Technologies, *The ABNF Journal*, 6( 4) p107-110.

Mete, R., Samiye, P., Yildirim, S. & Hatice, G. (2008). Nursing students' expectations from tutors in PBL and effects of tutors' behaviour on nursing students; *Nurse Education Today*, 28 (4) p434-442, [www.ncbi.nlm.nih.gov/pubmed/17889408](http://www.ncbi.nlm.nih.gov/pubmed/17889408)

Millward, L.J. & Jeffries, N. 2001). The Team Survey: A tool for health care team development. *Journal Advanced Nursing*, 35(2) p276-87.

Mills, G. E. & Gay, L. R. (2015) *Educational Research Competencies for Analysis and Applications*; Eleventh Edition; GLOBAL Edition; New York.

Ministry of Health (2008). Annual Report; nursing section, Lilongwe Malawi. [www.bipai.org/.../annual\\_reports/.../bcmcf-malawi annual report-2009](http://www.bipai.org/.../annual_reports/.../bcmcf-malawi_annual_report-2009)

Ministry of Health-MoH (2010). Biannual conference, Karikuti Hotel, Lilongwe, Malawi.

Mohajjel-A. A., Hassankhani H, Zamanzadeh V, Khameneh S. & Moghaddam S. (2013). Knowledge and Performance about Nursing Ethic Codes from Nurses' and Patients' Perspective in Tabriz Teaching Hospitals, Iran. *Journal of Caring Science*, 28; 2(3) p219-27.

Molenda, M. (2009). In search of Ellusive ADDIE Model; *Performance Improvement*, 42(5) p34-36.

Moon, I. (2005). Teaching in a long learning sector; *The Reflective Teacher*; 1 (1) p1-20.

Munkhondya, T.E.M., Msiska, G., Chilemba, E. & Majamanda, M.D. (2014). Experience of Conducting Objective Structured Clinical Evaluation (OSCE) in Malawi. *Open Journal of Nursing*, 4(2) p705-713. <http://dx.doi.org/10.4236/ojn.2014.410075>

Muula, A. S., Misiri, H., Chimalizeni, Y., Mpando, D., Phiri, C., & Nyaka, A. (2004). Access to continued professional education among health workers in Blantyre, Malawi. *African Health Science*, 4(1) p182-184.

Muula, A. S., Nyasula, Y. & Msiska, G. (2004). Gender distribution of teaching staff and students at the Kamuzu College of nursing, Malawi 1979-2001. *African Journal of Health Science*, 4(11) p74-76.



Ngalande R. (2012). Use of Open Education Resources at the University of Malawi (UNIMA); Kamuzu College of Nursing; Case Study: The Use of Open Education Resources at the University of Malawi (UNIMA); Lilongwe; Malawi.

Nurses Council of Malawi (NCM) (2007). Annual Report; progress of nurses in Development; Lilongwe; Malawi [https://www.rcn.org.uk/\\_data/assets/pdf\\_file/0004/.../003262.pdf](https://www.rcn.org.uk/_data/assets/pdf_file/0004/.../003262.pdf)

Nurses Council of Malawi (NCM) (2008). Annual Report; progress of nurses in Development; Lilongwe; Malawi; [www.nmcm.org.mw/](http://www.nmcm.org.mw/)

Nurses council of Malawi (2009). Annual Report on nursing education, Lilongwe, Malawi. [www.nmcm.org.mw/](http://www.nmcm.org.mw/)

Nurses Council of Malawi (NCM) (2010). Annual Report; progress of nurses in Development; Lilongwe; Malawi; [www.nmcm.org.mw/](http://www.nmcm.org.mw/)



Nurses Council of Malawi (NCM) (2012). Annual Report; progress of nurses in Development; Lilongwe; Malawi; [www.nmcm.org.mw/](http://www.nmcm.org.mw/)

Nurses Council of Malawi (NCM). (2013). Annual Report; progress of nurses in Development; Lilongwe; Malawi; [www.nmcm.org.mw/](http://www.nmcm.org.mw/)

Ministry of health-MoH (2010). Annual Report on nurse's performance: Capitol Hill; Lilongwe; Malawi. <https://www.hiv.health.gov.mw>

Nicholl, H. & Price, J. (2012). The experiences of providing children's palliative care education in undergraduate nursing programmes – A discussion of some practical issues; Nurse Education in Practice; 12 (3) p143–147.

O'Grady, G., Yew, E., Karen, Goh P.L. & Schmidt, H. (2012) One-Day, One-Problem: An Approach to Problem-based Learning, Springer book services, Amazon editors, California

Orii-Akita, M. (2014) The Effectiveness of Interactive Teaching Methods in EFL Classrooms: A Comparison with Bottom-Up and Top-Down Methods; Waseda University.

Oermann, M. H. (2009) Teaching in Nursing and Role of the Educator: The Complete Guide to Best practices in nursing; Springer Publishing Company; Amazon Books, California.

Pallant, J. (2011). SPSS Survival Manual; A step by step guide to data analysis using SPSS; 4th edition; Allen & Unwin 83; Alexander Street; Crow's Nest; NSW 2065; Australia.

Parker, M. E. (2005). Nursing Theories and Nursing Practice; second edition; F.A. Davis Company 1915 Arch Street Philadelphia, PA 19103.

Pearce, R. (2003). Profiles and Portfolios of Evidence; Nelson Thornes Ltd., Cheltenham.UK.

Pearson, R. T. (2010). Teaching Strategies for Indirect Instruction; Merrill Education Companion; Pearson Prentice Hall, UK; <http://wps.prenhall.com>

PEPFAR (2012). Presidential and Emergency Plan for AIDS Relief, Malawi annual Report, Lilongwe, Malawi.

Plessis du, D. (2004). Student nurses experience of a system of peer group supervision and guidance; *Health SA Gesondheid*, 9(2) p45-56.

Pittenger, A. L., Kristin, K; Melissa, A. & Bum, G. (2009). Instructional Design and Assessment: Online elective course for undergraduate students on common prescription Medications; *American Journal of Pharmaceutical education*, 73 (4) p1-8.

Polit D.E. & Beck C.T. (2003). *Nursing Research: Principles and Methods*. Williams Book Company; New York.

Polit, D. E., & Beck, C. T. (2008). *Nursing research: Generating and assessing evidence for nursing practice* (8th Edition). PA: Lippincott, Williams, & Wilkins, Philadelphia.

PorJitna B. & Louise M. (2008). The personal tutor's role in pre-registration nursing education; *British Journal of Nursing*, 17(2) p99-103.

Posey, L. & Pintz C. (2006). Online teaching strategies to improve collaboration among nursing; *students Nurse Education Today*, 26(2) p680–687.

Potolsky, A., Cohen J. & Saylor C. (2003). Academic Performance of Nursing Students: Do Prerequisite Grades and Tutoring make a difference? *Nursing Education Perspectives*; 24 (5) p246 -250.

Prasad, V. S. & Venkaiah, V. (2005). *India's first Open University: experience of two decades*. Hyderabad: Dr. B.R. Ambedkar Open University.

Pratt, D. D., Boll, S. L., & Collins, J. B. (2007). Towards a plurality of perspectives for nurse educators. *Nursing Philosophy*, 8(1) p49-59. doi:10.1111/j.1466-769X.2007.00297.x.

Rabiee, F. (2004). Focus-group interview and data Analysis School of Health and Policy Studies, University of Central England, *Proceedings of the Nutrition Society*, 63(2) p655–660.

Raintree, R. (2012). Top 5 Qualities That Make Educators Successful in Nursing Classes; University of St, Francis <http://www.nursetogether.com/qualities-of-a-good-nurse-educator>. .

Redfern, I. Norman, L. Calman, Watson R., Murrells T. (2002). Assessing competence to practice in nursing: a review of the literature; *Research Papers in Education*, 17 (1) p51–77. <http://www.tandfonline.com/doi/abs/10.1080/02671520110058714#>.

Restauri, S. L., King, F. L., & Nelson, J. G. (2001). Assessment of students' ratings for two methodologies of teaching via distance learning: An evaluative approach based on accreditation; Prantidf Book Services, London. [www.eric.ed.gov/?id=ED46014](http://www.eric.ed.gov/?id=ED46014)

Rosseter, R. J. (2015). The Impact of Education on Nursing Practice: Fact Sheet; (American Association of Colleges of Nursing; (202) 463-6930, x231, [rosseter@aacn.nche.edu](mailto:rosseter@aacn.nche.edu).

Robnson, B. & Dearmon, V. (2012). Evidence Based Nursing Education: Effective use of the Instructional Design and Simulated Learning Environment to Enhance Knowledge Transfer in Undergraduate Nursing Students; *Journal of Profession Nursing*, 29 (4) p203-209.

Rush B., Walsh N., Collins J., and Wharrad H. (2013). A teaching and learning observatory in nursing practice: the use of videoconferencing in nurse education; University of Nottingham, Visual Learning Laboratory, school of nursing; United Kingdom

Russell, B.H. (2015). The who, what, and how of evaluation within online nursing education: state of the science. *Journal of Nursing Education*. 54(1)13-21. [www.ncbi.nlm.nih.gov/pubmed/25545144](http://www.ncbi.nlm.nih.gov/pubmed/25545144)

Richman, L. (2010). Policy plus evidence issues and opinion in health care, National nursing research Unit; Kings College of nursing; London; 4(28) p22-29  
<https://www.kcl.ac.uk/nursing/research/nuru/.../Policy-plus-Review.pdf>

Richardson, C.A. & Rabiee, F. (2001). 'A Question of Access' – an exploration of the Factors influencing the health of young males aged 15–19 living in Corby and their use of health care services; Health Education Journal, 60 (2) p3–6.

Rhyn, V. & Gontsana, M. R. (2004). Experiences by student nurses during clinical placement in psychiatric units in a hospital; Curationis; 8 (2) p18-28.

Roberto, R. (2011). Research Ethics Training Curriculum, Second Edition; Family Health International; [www.fhi360.org](http://www.fhi360.org)

Ross-G. & Jovita, M. (2011). Research on Adult Learners: Supporting the Needs of a Student Population that Is No Longer Non-traditional; Peer Review; Washington, 13(1) p26-29

Ross, J., Head, K., King, L., Perry, P. M. & Stephen, S. (2014). The personal development tutor role: An exploration of student and lecturer experiences and perceptions of that relationship; Nurse Education Today, 34 (2) p1207–1213: [www.elsevier.com](http://www.elsevier.com) .

Salminen, L.K., Melender, H.L., Leino-Kilpi, H. (2009). The competence of student nurse teachers; Internal Journal of Nursing Education Scholarsh; 6(35) p22-44. doi: 10.2202/1548-923X.1803.

Sayers, R. (2006). Principles of awareness-raising for Information Literacy, a case study. Bangkok: UNESCO Bangkok.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects; Education for Information 22 (63) p75- 83; IOS Press.

Watson, R. & Murrells, T. (2002). Assessing competence to practice in nursing: a review of the literature. *Research Papers in Education* 17(1), p51–77.

Santy J., J. Kneale (2000). Critiquing quantitative research; *Journal of Orthopaedic Nursing*, 2 (2), p77–83.

Santos, J. & Reynaldo A. (2013) Financial Strain and Cognitive Impairment on Enrolment in Medicare Part D; *Journal of the American Geriatric Society*, 57(8): p1433–1440.

Saunders, M; Lewis P. & Thornhill, A. (2009). *Research methods for Business students*; fifth edition; Pearson Education; UK.

Schlegel, M. J. (1995). *A Handbook of Instructional and Training Programme Design*. ERIC Document Reproduction Service ED383281.

Simonson, M. (2000). Making Decisions: The Use of Electronic Technology in Online Classrooms; 20(84) p29-34.

Smits, M., Sluijsmans D. & dominique J. (2009). Effects of a competency-oriented course and the effects of feedback training on students' reflection skills; *Assessment & Evaluation in Higher Education*, 34(5) p491-498.

