

**APPLICATION OF ELEMENTS OF KNOWLEDGE MANAGEMENT TO
EVALUATION OF STUDENTS' PERFORMANCE IN COLLEGES OF
EDUCATION IN NORTH-WEST GEO-POLITICAL ZONE IN NIGERIA**

BY

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Ph.D/EDUC/04270/2010-2011**

**BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE
STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT
OF THE REQUIREMENT FOR THE AWARD OF DOCTOR OF PHILOSOPHY
(PhD) DEGREE IN CURRICULUM AND INSTRUCTION IN DEPARTMENT OF
EDUCATIONAL FOUNDATIONS AND CURRICULUM, FACULTY OF
EDUCATION, AHMADU BELLO UNIVERSITY, ZARIA**

SEPTEMBER, 2015

DECLARATION

I, Bara'u Rabi, declare that this dissertation entitled, "Application of Elements of Knowledge Management to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone in Nigeria," has been conducted by me under the supervision of Dr. B. A. Maina, Dr. A. F. Mohammed and Dr. S. U. El-Yakub of the Department of Educational Foundations and Curriculum. All relevant literatures reviewed were duly acknowledged in the text and list of references also provided. No part of this dissertation was previously presented for another degree at any university.

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CERTIFICATION

This dissertation entitled, “Application of Elements of Knowledge Management to Evaluation of Students’ Performance in Colleges of Education in North-West Geopolitical Zone in Nigeria”, written by Bara’u Rabi meets the requirements governing the award of the degree of Doctor of Philosophy (Ph.D) in Curriculum And Instruction, Department of Educational Foundations and Curriculum Ahmadu Bello University, Zaria. The work is approved for its contribution to knowledge advancement and literary presentation.

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DEDICATION

This work is dedicated to my parents, Hajiya Asma'u Abubakar Bamalli and the loving memory of my late father, Alhaji Bara'u Jamoh Bambale as the source of my existence.

ACKNOWLEDGEMENTS

All praises and thanks be to Allah Almighty for sparing my life, giving me the aspiration, fulfilling my expectations, giving me the strength, grace, foresight, wisdom and patience to carryout this research. Infact, no research of this nature can be completed without useful contributions of people of greatness.

My special appreciation and gratitude go to my committed, hardworking, considerate, helpful and dedicated supervisor, Dr Bashir A. Maina, for making himself available throughout the study to ensure it reached completion. I say thank you sir, for all the support, guidance and tolerance. May Allah in His infinite mercy see you through in all your endeavours. Amin.

I am also thankful to Dr. A.F Mohammed and Dr. S. U. El-Yakub who served as supervisors, mentors, elders, role models and guides to this research. Your roles in the conduct of this research has really helped in no small measure. May God bless each and everyone of you abundantly. Amin.

I also wish to express my sincere appreciation to Dr. A Guga and Dr. (Mrs) H. O. Yusuf, who always served as elders in giving series of counseling, support and academic advice. May the good Lord shower His mercy on to you. I am also thankful to Mal. Buhari Yahaya, Dr. Zakari Musa and the entire staff of curriculum and institution department and all management of Federal College of Education, Zaria, for their consideration, understanding and support both financially, (TETFUND sponsorship), academically and spiritually. I am also grateful to my research assistants in the conduct of this research. They include people like Ummul Khair Isah Ishaq, Bashir Sale Maina, Usman Yahaya

Dankumbo, Adamu Mohammed, Lawal Abubakar, Gambo Sada Rawayau, Ramatu Suleiman Ibrahim, Umar Haruna, Grace and Femi. I will not forget the assistance you rendered to me.

I am indebted to my loving sister and her husband, Hajiya Khadiya Kabir Umar and Late Engr. Kabir Umar Funtua, for their enormous financial and spiritual support throughout my educational pursuit. May Allah continue to guide you and your family.

I must be thankful to my uncle Haruna Abubakar Bamalli (NCCE), Alti Kasim, Auwal Muhammed, Jibrilla Umar (Yola), Sani Musa (Katsina) Ibrahim Yusuf (Kaduna) Mohammad Sani (Bauchi) and Samira Abdullahi, for their academic contributions with materials and ideas. Thank you in all aspects. I am grateful to Madam Alpha and Omega, and all members of Late Alh. Bara'u Bambale's family, for their concern, spiritual and financial support in one way or the other.