Streads, R. E. B. (2002). *Nurse Educator Competencies*; council on collegiate education for nursing; Southern Regional Education Board; 592; 10th St. N.W.; Atlanta, GA; 30318; (404) 875-9211.

Smeltzer, S. C. O'Connell. & Bare, B. G. (Brunner & Suddarth), (2010). *Text book of medical and surgical nursing*; 10<sup>th</sup> edition; Philadelphia, USA.

Stein, J. (2007). *Rapid prototyping and instructional design for technology enhanced learning*; flexknowlogy Eastern Road Street; Ottawa; Canada. [www.flexknowlogy.learningfield.org](http://www.flexknowlogy.learningfield.org)

Stephenson, P. M.(2008). Aspects of the nurse tutor-student; nurse relationship; Journal of Advanced Nursing, 9(3) p283-290.

Strickland, K. (2012). The use of podcasts to enhance research-teaching linkages in undergraduate nursing students; Nurse Education in Practice, 12 (4) p210-214.

Strickland, J., Strickland, A., Wang, P. & Zimmerly, L., (2010). Online Course development using ADDIE model: The need to establish validity; Plantiff Book Company; NewYork.

Strickland, S. (2014). Online course development using ADDIE model: the Need to Establish Validity; [www.dtic.mil/dtic/tr/fulltext/u2/a019490.pdf](http://www.dtic.mil/dtic/tr/fulltext/u2/a019490.pdf)

Strickland, K., Gray, C. & Hill, G. (2012). The use of podcasts to enhance research-teaching linkages in undergraduate nursing students. Nurse Education Practice.; 12(4) p210-214. doi: 10.1016/j.nepr.2012.01.006.

Shu-Mei, T. & Pei-Shan, L., (2014). The effect of knowledge management capability and dynamic capability on organizational performance, Journal of Enterprise Information Management, 27(2) p158-179, <https://doi.org/10.1108/JEIM-05-2012-0025>

Sweetin, J. (2005). Instructional Design “The Basics; Distance education and instructional technology; Pitt Community College; New York, USA.

Sowan, A.K. & Idhail, J.A. (2014).Evaluation of an interactive web-based nursing course with streaming videos for medication administration skills; International Journal of Medical Informatics.; 83 (8) p592-600.

Teddlie, M. & Tashakkori, R. (2009). Foundations of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioral Sciences. Sage Publications, Inc; Los Angeles.

Thomas, L. (2006). Widening participation and the increased need for personal tutoring. In Personal Tutoring in Higher Education, ed. Thomas, L., and P. Hixenbaugh. Stoke on Trent: Trentham Books. UK.

Thurmond, V., Wambach, K. (2007). Understanding Interactions in Distance Education: A Review of the Literature; *International Journal of Instructional Technology and Distance Learning*; 6(4) p29-36.

Tomietto, M., Saiani L., Palese, A., Cunico, L., Cicolini, G., Watson, P. & Saarikoski, M. (2012). Clinical Learning Environment and Supervision plus Nurse Teacher (CLES+T) scale: testing the psychometric characteristics of the Italian version; *G. Ital Med Lav Erg*; 34(3) p23-34

Torskar, A.A. (2011). Styles, strategies and tactics approaches to teaching; school of Education; Pondicherry University; German.

Twilley, J. (2014) Examination of practice of instructional Design Models; Doctor of Education Thesis; University of Central Florida; Orlando; Florida.

United Nation Institute, for Training and Research (2014). Designing Training: The ADDIE; Click4it toolkit, [www.unitar.org](http://www.unitar.org)

Vallant, S. & Neville, S. N Z. (2006). The relationship between student nurse and nurse clinician: impact on student learning; *Nursing Practice*; Nov; 22 (3) p23-33.

Vrasidas, C., & McIsaac, M. S. (1999). Factors influencing interaction in an online course. *The American Journal of Distance Education*, 13(3) p22-36.

Williman, P. (2011). *Research methods the basics*; Routledge; 2 Park Square, Milton Park, Abingdon, Oxon OX14; 4RN; UK.

William, S. D., Robert, W. L., Xiao, Z. & Yuan, Z. (2012). Evaluating Teachers and Schools Using Student Growth Models; *Practical Assessment, Research & Evaluation*, 17 (17) p28-35.

Wang, S.-W. (2009). Using ADDIE model to design second life activities for online learners, *TechTrends*, 53 (6) p76-81.

Waterson, E., Harms, E., Qupe, L., Maritz J. & Makobe K. (2006). Strategies to improve the performance of learners in a nursing college; Part I: Issues pertaining to nursing education; *Curationis*, 29(2) p56-65.

Worrell, J. A., Joanne, P. M. (2007). Critical thinking as an outcome of context-based learning among post RN students: A Literature Review; *Nurse Education Today*, 27(5) p420-426  
DOI:[www.//dx.doi.org/10.1016/j.nedt.2006.07.004](http://dx.doi.org/10.1016/j.nedt.2006.07.004)

Wang, L. (2012). Use of Likert scale in Class; *British Journal of Medical Education*; 18(6): p311-319.

Williams, R.T. (2012). Instructional Design: Using the ADDIE model to build a writing course for University students; *Journal of Japanese high education*, 49(4) p113-127.

William, H. W. (2013). E-books in Academic Libraries: Challenges for Acquisition and Collection Management portal: *Libraries and the Academy*, The Johns Hopkins University Press, Baltimore, MD 21218: 13(2) p187–211;

Winters C. A. & Echeverri R. (2012). Teaching Strategies to Support Evidence-Based Practice; *Critical Care Nurse*, 32(3) p49-56; American Association of Critical-Care Nurses; doi: <http://dx.doi.org/10.4037/ccn2012159>

WHO (2010). Statistical year book; Sub-Saharan Region; New York.

WHO (2007). Statistical year book, Geneva.



Yava, A., Tosun, N., Çiçek, H., Yavan, T., Terakye, G. & Hatipoğlu, S. (2009) Nurses' perceptions of the barriers to and the facilitators of research utilization in Turkey. *Application of Nursing Research*. 22(3) p166-75. doi: 10.1016/j.apnr.2007.11.003.

Yin, R.K. (2003). *Case Study Research: Design and Methods* (3rd edition). Thousand Oaks, Sage; California.

Yukhymenko, M. A., Brown, S. W., Lawless, K. A., Brodowinska, K., & Mullin, G. (2014). Thematic analysis of teacher instructional practices and student responses in middle school classrooms with problem-based learning environment. *Global Education Review*, 1 (3) p93-109.

Zeleny, M. (2010) Strategy as an Action: from Porter to Anti-Porter, *International Journal of Strategic Decision Sciences*, 1(1) p32-52.

#### **APPENDIX 1: INFORMED CONSENT ON QUESTIONNAIRE**

Dear Participant

#### **CONSENT TO PARTICIPATE IN A STUDY ON: DEVELOPING EFFECTIVE TEACHING STRATEGIES FOR NURSE TUTORS AND STUDENTS IN NURSING COLLEGES IN MALAWI**

Mr Noel Dzimnenani Mbirimtengerenji a student at University of Western Cape in community health sciences Department is conducting research on the above mentioned topic. As a partial fulfilment of the award of a PhD at University of Western Cape, as a requirement of the study on the study we are collecting information necessary for the study from nurse tutors, nursing students and administrators. Therefore, we would like to fill in the questionnaire below from you.

The questionnaire will last between 45 minutes to one hour. You are therefore, asked to voluntarily participate in the study by responding to the questionnaire that I will have with you. The responses will be recorded on the questionnaire to ensure that all the information is captured. There will be no benefits nor physical risks from this study, though psychological risks cannot be ruled out. However, your participation will assist the college in planning and implementing relevant teaching and learning strategies in improving nursing services in the country.

The questions will be asked in a private place to ensure privacy; the information to be obtained will be confidential as the information that you give will not be shared to any member outside the research team. In addition, your identity will be anonymous as code numbers will be used on the questionnaire. The information on the questionnaire will be destroyed upon completion of the study. Permission from other relevant authorities for me to carry out this study will be sought. Your participation in the study is absolutely on voluntary basis and you may withdraw from participation if you feel like without any reprisals. Therefore, you are free to participate in this study. To show that

you have clearly understood all the explanations regarding the study and that you have freely and voluntarily given your consent, please sign your signature below.

Should you encounter any problem with this research participation or want to know your rights in this research, please you should report to:

Professor Ellen Mbweza Chirwa, University of Malawi, College of Nursing, Blantyre Campus, Box 415, Chichiri, Blantyre 3. Tel, (265)1-880183 E-mail [ellenmbwezachirwa@kcn.unima.mw](mailto:ellenmbwezachirwa@kcn.unima.mw)

Head of Department: Professor Karien Jooste, School of Nursing, University of the Western Cape; Private Bag X17; Bellville 7535 Tel. +27(021) 9592274 E-mail: [kjooste@uwc.ac.za](mailto:kjooste@uwc.ac.za)

The Chair person, COMREC, P. O. Box 360, Chichiri Blantyre 3. or TEL.( 01877245)

**PARTICIPANT**

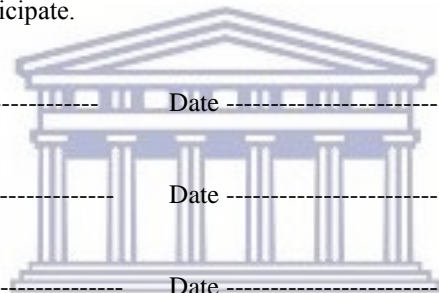
I have understood the above information and the conditions under which I may participate in this study.

I agree...../disagree..... to participate.

Participant's signature: ----- Date -----

Witnessed by: ----- Date -----

Investigator's signature: ----- Date -----



UNIVERSITY of the  
WESTERN CAPE

## APPENDIX 2: TUTOR QUESTIONNAIRE

### DEVELOPING EFFECTIVE TEACHING STRATEGY FOR NURSE TUTORS IN MALAWI

#### SECTION A: DEMOGRAPHIC DATA

*(Circle the most appropriate code on each question)*

NO	VARIABLES	COVARIATES	CODE	GO TO
A01	What is your <b>gender</b> ?	a) Male	1	
		b) Female	2	
A02	How <b>old</b> are you?	A) 25-30yrs	1	
		B) 31-55yrs	2	
		c) 36-40yrs	3	
		d) >40 yrs	4	
A03	What is your <b>marital status</b> ?	a) single	1	
		b) married	2	
		c) co-habitate	3	
		d) widowed	4	
A04	Where do you live?	a) On campus	1	
		b) Off campus	2	
		c) Another town	3	
A05	What is your religion?	a) catholic	1	
		b) CCAP	2	
		c) Islam	3	
		d) SDA	4	
		e) Others	5	
A06	To which tribe do you belong?	a) Chewa	1	

		b) Lomwe	2	
		c) Ngoni	3	
		d) Tumbuka	4	
		e) Yao	5	
		f) Others.....	6	
<b>A07</b>	In Which year are you teaching?	a) Year 1	1	
		b) Year 2	2	
		c) Year 3	3	
		d) Midwifery	4	
<b>A08</b>	Have you ever worked at another college?	a) Yes	1	A07
		b) No	2	A08
<b>A09</b>	How many years did you work as a nurse?	a) 1-2Years	1	
		b) 3-5 years	2	
		c) 6-10 years	3	
		d) 11-20 years	4	
		e) none	5	
<b>A10</b>	Which course/mode do you teach?	a) nursing	1	
		b) bioscience	2	
		c) clinical	3	
		d) others	4	
		e)		
<b>A11</b>	How many children do you have?	A) none	1	
		B) one	2	
		C) two	3	
		D) >two	4	