I owe apologies more than thanks to my children: Maryam, Ishaq, Ummu Kalthum and Nana Asma'u, for their patience, endurance, love and understanding throughout the conduct of this research.

The adage says, "behind every successful woman there is a man." Alhaji Aminu Muhammad is the man behind my success. A work of this nature will not be accomplished without love, care, understanding, tolerance and support of a partner. Thus, Alhaji Aminu Muhammad, I am grateful to you. May Allah Reward you abundantly. Amin.

ABSTRACT

This study titled, “Application of Elements of Knowledge Management to Evaluation of Students’ Performance in Colleges of Education in North-West Geopolitical Zone in Nigeria”, applied the four elements of knowledge management to evaluation of students’ performance in Colleges of Education in North West Geopolitical Zone, Nigeria. The study formulated four objectives, four research questions and four (4) null hypotheses. Related literatures were reviewed on application of knowledge creation and capture; knowledge sharing and enrichment; knowledge storage and retrieval; and knowledge dissemination in organizations. A descriptive survey design was used from a sample of 1916 obtained through cluster sampling. A self structured questionnaire was used as instrument for collecting data which was validated by experts and administered by the researcher. Frequency counts and simple percentages were used in analyzing respondents’ opinions while ANOVA and scheffe’s test were used in testing the hypotheses. Three hypotheses (1-3) were rejected while hypothesis four was retained. The findings of this work revealed that all the four elements of knowledge management were applied to evaluation of students’ performance in continuous assessment, final examination and teaching practice result. It was also found that knowledge creation and capture and knowledge sharing and retrieval were applied mostly while knowledge storage and retrieval and knowledge dissemination were least applied. Findings also revealed non applicability of the elements to moderation of marked scripts, observation of students’ results, students’ continuous assessment, teaching practice and final examinations. The study recommended that a three week programme be organized for newly employed or inexperienced lecturers at the beginning of each semester on how to apply the elements of knowledge management in evaluating students. All results be centralized for access by other departments. Central e-mail examination board be provided. Students and lecturers be made to open e-mail addresses. Website be created and made available for all, adequate facilities be provided for effective use of e-mails, data bases and website. Computer literacy be enforced on lecturers and other stakeholders.

TABLE OF CONTENTS

TITLE PAGE	i
DECLARATION	ii
CERTIFICATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
ABSTRACT	vii
TABLE OF CONTENTS	viii
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
OPERATIONAL DEFINITION OF TERMS	xv
CHAPTER ONE: INTRODUCTION	
1.1 Background to the Study	1
1.2 Statement of the Problem	8
1.3 Objectives of the Study	10
1.4 Research Questions	11
1.5 Hypotheses	11
1.6 Basic Assumptions	12
1.7 Significance of the Study	13
1.8 Scope of the Study	15
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
2.1 Introduction	17
2.2 Conceptual framework	17
2.2.1 Concept of Knowledge	17
2.2.2 Concept of Management	22
2.2.3 Concept of Knowledge Management	24
2.2.4 Concept of Evaluation	26
2.3 Application of Knowledge Creation and Capture in an Organization	25

2.4	Application of Knowledge sharing and Enrichment in an Organization	43
2.5	Application of Information Storage and Retrieval in an Organization	50
2.6	Application of knowledge Dissemination in an Organization	53
2.7	Empirical Studies	54
2.8	Summary	66
CHAPTER THREE: RESEARCH METHODOLOGY		
3.1	Introduction	68
3.2	Research Design	68
3.3	Population of the Study	69
3.4	Sample and Sampling Technique	70
3.5	Instrumentation	72
3.5.1	Validity of the Instrument	74
3.5.2	Pilot Testing	74
3.6	Reliability of the Instrument	74
3.7	Administration of the Instrument	75
3.8	Methods of Data Analysis	75
CHAPTER FOUR: PRESENTATION, ANALYSIS AND DISCUSSION OF DATA		
4.1	Introduction	76
4.2	Presentation and Interpretation of Data	76
4.3	Hypotheses Testing	96
4.4	Discussion of the Findings	103
4.5	Summary of Major Findings	111
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS		
5.1	Introduction	115
5.2	Summary of the Study	115
5.3	Conclusions	117
5.3.1	Application of Knowledge Creation and Capture to Evaluation of Students' Performance	117