UNIVERSITY of the  
WESTERN CAPE

**SECTION B: TEACHING STRATEGIES**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

CODE	VARIABLES	1	2	3	4	5
	<i>Have you ever used this method of teaching for this semester</i>					
	<b>Direct Instructions :</b>					
<b>B01</b>	Structured Overview					
<b>B02</b>	Lecture					
<b>B03</b>	Explicit Teaching					
<b>B04</b>	Drill & Practice					
<b>B05</b>	Compare & Contrast					
<b>B06</b>	Didactic Questions					
<b>B07</b>	Demonstrations					
<b>B08</b>	Guided & Shared - reading, listening,					
	<b>Interactive Instructions:</b>					
<b>B09</b>	Debates					
<b>B10</b>	Role-playing					
<b>B11</b>	Panels					
<b>B12</b>	Brainstorming					

<b>B13</b>	Peer Partner Learning					
<b>B14</b>	Discussion					
<b>B15</b>	Laboratory Groups					
<b>B16</b>	Think, Pair, Share					
<b>B17</b>	Cooperative Learning Groups					
<b>B18</b>	Jigsaw					
<b>B19</b>	Problem Solving					
<b>B20</b>	Structured Controversy					
<b>B21</b>	Tutorial Groups					
<b>B22</b>	Interviewing					
<b>B23</b>	Conferencing					
	<b>Indirect Instructions:</b>					
<b>B24</b>	Problem Solving					
<b>B25</b>	Case Studies					
<b>B26</b>	Reading for Meaning					
<b>B27</b>	Reflective Discussion					
<b>B28</b>	Writing to Inform					
<b>B29</b>	Concept Mapping					
	<b>Independent Studies</b>					
<b>B30</b>	Essays					
<b>B31</b>	Computer Assisted Instruction					
<b>B32</b>	Journals					
<b>B33</b>	Learning Logs					
<b>B34</b>	Report					
<b>B35</b>	Learning Activity Packages					
<b>B36</b>	Correspondence Lessons					
<b>B37</b>	Learning Contracts					
<b>B38</b>	Homework					
<b>B39</b>	Research Projects					
<b>B40</b>	Assigned Questions					
	<b>Experiential Learnings:</b>					
<b>B41</b>	Field Trips					
<b>B42</b>	Narratives					
<b>B43</b>	Conducting Experiments					
<b>B49</b>	Simulations					
<b>B50</b>	Games					
<b>B51</b>	Story telling					
<b>B53</b>	Field Observations					
<b>B54</b>	Role-playing					
<b>B55</b>	Model Building					
<b>B56</b>	Surveys					
	<b>Instructional Skills:</b>					
<b>B57</b>	Explaining					
<b>B58</b>	Demonstrating					
<b>B59</b>	Questioning					
<b>B60</b>	Questioning Technique					
<b>B61</b>	Wait Time					
<b>B62</b>	Levels of Questions					

**SECTION C. TEACHING STRATEGIES TUTOR COMPETENCY**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	<i>Have you ever used this method of teaching this Semester</i>					
	<b>DISCUSSION:</b>					
C01	provide opportunities for students to learn					
C02	state the purpose of discussion					
C03	identify the goal of the discussion and communicate it clearly					
C04	pose meaningful, open-ended questions					
C05	keep track of discussion progress					
C06	decide how to arrange seating for discussion					
C07	position seating so that members can hear each other					
	<b>BRAINSTORMING:</b>					
C09	state the issue or problem and ask for ideas					
C10	students may suggest any idea that comes to mind					
C11	do not discuss the ideas when they are first suggested					
C12	designate a leader and a recorder					
C13	record and review ideas in a place where everyone can see them					
	<b>ROLE-PLAY:</b>					
C15	provide an excellent strategy for practising skills during class					
C16	describe the situation to be role-played by students					
C17	select role-players in advance					
C18	Give and facilitate instructions to role-players on time					
C19	discuss what happened after role-playing					
	<b>CASE STUDIES:</b>					
C21	Guiding questions are useful to spur thinking					
C22	Facilitator must be adept at teasing out the key points					
C23	Teacher must act as the facilitator and coach					
	<b>DEBATE:</b>					
C24	Provides opportunity to address a particular issue in-depth					
C25	Offers a chance to practise higher thinking skills					
C26	Allow students to take positions of their choosing					
C27	Provide students with time to research					
C28	Do not allow students to dominate at the expense of other					
	<b>STORY TELLING:</b>					
C31	engage their creative skills in helping to write stories					
C32	helping students to discover healthy solutions					
C33	Keep the story simple and clear					
C34	Make the story dramatic enough to be interesting					
	<b>LECTURER</b>					
C36	Gives the instructor the chance to expose students to not readily available material.					
C37	Allows the instructor to precisely determine the aims, content, organization, pace and direction of a presentation.					
C38	Can be used to arouse interest in a subject.					
C39	Can complement and clarify text material.					
C40	Complements certain individual learning preferences.					
C41	Facilitates large-class communication					
C42	Places students in a passive rather than an active role,					
	Encourages one-way communication to my students					

C43	Causes Student to understand content without verbal feedback.					
C44	Places students in a passive rather than an active role, which hinders learning					
C45	Encourages one-way communication					
C46	. Creating an Environment of Respect and Rapport					

#### SECTION D: TEACHING AND LEARNING AIDS

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	Which of the following teaching and learning AIDS did you use recently					
D01	Use of posters					
D02	Use of whiteboard with different marker- colours					
D03	Use of Overhead projector					
D04	Use of LCD – Power-point- Presentation					
D05	Use of Training CD/DVD/Videos					
D06	Use of figurative Models from clinical Laboratory					
D07	Use of research articles					
D08	Use of Workbook					
D09	Use of manual or module guides					
D10	Computer laboratory					
D11	Use of internet when teaching					
D12	Use of teaching CDs					
D13	Use of Chalk					
D14	Use of Library to teach					
D15	Use of Video conference					
D16	Use of small group facilitations					
D17	Use of patient					

#### SECTION E: STUDENT-TUTOR INTERACTION

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	During last semester, have you?					
E01	Always been cheerful to students					
E02	Very academically sociable in class & Clinical area					
E03	Tend to be rude at times to students in class					
E04	Tend to be talkative in class when irritated					
E05	Outgoing to students when need arise					
E06	Mostly reserved from students					
E07	At times look aggressive to students					
E08	Mostly considerate to student					

E09	Very reflective in teaching					
E10	Listen attentively before answering student question					
E11	At times I Look arrogant to student					
E12	Motivate my student to work hard					
E13	Mostly accommodative to students problems					
E14	Tend to be apologetic to students					
E15	Feel non-judgemental to students					
E16	Have fluent non-verbal skills in communication					
E17	Open-minded on student needs					
E18	Have clear language articulation					
E19	Tend to be empathetic to students					
E20	Tend to be respectful on students ideas					
E21	Look compassionate to student					
E22	Generally enthusiastic when teaching					
E23	Feel I have good humour in class					
E24	Feel I have commitment to job					
E25	Generally approachable by students					
E26	Tend to be trustworthy to students counselling					
E27	Tend to be sensitive tutor to my students					
E28	Advocate for students welfare					
E29	Mostly honest on student counselling					
E30	Naturally Nurturing person to students					
E31	Promote cooperation rather than competition					
E32	Support for equity among students					
E33	Advocate for human rights on my students					
E34	Role models for healthy behaviours to students					
E35	Respond to student misbehaviour					
E36	Tend to be respectful when talking and turn to student					
E37	Good user of body language in class					
E39	Maintain good physical proximity with my students					
E40	Provide warmth and caring speech to students					
E41	Polite in approaching students					
E42	Good at monitoring of student behaviour					

## **SECTION F: TUTOR PERFORMANCE**

*Tick in the right number as 1 to 5*

*1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree*

NO	VARIABLES	1	2	3	4	5
	<i>During last semester, have you?</i>					
F01	Provide adequate instructional time to students					
F02	Provide enough notes/information to students					
F03	have enough internet resources for teaching					
F04	have enough books to use for teaching					
F05	Have personal students as advisor					
F06	Offer and describe good objectives when teaching					
F07	Tend to vary on teaching strategies					



F08	Give good examples when teaching					
F09	Ask questions when teaching					
F10	Use power-point when teaching					
F11	Give active lecturing to students					
F12	Give tests from what is taught in class					
F13	Give time before exam to students					
F14	Award marks to examination effectively					
F15	Evaluate the module/course after class					
F16	Give fair examinations to students					
F17	Understands course/module to be taught					
F18	Give self-directed learning to student					
F19	Know learning resource mobilization for class					
F20	Tend to be a risk taker					
F21	Give constructive feedback to students					
F22	Competent in teaching students					
F23	Satisfy student learning process in class					
F24	Mostly punctual in class					
F25	Tend to be initiative in learning process					
F26	Tend to be a facilitator rather than a provider					
F27	Feel a problem solver					
F28	Promote listening and communication skills					
F29	Have adequate experience to teach different strategies					
F30	Tend to be student centred					
F31	Facilitate dealing with sensitive issues to students					
F32	Promote tolerance and understanding in students					
F33	Encourage innovation and creativity in students					
F34	Establish an adequate knowledge base for class					
F35	Have networks of experts to draw on student information					
F36	Establishes an effective, safe, and supportive training					
F37	Apply participatory teaching methods effectively					
F38	Model the skills addressed in the curriculum					
F39	Focus on the whole student, not just, for instance, on the effect of one particular health issue.					

### **SECTION G: TUTOR SELF-PERFORMANCE**

*Tick in the right number as 1 to 5*

*1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree*

NO	VARIABLES	1	2	3	4	5
	<i>During last semester, have you?</i>					
G01	Lecture during the entire class period.					
G02	Showed a film or video for the entire class period.					
G03	During lecture, gave a short, ungraded quiz to check student comprehension of material					
G04	assigned a short writing activity without having class discussion afterward	33				
G05	Had students complete a survey instrument					
G06	Had students complete a self-assessment activity					
G07	Took the class on a field trip					
G08	Assigned a laboratory exercise that was done by students					
G09	Lectured with at least 15 minutes of time devoted to recitation or asking questions designed to check student understanding.					

G10	Led a class discussion focused on a visual/audio stimulus					
G11	Had students engage in a brainstorming activity					
G12	Lectured with at least 15 minutes of time devoted to class discussion					
G13	Assigned a short writing activity that was followed by at least 15 minutes of class discussion					
G14	Assigned an in-class reading activity that was followed by a significant class discussion lasting 15 minutes or more					
G15	Assigned a small group discussion or project					
G16	Had students completed a problem solving game or simulation					
G17	Assigned individual student presentations					
G18	Assigned small group presentations					
G19	Assigned a student-centred class discussion					
G20	Led a role-playing activity					

## **SECTION H. COMMON TEACHING MOTIVATORS AND BARRIERS**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	<i>Have you ever come across the following teaching <b>motivators</b> and <b>barriers</b></i>					
	<b>FOCUS:</b>					
H01	Inadequate orientation and training of administrators, teachers, and other support staff					
H02	General programmes that are less directed toward specific contexts or risk behaviours					
H03	Efforts to cover a broad array of topics, values, and skills while failing to emphasise particular facts, values, norms, and skills					
H04	Presentations that are information-heavy, particularly with physiological information, with little or no attention to feelings					
H05	Too little concentrated time on the learning task					
H06	Infusion of health issues across a range of subjects without providing a solid foundation within one subject					
	<b>COORDINATION AND CONSISTENCY:</b>					
H07	Weak leadership, lack of genuine commitment and coordination from ministries of health and education					
H08	Insufficient infrastructure for teacher training					
H09	lack of quality teaching materials and participatory methods					
H10	Insufficient coordination in terms of time frames and plans, leading to isolated and vertical programmes					
H11	competition with other health topics or programmes within the school environment or inconsistent messages					
	<b>INTENSITY AND SCALE</b>					
H12	Failure to plan for expansion or to go beyond the pilot stage					
H13	Inadequate funding					
H14	Inadequate attention to related strategies that maximise success					
H15	Inadequate mechanisms for supervising, monitoring, and evaluating programmes, including a lack of detailed documentation					
	<b>ATTITUDE FOR PARTICIPANTS</b>					
H16	Respect for themselves and others					

H17	Understanding of gender roles and sexual differences					
H18	Belief in a positive future					
H19	Empathy with others					
H20	Understanding of duty in regard to self and others					
H21	Willingness to explore attitudes, values, and beliefs					
H22	Recognition of behaviour that is deemed appropriate within the context of social and cultural norms					
H23	Support for equity, human rights, and honesty					
H24	Commitment to setting ethical, moral, and behavioural standards					
H25	Positive self-image by defining positive personal qualities and					
H26	Portrayal of human sexuality as a healthy and normal					
H27	Confidence to change unhealthy habits					
H28	Willingness to take responsibility for their own behaviour					
H29	Understanding of their own values and standards					
H30	Concern for social issues and their relevance to social					
H31	A sense of care and social support for those					
H32	Respect for the knowledge, attitudes, beliefs					
	<b>COMPETENCES FOR TUTORS</b>					
H33	Ability to play different roles - to support, focus, or direct the group					
H34	Ability to act as a guide as opposed to dominating the group					
H35	Respect for the adolescent and his or her freedom of choice and individual					
H36	Warmth, supportiveness, and enthusiasm					
H37	Ability to deal with sensitive issues, such as hygiene, sexual and reproductive health					
H38	Appropriate personal and professional attitudes and practices					
H39	Practice what you preach					
H40	Accurate knowledge of, and adequate personal comfort with					

### **SECTION I. CLINICAL STUDENT NEEDS**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	<i>The tutor/clinical instructor at the clinical area:</i>					
	<i>During last semester, have you?</i>					
I01	Clarify clinical objectives at the beginning to students					
I02	Guide student in meeting objectives during the allocation					
I03	Identify student learning issues on patients					
I04	Effectively demonstrates on clinical procedures on a patient					
I05	Guide on information/resources at the clinical area					
I06	Stimulate student interest in clinical learning					
I07	Guide on clinical student resource mobilization					
I08	Communicate to students in clinical area clearly					
I09	Able to evaluate the students objectives after an allocation					
I10	Aware of students clinical learning needs					
I11	Encourage student efforts on patient care					
I12	Fostering self-evaluation and skill adjustment					
I13	Influence student clinical confidentiality on patient care					
I14	Reduces fear of unknown for the students on clinical learning					
I15	Alleviate student stress in the clinical area.					
I16	Facilitates teamwork to students					

I17	Facilitate critical thinking to student at the clinical area					
I18	Help student identify an appropriate case study					
I19	Providing opportunities for personal student practise					
I20	Serve as resource to facilitate learning					
I21	Facilitate the student's orientation to clinical setting					
I22	used principles of group interaction					
I23	Tend to be objectives on clinical student evaluation					
I24	included evidence of being well prepared					
I25	Serve as a role model/mentor, demonstrating clinical expertise					
I26	Help student perform skills in accordance with ward policy					
I27	Provide ongoing feedback to the student for growth					
I28	Meet with student and faculty adviser to discuss student's progress					
I29	Professionally presented to the group					
I30	provided guidance for recorder/timekeeper					
I31	moved group actively in positive direction					
I33	brought new case information to the tutorial					
I34	contributed constructively to group learning					
I35	related new and old case information to learning issues					
I36	Related findings to the case situation sufficiently					
I37	necessary content, without extraneous information					
I38	formulated questions to stimulate further inquiry					
I39	ensured that closing reflection included					

### **SECTION J. EFFECTIVENESS OF TEACHING STRATEGIES**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

CODE	VARIABLES	1	2	3	4	5
	<i>During last semester, have you?</i>					
	<b>ADMINISTRATION</b>					
J01	Established an adequate knowledge base about the issues to be addressed					
J02	Established an effective, safe, and supportive student training and programmeenvironment					
J03	Inspired broad participation and genuine interaction					
J04	Applied participatory teaching methods both in class and at the clinical area					
J05	Modelled the skills addressed in the curriculum					
J06	Focused on the whole student, not just, on the effect of one particular health issue					
J07	Analysed adult perceptions of adolescents and adolescence					
J08	Built skills in conjunction with providing information					
J09	Addressed sensitive issues in adolescents					
J10	Provided constructive criticism and positive reinforcement and feedback					
J11	Accessed and assessing the quality of teaching and learning resources					
J12	Accessed and assessing referral and support networks and community liaisons, and facilitating local participation					
J13	Fitted training to the skills level of the providers					
J14	Provided ample opportunity for trainees to demonstrate and practise					
J15	Allowed active participation of trainees in making decisions about programmeadoption					
J16	Paired experienced skills-based health education providers with new trainees					

<b>QUALITY STANDARDS/COMPETENCIES</b>						
<b>J17</b>	Does the programme address relevant health and social issues?					
<b>J18</b>	Are there objectives to influence behaviour change to students?					
<b>J19</b>	Is there a mix of knowledge, attitudes, and skills in class and at the clinical area?					
<b>J20</b>	Are participatory teaching and learning methods used both in class and at the clinical area?					
<b>J21</b>	Is the programme participant-centred and gender-sensitive					
<b>J22</b>	Are policies in place to support the programme					
<b>J23</b>	Are related support services accessible to the audience/participants					
<b>J24</b>	Are stakeholders consulted? Involved					
<b>J25</b>	Are facilitators/teachers trained for this purpose					
<b>J26</b>	Are facilitators/teachers supported in the implementation phase?					
<b>J27</b>	Are facilitators/teachers satisfied with the implementation of the programme?					
<b>J28</b>	Are participants satisfied with the implementation of the programme?					
<b>J29</b>	Is the programme of sufficient duration to achieve the desired objectives?					
<b>J30</b>	Are relevant educational materials utilised in class and at the clinical area?					
<b>J31</b>	Is the programme based on relevant, current, accurate information and methods in nursing?					
<b>J32</b>	Are programme impact and process monitoring and evaluation in place both in class and at the clinical area?					
<b>J33</b>	Does the management meet the programme cost?					
<b>COMPETENCES FOR TUTORS</b>						
<b>J34</b>	encouraging teamwork					
<b>J35</b>	enhancing skills and knowledge					
<b>J36</b>	increasing staff retention					
<b>J37</b>	reducing staff anxiety					
<b>J38</b>	increasing productivity					
<b>J39</b>	improving nursing performance					
<b>J40</b>	ensuring compliance with The Joint Commission					
<b>J41</b>	Use assessment and evaluation strategies					
<b>J42</b>	Participate in curriculum design and evaluation of programme outcomes					
<b>J43</b>	Function as change agents and leaders					

**SECTION. ASSESSING NURSING SKILLS**

*Circle in the right place on Yes or NO*

<b>CODE</b>	<b>VARIABLE</b>	<b>YES</b>	<b>NO</b>
	<i>During last semester, have you done the following assessment skills in class or at the clinical area ?</i>		
<b>K01</b>	Exhibitions		
<b>K02</b>	Laboratory performance		
<b>K03</b>	Essays		
<b>K04</b>	Journals		
<b>K05</b>	Short answer items		
<b>K06</b>	Multiple-choice items		
<b>K07</b>	Projects		
<b>K08</b>	Portfolios		
<b>K09</b>	Interviews		
<b>K10</b>	Papers		
<b>K11</b>	Concept mapping		

<b>K12</b>	Systematic observation		
<b>K13</b>	Long-term investigation		
<b>K14</b>	Manipulative skills		



UNIVERSITY *of the*  
WESTERN CAPE

APPENDIX 3: INFORMED CONSENT ON STUDENT QUESTIONNAIRE

Dear Participant

**CONSENT TO PARTICIPATE IN A STUDY ON: DEVELOPING EFFECTIVE TEACHING STRATEGIES FOR NURSE TUTORS AND STUDENTS IN NURSING COLLEGES IN MALAWI**

Mr Noel Dzimnenani Mbirimtengerenji a student at University of Western Cape in community health sciences Department is conducting research on the above mentioned topic. As a partial fulfilment of the award of a PhD at University of Western Cape, as a requirement of the study on the study we are collecting information necessary for the study from nurse tutors, nursing students and administrators . Therefore, we would like to fill in the questionnaire below from you.

The questionnaire will last between 45 minutes to one hour. You are therefore, asked to voluntarily participate in the study by responding to the questionnaire that I will have with you. The responses will be recorded on the questionnaire to ensure that all the information is captured. There will be no benefits nor physical risks from this study, though psychological risks cannot be ruled out. However, your participation will assist the college in planning and implementing relevant teaching and learning strategies in improving nursing services in the country.

The questions will be asked in a private place to ensure privacy; the information to be obtained will be confidential as the information that you give will not be shared to any member outside the research team. In addition, your identity will be anonymous as code numbers will be used on the questionnaire. The information on the questionnaire will be destroyed upon completion of the study. Permission from other relevant authorities for me to carry out this study will be sought.

Your participation in the study is absolutely on voluntary basis and you may withdraw from participation if you feel like without any reprisals. Therefore, you are free to participate in this study. To show that you have clearly understood all the explanations regarding the study and that you have freely and voluntarily given your consent, please sign your signature below.

Should you encounter any problem with this research participation or want to know your rights in this research, please you should report to:

Professor Ellen MbwezaChirwa, University of Malawi, College of Nursing, Blantyre Campus, Box 415, Chichiri, Blantyre 3. Tel, (265)1-880183 E-mail [ellenmbwezachirwa@kcn.unima.mw](mailto:ellenmbwezachirwa@kcn.unima.mw)

Head of Department: Professor Karien Jooste School of Nursing, University of the Western Cape; Private Bag X17; Bellville 7535Tel. +27(021) 9592274 E-mail: [kjooste@uwc.ac.za](mailto:kjooste@uwc.ac.za)

The Chair person, COMREC, P. O. Box 360, Chichiri Blantyre 3. TEL.( 01877245) email. [comrec@medcol.mw](mailto:comrec@medcol.mw)

PARTICIPANT

I have understood the above information and the conditions under which I may participate in this study.

I agree...../disagree..... to participate.

Participant's signature: ----- Date -----

Witnessed by: ----- Date -----

Investigator's signature: ----- Date -----

## APPENDIX 4: STUDENT QUESTIONNAIRE

### DEVELOPING EFFECTIVE TEACHING STRATEGY FOR NURSE TUTORS IN MALAWI

#### PART ONE:

#### SECTION A: DEMOGRAPHIC DATA

*(Circle the most appropriate code on each question)*

NO	VARIABLES	COVARIATES	CODE	GO TO
A01	What is your gender?	A. Male	1	
		B. Female	2	
A02	How old are you?	a) 15-20yrs	1	
		b) 21-25yrs	2	
		c) 26-30yrs	3	
		d) >30 yrs	4	
A03	Where do you live?	a) On campus	1	
		b) Off campus	2	
		c) At home	3	
A04	In Which year are you studying?	a) Year 2	1	
		b) Year 3	2	
		c) Midwifery	3	
A05	Have you ever worked before?	a) Yes	1	A06
		b) No	2	A07
A06	What was your previous occupation?	a) Teacher	1	
		b) Business	2	
		c) Health/HSA	3	
		d) Accounts	4	
		e) Others	5	
A07	What is your marital status?	a) single	1	
		b) married	2	
		c) co-habitate	3	
A08	What is your religion?	a) catholic	1	
		b) CCAP	2	
		c) Islam	3	
		d) SDA	4	
		e) Others	5	
A09	To which tribe do you belong?	a) Chewa	1	
		b) Lomwe	2	
		c) Ngoni	3	
		d) Tumbuka	4	
		e) Yao	5	
		f) Others.....	6	



<b>A10</b>	Where do you eat food?	a) On campus		
		b) Off campus		
		c) At Home		
<b>A11</b>	How many children do you have?	a) none	1	
		b) one	2	
		c) two	3	
		d) >two	4	

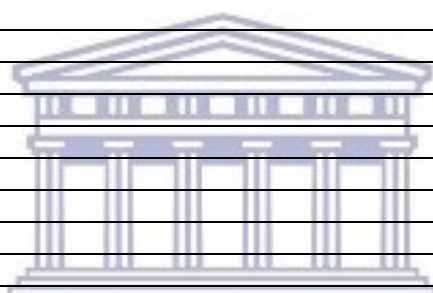
## **SECTION B. TEACHING STRATEGIES**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

<b>CODE</b>	<b>VARIABLES</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<i>Has your tutor ever used this method of teaching for this semester</i>					
	<b>Direct Instructions :</b>					
<b>B01</b>	Structured Overview					
<b>B02</b>	Lecture					
<b>B03</b>	Explicit Teaching					
<b>B04</b>	Drill & Practice					
<b>B05</b>	Compare & Contrast					
<b>B06</b>	Didactic Questions					
<b>B07</b>	Demonstrations					
<b>B08</b>	Guided & Shared - reading, listening,					
	<b>Interactive Instructions:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>B09</b>	Debates					
<b>B10</b>	Role-playing					
<b>B11</b>	Panels					
<b>B12</b>	Brainstorming					
<b>B13</b>	Peer Partner Learning					
<b>B14</b>	Discussion					
<b>B15</b>	Laboratory Groups					
<b>B16</b>	Think, Pair, Share					
<b>B17</b>	Cooperative Learning Groups					
<b>B18</b>	Jigsaw					
<b>B19</b>	Problem Solving					
<b>B20</b>	Structured Controversy					
<b>B21</b>	Tutorial Groups					
<b>B22</b>	Interviewing					
<b>B23</b>	Conferencing					
	<b>Indirect Instructions:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>B24</b>	Problem Solving					
<b>B25</b>	Case Studies					
<b>B26</b>	Reading for Meaning					
<b>B27</b>	Reflective Discussion					
<b>B28</b>	Inquiry					
<b>B29</b>	Writing to Inform					
<b>B30</b>	Concept Formation					

B31	Concept Mapping					
B32	Concept Attainment					
B33	Cloze Procedure					
	<b>Independent Studies</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
B34	Essays					
B35	Computer Assisted Instruction					
B36	Journals					
B37	Learning Logs					
B38	Reports					
B39	Learning Activity Packages					
B40	Correspondence Lessons					
B41	Learning Contracts					
B42	Homework					
B43	Research Projects					
B44	Assigned Questions					
B45	Learning Centers					
	<b>Experiential Learnings:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
B46	Field Trips					
B47	Narratives					
B48	Conducting Experiments					
B49	Simulations					
B50	Games					
B51	Storytelling					
B52	Focused Imaging					
B53	Field Observations					
B54	Role-playing					
B55	Model Building					
B56	Surveys					
	<b>Instructional Skills:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
B57	Explaining					
B58	Demonstrating					
B59	Questioning					
B60	Questioning Technique					
B61	Levels of Questions					
B62						



UNIVERSITY OF  
WESTERN CAPE

### **SECTION C. TEACHING STRATEGIES TUTOR COMPETENCY**

*Tick in the right number as 1 to 5*

*1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree*

NO	VARIABLES	1	2	3	4	5
	<i>Have your tutor ever used this attributes of method of teaching this Semester</i>					
	<b>DISCUSSION:</b>					
C01	Provide opportunities for students to learn					
C02	State the purpose of discussion					
C03	Identify the goal of the discussion and communicate it clearly					

C04	Pose meaningful, open-ended questions					
C05	Keep track of discussion progress					
C06	Decide how to arrange seating for discussion					
C07	Position seating so that members can hear each other					
	<b>BRAINSTORMING:</b>					
C09	State the issue or problem and ask for ideas					
C10	Students may suggest any idea that comes to mind					
C11	Do not discuss the ideas when they are first suggested					
C12	Designate a leader and a recorder					
C13	Record and review ideas in a place where everyone can see them					
	<b>ROLE-PLAY:</b>					
C15	Provide an excellent strategy for practising skills during class					
C16	Describe the situation to be role-played by students					
C17	Select role-players in advance					
C18	Give and facilitate instructions to role-players on time					
C19	Discuss what happened after role-playing					
	<b>CASE STUDIES:</b>					
C21	Guiding questions are useful to spur thinking					
C22	Facilitator must be adept at teasing out the key points					
C23	Teacher must act as the facilitator and coach					
	<b>DEBATE:</b>					
C24	Provides opportunity to address a particular issue in-depth					
C25	Offers a chance to practise higher thinking skills					
C26	Allow students to take positions of their choosing					
C27	Provide students with time to research					
C28	Do not allow students to dominate at the expense of other					
	<b>STORY TELLING:</b>					
C31	Engage their creative skills in helping to write stories					
C32	Helping students to discover healthy solutions					
C33	Keep the story simple and clear					
C34	Make the story dramatic enough to be interesting					
	<b>LECTURER</b>					
C36	Gives the instructor the chance to expose students to not readily available material.					
C37	Allows the instructor to precisely determine the aims, content, organization, pace and direction of a presentation.					
C38	Can be used to arouse interest in a subject.					
C39	Can complement and clarify text material.					
C40	Complements certain individual learning preferences.					
C41	Facilitates large-class communication					
C42	Places students in a passive rather than an active role, Encourages one-way communication to my students					
C43	Causes Student to understand content without verbal feedback.					
C44	Places students in a passive rather than an active role, which hinders learning					
C45	Encourages one-way communication					
C46	Creating an Environment of Respect and Rapport					

#### SECTION D: TEACHING AND LEARNING AIDS

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	Which of the following teaching and learning AIDS did your tutor recently used					
D01	Use of posters					
D02	Use of whiteboard with different marker- colours					
D03	Use of Overhead projector					
D04	Use of LCD – Powerpoint- Presentation					
D05	Use of Training CD/DVD/Videos					
D06	Use of figurative Models from your Laboratory					
D07	Use of research articles					
D08	Use of Workbook					
D09	Use of manual guides					
D10	Computer laboratory					
D11	Use of internet when teaching					
D12	Use of teaching CDs					
D13	Use of Chalk					
D14	Use of Library to teach					
D15	Use of Video conference					
D16	Use of small group facilitations					
D17	Use of patient					

### **SECTION E: STUDENT -TUTOR INTERACTION CHALLENGES**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	Have you interacted at any time with your tutor on the following attributes for this semester					
E01	Tutor is cheerful to students in class					
E02	Very academically sociable in class & Clinical area					
E03	Tend to be rude to students in class					
E04	Tend to be talkative in class					
E05	Is an outgoing to students					
E06	Is mostly reserved from students					
E07	Looks aggressive to students in class					
E08	Mostly considerate to student					
E09	Very reflective in teaching					
E10	Has listening skills to students					
E11	Looks arrogant to student					
E12	Mostly motivate students to learning					
E13	Mostly accommodative student ideas					
E14	Tend to be apologetic when wrong					
E15	Non-judgemental to students					
E16	Has fluent non-verbal skills					
E17	Looks Open-minded to students					
E18	Has clear language articulation					

E19	Tend to be empathetic to students					
E20	Tend to be respectful to students and other tutors					
E21	Looks compassionate to students					
E22	Looks Enthusiastic when teaching					
E23	Has good humour in class					
E24	Looks to have Commitment to job					
E25	Is mostly Approachable					
E26	Looks trustworthy to students					
E27	Tend to be experienced in teaching					
E28	Mostly advocate for students learning					
E29	Tend to be Honest to students					
E30	Looks more nurturing to students					
E31	promote cooperation rather than competition					
E32	support for equity to students in class					
E33	Promote Human rights to students,					
E34	role models for healthy behaviours					
E35	skilled and competent in teaching					
E36	Respect for students' background and life outside the classroom					
E37	good use of Teacher body language					
E38	Maintain good Physical proximity					
E39	Warmth and caring speech					
E40	Politeness in approach					
E41	Good Monitoring of student behaviour					
E42	Response to student misbehaviour					

### **SECTION F : PARAMETERS FOR TEACHER PERFORMANCE**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	<i>Has your tutor performed the following attributes</i>					
F01	Tutors provides adequate instructional time to students					
F02	Tutors gives enough notes/information in class					
F03	Have enough internet resources					
F04	Have enough books to use for learning					
F05	have personal tutor as advisor					
F06	Tutors gives good objectives when teaching					
F07	Tutor vary on teaching strategy in class and at the clinical area					
F08	Gives good examples when teaching					
F09	asks questions when teaching					
F10	uses power-point when teaching					
F11	gives active lecturing to students					
F12	gives tests from what he/she taught					
F13	gives time before exam					
F14	marks examination effectively					
F15	evaluates the module/course after					
F16	gives fair examinations					
F17	understands her/his course/module					
F18	gives self-directed learning to student					
F19	knows learning resource mobilization					
F20	knows collaborative learning					

F21	gives constructive feedback to students					
F22	is competent in teaching students					
F23	Tutor Satisfies student learning process					
F24	Tutor Is mostly punctual in class					
F25	Tutor is initiative in learning process					
F26	Tutor is a facilitator rather than a director in class					
F27	Tutor is a problem solver to students					
F28	Tutor demonstrates on procedures					
F29	Tutor is student centered					
F30	facilitates dealing with sensitive issues					
F31	promotes tolerance and understanding					
F32	Tutor is a risk taker					
F33	Tutor establishes an adequate knowledge base					
F34	Tutor has networks of experts to draw on information					
F35	Tutor has Inspiring broad participation and genuine interaction					
F36	Tutor applies participatory teaching methods effectively					
F37	Tutor models the skills addressed in the curriculum					
F38	Tutors focuses on the whole student, not just, for instance, on the effect of one particular health issue					
F39	Analyses adult student perceptions of myths, and clarification of adult values					
F40	Tutor addresses sensitive issues in students during learning					
F41	Tutor provides constructive criticism and positive reinforcement and feedback					
F42	Tutor provide ample opportunity for students to demonstrate and practise new skills					
F43	Tutors allows active participation of students in making decisions					
F44	Tutors pair experienced skills-based clinical staff with new students					
F45	Tutors establish an adequate knowledge base about the issues to be addressed.					
F46	Tutors promote cooperation rather than competition among students					
F47	Tutors enable participants to get to know each other better and extend relationship					
F48	Tutors promote listening and communication skills					
F49	Tutors promote tolerance and understanding of individuals and their needs					
F50	Tutors encourage innovation and creativity					

### **SECTION G :PARAMETERS FOR TEACHER SELF-PERFORMANCE**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

NO	VARIABLES	1	2	3	4	5
	<i>Has your tutor self- performed the following attributes in your presence</i>					
G01	Lectured during the entire class period.					
G02	Showed a film or video for the entire class period.					
G03	During lecture, gave a short, ungraded quiz to check student comprehension of material					
G04	Assigned a short writing activity without having class discussion afterward					
G05	Had students complete a survey instrument					
G06	Had students complete a self-assessment activity					

G07	Took the class on a field trip					
G08	Assigned a laboratory exercise that was done by students					
G09	Lectured with at least 15 minutes of time devoted to recitation or asking questions					
G10	Led a class discussion focused on a visual/audio stimulus					
G11	Had students engage in a brainstorming activity					
G12	Lectured with at least 15 minutes of time devoted to class discussion					
G13	Assigned a short writing activity that was followed by at least 15 minutes of class discussion					
G14	Assigned an in-class reading activity that was followed by a significant class discussion					
G15	Assigned a small group discussion or project					
G16	Had students complete a problem solving game or simulation in groups					
G17	Assigned individual student presentations					
G18	Assigned small group presentations					
G19	Assigned a student-centered class discussion)					
G20	Led a role-playing activity					
G21	Lectured during the entire class period.					



**SECTION H: COMMON TEACHING MOTIVATORS AND BARRIERS**

*Tick in the right number as 1 to 5*

*1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree*

NO	VARIABLES	1	2	3	4	5
	<i>has your tutor had the following teaching motivators and barriers</i>					
	<b>FOCUS:</b>					
H01	Had in-adequate orientation and training of administrators, teachers, and other support staff					
H02	General programmes that are less directed toward specific contexts or risk behaviours					
H03	More efforts to cover a broad array of topics, values, and skills while failing to emphasise particular facts, values, norms, and skills					
H04	Presentations that are information-heavy, particularly with physiological information, with little or no attention to feelings					
H05	Too little concentrated time on the learning task					
H06	Infusion of health issues across a range of subjects without providing a solid foundation within one subject					
	<b>COORDINATION AND CONSISTENCY:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
H07	Tutors lack of genuine commitment and coordination from their bosses					
H08	Insufficient infrastructure for teacher training					
H09	Lack of quality teaching materials and participatory methods					
H10	Insufficient coordination in terms of time frames and plans, leading to					

	isolated and vertical programmes					
<b>H11</b>	No competition with other health topics or programmes within the school environment or inconsistent messages					
	<b>INTENSITY AND SCALE</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>H12</b>	Failure to plan for expansion or to go beyond the pilot stage					
<b>H13</b>	This college has inadequate funding					
<b>H14</b>	Inadequate attention to related strategies that maximise success					
<b>H15</b>	Inadequate mechanisms for supervising, monitoring, and evaluating programmes, including a lack of detailed documentation					
	<b>ATTUDE FOR STUDENTS</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>H16</b>	Respect for themselves and others					
<b>H17</b>	Understanding of student gender roles and sexual differences					
<b>H18</b>	Belief in a positive future for students					
<b>H19</b>	Is very empathetic with students and others					
<b>H20</b>	Understanding of duty in regard to self and others					
<b>H21</b>	Willingness to explore attitudes, values, and beliefs					
<b>H22</b>	Recognition of behaviour that is deemed appropriate within the context of social and cultural norms					
<b>H23</b>	Support for equity, human rights, and honesty					
<b>H24</b>	Commitment to setting ethical, moral, and behavioural standards					
<b>H25</b>	Positive self-image by defining positive personal qualities and					
<b>H26</b>	Portrayal of human sexuality as a healthy and normal					
<b>H27</b>	Confidence to change unhealthy habits					
<b>H28</b>	Willingness to take responsibility for their own behaviour					
<b>H29</b>	an understanding of their own values and standards					
<b>H30</b>	Concern for social issues and their relevance to social					
<b>H31</b>	A sense of care and social support for all students					
<b>H32</b>	Respect for the knowledge, attitudes, beliefs of students					
	<b>COMPETENCES FOR TUTORS</b>					
<b>H33</b>	Ability to play different roles - to support, focus, or direct the group					
<b>H34</b>	Ability to act as a guide as opposed to dominating the group					
<b>H35</b>	Respect for the adolescent and his or her freedom of choice and individual					
<b>H36</b>	Warmth, supportiveness, and enthusiasm to students					
<b>H36</b>	Ability to deal with sensitive issues, such as hygiene, sexual and reproductive health					
<b>H37</b>	Appropriate personal and professional attitudes and practices					
<b>H38</b>	Practice what tutor say in class					
<b>H39</b>	Accurate knowledge of, and adequate personal comfort with student					

## **SECTION I. CLINICAL STUDENT NEEDS**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

<b>NO</b>	<b>VARIABLES</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<i>Has your tutor/clinical instructor at the clinical area:</i>					



I01	Clarify objectives at the beginning of the lesson					
I02	Guide student in meeting objectives both in class and at clinical area					
I03	Identify student learning issues in class					
I04	Effectively demonstrates on clinical procedures on the patient					
I05	Guide on information/resources at the clinical area					
I06	Stimulate student interest in clinical learning					
I07	Guide on Clinical student resource mobilization					
I08	Communicate to students in clinical area clearly					
I09	Able to evaluate the students objectives					
I10	Aware of students clinical needs					
I11	Encourage student efforts					
I12	Is enthusiastic on student clinical instructions					
I13	Influence student clinical confidentiality					
I14	Reduces fear of unknown for the students on clinical learning					
I15	Alleviate student stress in the clinical area.					
I16	Facilitates teamwork to students					
I17	Facilitate critical thinking to student at the clinical area					
I18	Fostering self-evaluation and skill adjustment					
I19	Providing opportunities for personal student practise					
I20	Facilitate the student's orientation to clinical setting					
I21	Collaborate with student and faculty adviser in planning individualized					
I22	Help student identify an appropriate case study					
I23	Serve as a role model/mentor, demonstrating clinical expertise					
I24	Serve as resource to facilitate learning in the ward for students					
I25	Help student perform skills in accordance with policy and professional judgment					
I26	Provide ongoing feedback to the student for growth					
I27	Meet with student and staff to discuss student's					
I28	Shows evidence of being well prepared when in the clinical					
I29	Mostly establishes ground rules before clinical placement					
I30	Participation and preparedness attendance at all clinical tutorials, and on time					
I31	Provide guidance for students in every allocation					
I32	Probe for accurate data in the clinical area					
I33	Used principles of group interaction					
I34	Move clinical group actively in positive direction					
I35	Maintained clinical student control and dignity					
I36	Contributed constructively to group learning in clinical presentations					
I37	Brought new case information to the clinical tutorial					
I38	Related new and old case information to learning issues					
I39	Sought to contribute scholarly information to students					
I40	Engaged students in analysis of learning issues					
I41	Formulated questions to stimulate student further clinical inquiry					
I42	Ensured that closing reflection included in assignments					
I43	Provide helpful information for future tutorials					
I44	Regular contribution of quality and helpful comments in clinical meeting					
I45	Listened respectfully/validated input from others					
I46	Professionally presented to the group					
I47	Addressed issues and controversies					
I48	Useful in the "real" situation					
I49	Well-written, theory-based scholarly products					
I50	Accurate and complete information					
I51	Related findings to the case situation sufficiently					
I52	Comments reflected preparation/growth in knowledge					

## **SECTION J. EFFECTIVENESS OF TEACHING STRATEGIES**

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

<b>CODE</b>	<b>VARIABLES</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<i>With your tutor have you done the following attributes for teaching strategies</i>					
<b>J01</b>	establishing an adequate knowledge base about the issues to be addressed					
<b>J02</b>	establishing an effective, safe, and supportive training and programmeenvironment					
<b>J03</b>	inspiring broad participation and genuine interaction					
<b>J04</b>	applying participatory teaching methods;					
<b>J05</b>	modelling the skills addressed in the curriculum					
<b>J06</b>	focusing on the whole child and adolescent, not just, for instance, on the effect of one particular health issue					
<b>J07</b>	analysing students perceptions of myths, and clarification of values around issues relevant to young people					
<b>J08</b>	building skills in conjunction with providing information					
<b>J09</b>	addressing sensitive issues in adolescents					
<b>J10</b>	providing constructive criticism and positive reinforcement and feedback					
<b>J11</b>	accessing and assessing the quality of teaching and learning resources					
<b>J12</b>	accessing and assessing referral and support networks and community liaisons, and facilitating local participation					
<b>J13</b>	fitting training to the skills level of the providers					
<b>J14</b>	providing ample opportunity for students to demonstrate and practise					
<b>J15</b>	allowing active participation of students in making decisions about programmeadoption					
<b>J16</b>	pairing experienced skills-based health education providers with new students					
	<b>QUALITY STANDARDS/COMPETENCIES</b>					
<b>J17</b>	The programmeaddress relevant health and social issues					
<b>J18</b>	There are objectives to influence behaviour					
<b>J19</b>	There is a mix of knowledge, attitudes, and skills					
<b>J20</b>	Participatory teaching and learning methods are used					
<b>J21</b>	The programmeis participant-centred and gender-sensitive					
<b>J22</b>	Policies are in place to support the programme					
<b>J23</b>	related support services accessible to the audience/participants					
<b>J24</b>	stakeholders are regularly consulted and Involved					
<b>J25</b>	teachers Are well trained for this teaching purpose					
<b>J26</b>	Tutors are supported in the implementation phase by administrators					
<b>J27</b>	tutors satisfied with the implementation of the programme					
<b>J28</b>	the programmeof sufficient duration is to achieve the desired objectives					
<b>J29</b>	relevant educational materials are utilised					
<b>J30</b>	The programmeis based on relevant, current, accurate information and methods					
<b>J31</b>	programmeimpact and process monitoring and evaluation in place					
<b>J32</b>	Encouraging teamwork for students at the ward					
<b>J33</b>	Enhancing skills and knowledge for student					
	<b>COMPETENCES FOR TUTORS</b>					
<b>J34</b>	Improving nursing clinical performance for students and staff					
<b>J35</b>	Function within the educational clinical environment					

<b>J36</b>	Facilitate learning of clinical staff and students					
<b>J37</b>	Use clinical assessment and evaluation strategies with staff					
<b>J38</b>	Participate in curriculum design and evaluation of programme outcomes					
<b>J39</b>	Function as change agents and leaders in the clinical area					
<b>J40</b>	Pursue continuous quality improvements in the nurse educator role					

## SECTION K. ASSESSING NURSING SKILLS

Tick in the right number as 1 to 5

1=strongly disagree; 2=disagree 3= not sure 4=agree 5=strongly agree

CODE	VARIABLE	1	2	3	4	5
	<i>During last semester, have you done the following assessment skills in class or at the clinical area ?</i>					
<b>K01</b>	Exhibitions					
<b>K02</b>	Laboratory performance					
<b>K03</b>	Essays					
<b>K04</b>	Journals					
<b>K05</b>	Short answer items					
<b>K06</b>	Multiple-choice items					
<b>K07</b>	Projects					
<b>K08</b>	Portfolios					
<b>K09</b>	Interviews					
<b>K10</b>	Papers					
<b>K11</b>	Concept mapping					
<b>K12</b>	Systematic observation					
<b>K13</b>	Long-term investigation					
<b>K14</b>	Manipulative skills					

UNIVERSITY of the  
WESTERN CAPE

## APPENDIX 5: INFORMED CONSENT ON TUTORS IN-DEPTH INTERVIEW

Dear Participant

### CONSENT TO PARTICIPATE IN A STUDY ON: DEVELOPING EFFECTIVE TEACHING STRATEGIES FOR NURSE TUTORS AND STUDENTS IN NURSING COLLEGES IN MALAWI

Mr Noel Dzimnenani Mbirimtengerenji a student at University of Western Cape in community health sciences Department is conducting research on the above mentioned topic. As a partial fulfilment of the award of a PhD at University of Western Cape, as a requirement of the study on the study we are collecting information necessary for the study from nurse tutors, nursing students and administrators . Therefore, we would like to participate in this in-depth interview.

The interview will last between 45 minutes to one hour. You are therefore, asked to voluntarily participate in the study by responding to the questions that I will have with you. The responses will be recorded on the tape recorder and written on paper to ensure that all the information is captured. There will be no benefits nor physical risks from this study, though psychological risks cannot be ruled out. However, your participation will assist the college in planning and implementing relevant teaching and learning strategies in improving nursing services in the country.

The interview is going to be conducted in a private place to ensure privacy; the information to be obtained will be confidential as the information that you give will not be shared to any member outside the research team. In addition, your identity will be anonymous as code numbers will be used on the questionnaire. The information will be later destroyed upon completion of the study. Permission from other relevant authorities for me to carry out this study will be sought.

Your participation in the study is absolutely on voluntary basis and you may withdraw from participation if you feel like without any reprisals. Therefore, you are free to participate in this study. To show that you have clearly understood all the explanations regarding the study and that you have freely and voluntarily given your consent, please sign your signature below.

Should you encounter any problem with this research participation or want to know your rights in this research, please you should report to:

Professor Ellen MbwezaChirwa, University of Malawi, College of Nursing, Blantyre Campus, Box 415, Chichiri, Blantyre 3. Tel, (265)1-880183 E-mail [ellenmbwezachirwa@kcn.unima.mw](mailto:ellenmbwezachirwa@kcn.unima.mw)

Head of Department: Professor Karien Jooste School of Nursing, University of the Western Cape; Private Bag X17; Bellville 7535Tel. +27(021) 9592274 E-mail: [kjooste@uwc.ac.za](mailto:kjooste@uwc.ac.za)

The Chair person, COMREC, P. O. Box 360, Chichiri Blantyre 3. TEL. ( 01877245) email. [comrec@medcol.mw](mailto:comrec@medcol.mw)

#### PARTICIPANT

I have understood the above information and the conditions under which I may participate in this study.

I agree...../disagree..... to participate.

Participant's signature: ----- Date -----

Witnessed by: ----- Date -----

Investigator's signature: ----- Date -----

**APPENDIX 6: IN-DEPTH INTERVIEW GUIDE – TUTOR/ADMIN**

**DEVELOPING EFFECTIVE TEACHING STRATEGY FOR NURSE TUTORS IN MALAWI**

**SECTION A: DEMOGRAPHIC DATA**

*(Circle the most appropriate code on each question)*

NO	VARIABLES	COVARIATES	CODE	GO TO
A01	What is your gender?	a) Male	1	
		b) Female	2	
A02	How old are you?	a) 25-30yrs	1	
		b) 31-55yrs	2	
		c) 36-40yrs	3	
		d) >40 yrs	4	
A03	What is your marital status?	a) single	1	
		b) married	2	
		c) co-habitate	3	
		d) widowed	4	
A04	Where do you live?	a) On campus	1	
		b) Off campus	2	
		c) Another town	3	
A05	In Which year are you teaching?	a) Year 1	1	
		b) Year 2	2	
		c) Year 3	3	
		d) Midwifery	4	
A06	Have you ever worked at another college?	a) Yes	1	A07
		b) No	2	A08
A07	How many years did you work as a nurse?	a) 1-2Years	1	
		b) 3-5 years	2	
		c) 6-10 years	3	
		d) 11-20 years	4	
		e) none	5	
A08	Which course/mode do you teach?	a) nursing	1	
		b) bioscience	2	
		c) clinical	3	
		d) others	4	
A09	How many children do you have?	e) none	1	
		f) one	2	
		g) two	3	
		h) >two	4	
A10	What is your highest qualification	a) Diploma	1	
		b) Degree	2	
		c) Masters	3	

		d) Others	4	

### INTERVIEW GUIDE FOR TUTORS AND ADMINISTRATION

QUESTIONS	PROBES
1. Tell me about the different teaching approaches and their challenges	Tell me about your: <ul style="list-style-type: none"> <li>• teaching strategy; challenges</li> <li>• Teaching aids; challenges</li> <li>• Competence; challenges</li> <li>• Interaction; challenges</li> <li>• Performance; challenges</li> </ul>
2. Tell me about the student interactions both in class and at the clinical area	Tell me about the: <ul style="list-style-type: none"> <li>• Challenges</li> <li>• Solutions</li> </ul>



UNIVERSITY *of the*  
WESTERN CAPE

## APPENDIX 7: INFORMED CONSENT FOR FOCUS GROUP DISCUSSION

Dear Participant

### CONSENT TO PARTICIPATE IN A STUDY ON: DEVELOPING EFFECTIVE TEACHING STRATEGIES FOR NURSE TUTORS AND STUDENTS IN NURSING COLLEGES IN MALAWI

Mr Noel Dzimnenani Mbirimtengerenji a student at University of Western Cape in community health sciences Department is conducting research on the above mentioned topic. As a partial fulfilment of the award of a PhD at University of Western Cape, as a requirement of the study on the study we are collecting information necessary for the study from nurse tutors, nursing students and administrators . Therefore, we would like to conduct a focus group discuss with you.

The discussion will last between 45 minutes to one hour. You are therefore, asked to voluntarily participate in the study by responding to the questions that I will have with you. The responses will be recorded on the tape recorder and written on paper to ensure that all the information is captured. There will be no benefits nor physical risks from this study, though psychological risks cannot be ruled out. However, your participation will assist the college in planning and implementing relevant teaching and learning strategies in improving nursing services in the country.

The discussion is going to be conducted in a private place to ensure privacy; the information to be obtained will be confidential as the information that you give will not be shared to any member outside the research team. In addition, your identity will be anonymous as code numbers will be used on the questionnaire. The information on the questionnaire will be destroyed upon completion of the study. Permission from other relevant authorities for me to carry out this study will be sought.

Your participation in the study is absolutely on voluntary basis and you may withdraw from participation if you feel like without any reprisals. Therefore, you are free to participate in this study. To show that you have clearly understood all the explanations regarding the study and that you have freely and voluntarily given your consent, please sign your signature below.

Should you encounter any problem with this research participation or want to know your rights in this research, please you should report to:

Professor Ellen MbwezaChirwa, University of Malawi, College of Nursing, Blantyre Campus, Box 415, Chichiri, Blantyre 3. Tel, (265)1-880183 E-mail [ellenmbwezachirwa@kcn.unima.mw](mailto:ellenmbwezachirwa@kcn.unima.mw)

Head of Department: Professor Karien Jooste School of Nursing, University of the Western Cape; Private Bag X17; Bellville 7535Tel. +27(021) 9592274 E-mail: [kjooste@uwc.ac.za](mailto:kjooste@uwc.ac.za)

The Chair person, COMREC, P. O. Box 360, Chichiri Blantyre 3. TEL.( 01877245) email. [comrec@medcol.mw](mailto:comrec@medcol.mw)

#### PARTICIPANT

I have understood the above information and the conditions under which I may participate in this study.

I agree...../disagree..... To participate.

Participant's signature: ----- Date -----

Witnessed by: ----- Date -----

Investigator's signature: ----- Date -----

## APPENDIX 8: FOCUS GROUP GUIDE – STUDENT

### DEVELOPING EFFECTIVE TEACHING STRATEGY FOR STUDENT IN MALAWI

QUESTIONS	PROBES
1. Explain the different teaching needs and their challenges both in class and at the clinical area	How to solve these needs: <ul style="list-style-type: none"><li>• teaching strategy challenges</li><li>• Teaching aids challenges</li><li>• Competence challenges</li><li>• Interaction challenges</li><li>• Performance challenges</li></ul>
2. Explain the nurse tutor and student challenges of interactions both in class and at the clinical area	How do you cope up with such challenges <ul style="list-style-type: none"><li>• Solutions</li><li>• Promotion</li></ul>



UNIVERSITY *of the*  
WESTERN CAPE



## APPENDIX 9: NKHOMA TEACHING STRATEGY

### SECTION A: TUTOR COMPETENCY

NO	ATTRIBUTES	MARK	COMMENT
A1	Prepares and provides an excellent strategy for practising skills during class		
A2	Provides opportunities for students to learn		
A3	Positions seating so that members can see and hear each other		
A4	Identifies and states the goal of the discussion and communicate it clearly		
A5	Poses meaningful, open-ended questions		
A6	Motivate student to work hard		
A7	Keeps track of discussion progress		
A8	Makes decision mapping or problem trees		
A9	Describes the situation to be role-played by students effectively		
A10	Selects facilitators in advance		
A11	Gives instructions to role-players on time		
A12	Evaluates what happened after skill		
A13	Gives guiding questions to stimulate thinking		
A14	Vigilant at teasing out the key points		
A15	Acts as the main facilitator and coach		
A16	Provides opportunities to expose students to material not usually available		
A17	Precisely determine the Objectives		
A18	Precisely determine content		
A19	Precisely determine organization		
A20	Precisely determine pace and direction of a presentation (students taking 60% of work and 40% by tutors)		
A21	Stimulates interest in a subject.		
A22	Complements and clarifies material.		
A23	Facilitates large-class communication		
A24	Places students in an active role, that promotes learning		
A25	Encourages non-verbal and verbal 2-way communication to students		
A26	Provides a considerable amount of guided student time outside of the classroom.		
A27	Responsible to create an environment of respect and rapport		
A28	Leads a class discussion focused on a visual/audio stimulus		
A29	Assigns an in-class reading activity followed by a significant class discussion		
A30	Had students complete a problem solving game or simulation in class session		
A31	Assigns individual student presentations		
A32	Establishes adequate knowledge base about the issues to be addressed		
A33	Establishes safe and supportive training and programmeenvironment effectively		
A34	Assists in accessing and assessing referral and support networks		
A35	Assists in community liaisons		
A36	Facilitates local participation		
A37	Integrates knowledge, attitudes, and skills in teaching		
A38	Relates support services accessible to the audience/participants		
A39	Involves stakeholders are regularly		
A40	Reinforces administration support		
A41	utilises educational materials		
A42	Encourages programmeimpact and process monitoring and evaluation in place		

### SECTION B: TEACHING AND LEARNING AIDS

B1	Uses posters		
B2	Uses whiteboard with different marker- colours		
B3	Uses LCD – PowerPoint- Presentation		
B4	Uses Training CD/DVD/Videos		

B5	Uses figurative Models from clinical Laboratory		
B6	Uses research articles		
B7	Uses manual or module guides		
B8	Uses computer laboratory		
B9	Uses internet when teaching		
B10	Uses patient		

**STUDENT-TUTOR VERBAL&NON-VERBAL QUES**

<b>A</b>	Eye contact		
<b>B</b>	Tutor movement		
<b>C</b>	Facial expressions		
<b>D</b>	Smiling		
<b>E</b>	Dressing code		
<b>F</b>	Hair do		
<b>G</b>	Word repetition		
<b>H</b>	Voice tone		
<b>I</b>	Learning		
<b>J</b>	Nodding		
<b>K</b>	Avoids irritating mannerisms		
<b>L</b>	Seating plan		

**SECTION C: TUTOR –STUDENT INTERACTION**

C1	Cheerful to students		
C2	Academically sociable in class & clinical area		
C3	Must not be rude to students in class		
C4	Must not be talkative in class when irritated		
C5	Friendly but not over-familiar to students		
C6	Must not be reserved from students		
C7	Must not be aggressive to students		
C8	Mostly considerate to student		
C9	Very reflective in teaching		
C10	Listen attentively before answering student question		
C11	Must not be arrogant to student		
C12	Accommodative to students problems		
C13	Be apologetic to students		
C14	Feel non-judgemental to students		
C15	Have fluent non-verbal skills in communication		
C16	Open-minded on student needs		
C17	Have clear language articulation		
C18	Empathetic to students		
C19	Respectful on students ideas		
C20	Enable students to get to know each other better and extend relationship		
C21	Enthusiastic when teaching		
C22	Have a good sense humour in class		
C23	Commitment to job		
C24	Approachable by students		
C25	Trustworthy to students counselling		
C26	Sensitive tutor to my students		
C27	Advocates for students welfare		
C28	Honest on student counselling		
C29	Nurturing person to students		
C30	Promote cooperation rather than competition		
C31	Support equity among students		

C32	Advocate human rights on my students		
C33	Role models for healthy behaviours to students		
C34	Respond to student misbehaviour		
C35	Respectful when talking and turn to student		
C36	Maintain social distance with my students		
C37	Provide warmth and caring speech to students		
C38	Polite in approaching students		
C39	Good at monitoring of student behaviour		
C40	Goal oriented-Tutor to my students		

#### SECTION D: TUTOR PERFORMANCE

F01	Tutors provides adequate instructional time to students		
F02	Tutors gives enough information in class		
F03	Have enough internet resources		
F04	Have enough books to use for learning that are up-to-date		
F05	Students have personal tutor as advisor		
F06	Tutors gives good objectives when teaching		
F07	Tutor vary on teaching strategy in class and at the clinical area		
F08	Gives relevant examples when teaching		
F09	Asks questions when teaching		
F10	Gives tests from what he/she taught		
F11	Gives appropriate time before exam for preparation		
F12	Marks examination effectively		
F13	Evaluates the Lesson after class		
F14	understands her/his course/module		
F15	Facilitates self-directed learning to student		
F16	knows learning resource mobilization		
F17	Applies collaborative learning to students with other disciplines		
F18	Gives constructive feedback to students		
F19	Observes punctuality in class and clinical area		
F20	Promotes tolerance and understanding		
F21	Handles crisis professionally		
F22	Demonstrates competently on procedures		
F23	Establishes an adequate knowledge base		
F24	Establishes networks of experts to draw information from		
F25	Addresses the skills used in the curriculum		
F26	Focuses on the student holistically.		
F27	Analyses student perceptions of myths		
F28	Clarifies students values		
F29	Provides constructive criticism to students		
F30	Provides positive reinforcement to student learning		
F31	Provides adequate time to demonstrate skills to students.		
F32	Allows students to practise skills		
F33	Active participation of students in making decisions		
F34	Pairs experienced skilled clinical staff with new students		
F35	Provides an appraisal tool to students		
F36	Assigns laboratory exercise to students		
F37	Participates in curriculum design and evaluation of programme outcomes		
F38	Prioritises the programmethat address relevant health and social issues		
F39	Demonstrates gender-sensitivity		

#### SECTION H: CLINICAL STUDENTS NEEDS

H01	Facilitate the student's orientation to clinical setting		
	Clarifies clinical expectations and objectives at the beginning of the clinical		

	allocation		
<b>H02</b>	Guides student in meeting objectives at clinical area		
<b>H03</b>	Identifies student learning issues in clinical area		
<b>H04</b>	Demonstrates on clinical procedures on the patient/clients		
<b>H05</b>	Stimulates student interest in clinical learning		
<b>H06</b>	Guides on Clinical student resource mobilization		
<b>H07</b>	Communicate to students in clinical area clearly		
<b>H08</b>	Identifies students clinical needs		
<b>H09</b>	Influence student clinical confidentiality on patient care		
<b>H10</b>	Alleviates students stress and fear of unknown on clinical learning		
<b>H11</b>	Facilitates teamwork to students		
<b>H12</b>	Facilitates critical thinking to student at the clinical area		
<b>H13</b>	Encourages student self-evaluation		
<b>H14</b>	Encourages student skill adjustment		
<b>H15</b>	Collaborate with student and course coordinator in planning individualized learning		
<b>H16</b>	Assists students identify an appropriate case study		
<b>H17</b>	Assists students to perform skills in accordance with policy and professional judgment		
	Provide ongoing feedback to the student for growth		
<b>H18</b>	Conducts students and staff meetings to discuss student's performance		
<b>H19</b>	Evaluates student objectively on clinical		
<b>H20</b>	Participates and attends at all clinical tutorials on time		
<b>H21</b>	Collaborate with students and ward in-charge in planning individualised patient care		
<b>H22</b>	Moves clinical group actively in positive direction		
<b>H23</b>	Controls students effectively in the clinical.		
<b>H24</b>	Brings new case information to the clinical tutorial		
<b>H25</b>	Relates new and old case information to learning issues		
<b>H26</b>	Engaged students in analysis of learning issues		
<b>H27</b>	Formulated questions to stimulate student further clinical inquiry		
<b>H28</b>	Encourages closing reflection in assignments		
<b>H29</b>	Provides helpful information for future tutorials		
<b>H30</b>	Contributes quality and helpful comments in clinical meeting		
<b>H31</b>	Respects/validated input from others		
<b>H32</b>	Professionally presented to the group		
<b>H33</b>	Assists students write a well-written, theory-based scholarly products		
<b>H34</b>	Evaluates the students achievement of objectives after an allocation		
<b>H35</b>	Functions within the educational clinical environment		
<b>H36</b>	Functions as change agents and leaders in the clinical area		
<b>H37</b>	Pursues continuous quality improvements in the clinical nurse educator role		

#### SECTION J: ASSESSING NURSING SKILLS

<b>J01</b>	Uses exhibitions		
<b>J02</b>	Uses laboratory performance		
<b>J03</b>	Utilises essays		
<b>J04</b>	Utilises journals		
<b>J05</b>	Uses short answer items		
<b>J06</b>	Uses multiple-choice items		
<b>J07</b>	Uses projects		
<b>J08</b>	Uses portfolios		
<b>J09</b>	Uses interviews		
<b>J11</b>	Uses concept mapping		
<b>J12</b>	Utilises systematic observation		

<b>J13</b>	Uses long-term investigation		
<b>J14</b>	Uses manipulative skills		



UNIVERSITY *of the*  
WESTERN CAPE

APPENDIX 10: APPROVAL LETTER UWC



UNIVERSITY of the  
WESTERN CAPE

OFFICE OF THE DEAN  
DEPARTMENT OF RESEARCH DEVELOPMENT

31 October 2013

**To Whom It May Concern**

I hereby certify that the Senate Research Committee of the University of the Western Cape approved the methodology and ethics of the following research project by:  
Mr ND Mbirimtengerenji (School of Nursing)

Research Project:                      Developing effective classroom and clinical  
nursing teaching strategy in Malawi nursing  
colleges.

Registration no:                          13/9/30

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

The Committee must be informed of any serious adverse event and/or termination of the study.

A handwritten signature in black ink, appearing to read 'Patricia Josias'.

*Ms Patricia Josias  
Research Ethics Committee Officer  
University of the Western Cape*

Private Bag X17, Bellville 7535, South Africa  
T: +27 21 959 2988/2948 . F: +27 21 959 3170  
E: [pjosias@uwc.ac.za](mailto:pjosias@uwc.ac.za)  
[www.uwc.ac.za](http://www.uwc.ac.za)

A place of quality,  
a place to grow, from hope  
to action through knowledge

**APPENDIX 11: LETTER OF INTRODUCTION TO ETHICAL COMMITTEE**

**UNIVERSITY OF MALAWI  
KAMUZU COLLEGE OF NURSING**



PRINCIPAL  
Prof.A. MALATA, dipNurs, MRM  
B.Sc., MN, PhD.

Private bag 1 Lilongwe Malawi  
Tel. 265-1-751622  
Teregram: nursing  
Fax: 265-1-756424; 265-1-756090

Dear the chairman; ATT. Dr Dzamalala

**RE: P.02/14/1519 – DEVELOPING EFFECTIVE CLASSROOM AND CLINICAL TEACHING STRATEGY IN MALAWI NURSING COLLEGES VERSION 1**

I am Noel Mbirimtengerenji, in the Medical -Surgical Nursing Department, currently pursuing a Doctoral of philosophy Degree in nursing studies at the University of Western Cape, Cape Town, RSA. I am doing the aboved named study as part of my PhD .

You may wish to know that in Malawi nursing student failure might not only be contributed by the student herself but also the process of teaching. Indeed I strongly believe that "Effective teaching is an act of respect to human rights and a professional justice to nursing care".

I therefore, resubmit my proposal to you for the fifth time now particulary for the sample size calculation as the main reason for you not to previously approve the proposal. Therefore this time for your further consideration after comprehensively reviewed and in cooperated all the inserted comments as per reviewers attached comments. Your timely response will help to meet the time frame of my data collection in Malawi and the university calendar. May my God guide you and bless you during this time!

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'Noel Mbirimtengerenji'.

Mbirimtengerenji Dzimmenani Noel

Tel. 265-999406346; 265-993367580-

E-mail [ndmbiri@kcn.unima.mw](mailto:ndmbiri@kcn.unima.mw) ; [ndmbiri5@gmail.com](mailto:ndmbiri5@gmail.com); [ndmbiri@hotmail.com](mailto:ndmbiri@hotmail.com)



**NKHOMA COLLEGE OF NURSING**

P. O. Box 48, NKHOMA  
Tel: +265 127 9422/424

or

P/Bag 228, LILONGWE  
E-mail: [nkhomacollege@gmail.com](mailto:nkhomacollege@gmail.com)

All communication should be addressed to:  
The College Principal

In reply please quotes:

Our Ref: 001/04/AD/014

10<sup>th</sup> January, 2014

Mr. N. Mbirimtengerenji  
Kamuzu College of Nursing  
Private Bag 1  
Lilongwe

Dear Sir,

**PERMISSION TO CONDUCT A STUDY ON DEVELOPMENT OF  
EFFECTIVE TEACHING STRATEGY IN NURSING COLLEGES IN  
MALAWI**

With reference to your letters dated 27<sup>th</sup> December, 2013, permission has been granted to conduct a study on '**Development of Effective Teaching Strategy in Nursing Colleges in Malawi**'. However we will require ethical approval certificate when you will be coming for data collection.

Wishing you all the best in your studies.

Yours faithfully

F. Ndege  
**Acting College Principal.**



**APPENDIX 13: APPROVAL LETTER FROM COMREC**



**COLLEGE OF MEDICINE**

Principal

K.M Maleta, MBBS PhD

Our Ref.:

Your Ref.: P.02/14/1519

College of Medicine  
Private Bag 360  
Chichiri  
Blantyre 3  
Malawi

Telephone: 01 877 245

01 877 291

Fax: 01 874 700

Email: [comrec@medcol.mw](mailto:comrec@medcol.mw)

**5<sup>th</sup> March 2014**

Mr. N. Mbirimtengerenji  
KCN  
P.O box 1  
**LILONGWE**



UNIVERSITY of the  
WESTERN CAPE

Dear Mr. Mbirimtengerenji,

**RE: P.02/14/1519 – Developing effective classroom and clinical teaching strategy in Malawi Nursing Colleges**

I write to inform you that COMREC reviewed the proposals mentioned above, which you submitted for review. COMREC have **approved** your proposal:

Yours sincerely

Dr. C. Dzamalala

**For:Chairperson, COMREC**



**ST. JOHN'S COLLEGE OF NURSING**

P.O. Box 18  
Mzuzu  
Malawi  
Central Africa

Telephone: (265) 311 331  
Fax: (265) 311 331  
E-mail: [sjcnm.mw@gmail.com](mailto:sjcnm.mw@gmail.com)

07/01/14

Mr. N. Mbirimtengerenji

KCN

P/Bag 1

Lilongwe

Dear Sir,

**PERMISSION TO CONDUCT A STUDY**

I am pleased to inform you that your request to carry out a study at St John's College of Nursing and Midwifery on "Development of effective teaching strategy in nursing colleges" has been granted. However, before you start collecting data, you will be required to present a clearance letter from any reputable research ethics committee as well as authorization letter from the institution where you are currently learning.

Wishing you good luck as you pursue your PhD.

Yours faithfully,

Balwani Chingatchifwe Mbakaya (RN, Pg UCM, BScN, MPH)

**PRINCIPAL TUTOR/VICE PRINCIPAL**

APPENDIX 15: APPROVAL LETTER FROM CHAM SECRETARIATE



**CHAM**  
**CHRISTIAN HEALTH ASSOCIATION OF MALAWI**

P.O. Box 30378, LILONGWE 3, Malawi.  
Telephone Office: 01-775 180/404, 01-771 258 Fax: 01-775 406  
E-mail: chamsec@cham.org.mw

Ref: **CHAM/TM/2014**

**20<sup>th</sup> January 2014**

Mr. N. Mbirimtengereni  
Kamuzu College of Nursing  
Private Bag 1  
**LILONGWE**

Dear Sir/ Madam

**PERMISSION TO CONDUCT A STUDY ON DEVELOPMENT OF EFFECTIVE  
TEACHING STRATEGY IN NURSING COLLEGES IN MALAWI**

With reference to your letter dated 27<sup>th</sup> December, 2013, permission has been granted to conduct a study on "Development of Effective Strategy in Nursing Colleges in Malawi" from February to June 2014. However, we will require ethical approval certificate when you will be collecting data.

By copy of this letter all CHAM Training Colleges are informed and requested to support your study.

Wishing you all the best in your studies.

Yours faithfully

Dr. Mwai Makoka  
**EXECUTIVE DIRECTOR**

## APPENDIX 16: LETTER PROOF OF EDITING



### LETTER OF CERTIFICATION

Gareth O P H Lowe  
9 Lamborghini Avenue  
Wierda Park  
Centurion  
0157  
Tel: +27 83 726 6868  
Email: gareth\_lowe@yahoo.com

13 March 2018

To whom it may concern

I hereby certify that I, Gareth Owain Paul Howel Lowe, edited the thesis of Noel D Mbirimtengerenji, entitled 'Developing an effective classroom and clinical teaching strategy in Malawi Nursing Colleges', for language within the main body text.

Regards

A handwritten signature in black ink, appearing to read "Gareth Lowe", written over a dotted horizontal line.

Gareth Lowe

Editor