5.3.2	Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance	118
5.3.3	Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance	118
5.3.4	Application of Knowledge Dissemination to Evaluation of Students' Performance	118
5.4	Recommendations	119
5.5	Suggestions for Further Studies	121
5.6	Limitations of the Study	121
	REFERENCES	123
	APPENDICES	136

LIST OF TABLES

Table 1:	Spiral Organizational Knowledge Creation	21
Table 2:	Population of States in North-West Geo-political zone number of Colleges of Education and Lecturers	70
Table 3:	State in the Geo-political Zone and Sample Size of Lecturers in Colleges of Education	72
Table 4:	Opinions of Respondents on the Application of Knowledge Creation and Capture to Evaluation of Students' Performance in College Of Education in North West Geopolitical Zone, Nigeria.	77
Table 5:	Opinions of Respondents on Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.	82
Table 6:	Opinions of Respondents on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	88
Table 7:	Opinions of Respondents on Application of Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	93
Table 8:	Summary of One Way Analysis of Variance on Application of Knowledge Creation and Capture to Evaluation of Students' Performance in North West Geopolitical Zone, Nigeria.	97
Table 9:	Summary of Scheffe's Multiple Comparison Test on Application of Knowledge Creation and Capture on Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	98
Table 10:	Summary of One way Analysis of Variance on Application of Knowledge sharing and enrichment to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	98
Table 11:	Summary of Scheffe's Multiple Comparison Test on Application of Knowledge sharing and retrieval on Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	99

Table 12:	Summary of One Way Analysis of Variance on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	100
Table 13:	Summary of Scheffe's Multiple Comparison Test on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.	100
Table 14:	Summary of One Way Analysis of Variance on Application of Knowledge Dissemination to Evaluation of Students' Performance Colleges of Education in North West Geopolitical Zone, Nigeria.	101
Table 15:	Summary of Hypotheses Testing	102
Table 16:	A Summary of Knowledge Management Elements' Application to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.	112
Table 17:	A Mapping of Knowledge Creation and Capture Programme to Evaluation of Students' Performance for Inexperienced Teachers	113

LIST OF FIGURES

Fig. 1: A Mapping of Elements of Knowledge Management
to Evaluation of Students' Performance

113

LIST OF ABBREVIATIONS

NCE	-	Nigeria Certificate in Education
NCCE	-	National Commission for Colleges of Education
ICT	-	Information Communication Technology
GSE	-	General Studies and Education
ANOVA	-	Analysis of Variance
SPSS	-	Statistical Package for the Social Science
E-P-C	-	Engineering Procurement Consummation
KM	-	Knowledge Management
UNSSC	-	United Nations System Staff College
APO	-	Asia Productivity Organization
UF	-	Userbility First
KMI	-	Knowledge Management Implementation
KCO	-	Knowledge Center's Organization
AKM	-	Army Knowledge Management
CA	-	Continuous Assessment
TP	-	Teaching Practice

OPERATIONAL DEFINITION OF TERMS

Evaluation:	Process of arriving at a decision or judgement in respect of learners' ability, attitude and progress.
Explicit Knowledge:	Knowledge recorded in documents or any other form apart from human brain.
Formative Evaluation:	Evaluating the progress of instructions through assignment, test, project, TP (C.A) end of term exam, promotion exams etc.
Knowledge Capture:	Ability to store or document new knowledge in human brains and other forms through interaction.
Knowledge Creation:	Ability to be innovative in generating new ideas, facts or information.
Knowledge Dissemination:	Ability to allow for free access of information without restriction.
Knowledge Enrichment:	Ability to update, develop, widen and up-lift ones knowledge.
Knowledge Management:	process by which organizations generate value from their intellectuals and knowledge-based assets through codifying, creating, sharing and using knowledge to best effect.
Knowledge Retrieval:	Ability to access the documented information for re-use.
Knowledge Share:	Ability to willingly relate with others through conferences, workshops and seminars etc for the benefit of others to see and learn.
Knowledge Storage:	Ability to safely document information in any other form apart from human brain.
Knowledge:	Facts, experiences, ideas, thoughts, feelings or information known by a person or group of persons.
Management:	Process of planning, organizing, controlling, enriching and evaluating employees' knowledge for an organization to stay competitive and survive.

Organization:	Group of people who do something together in an organized way and possess such features as human being, process and technology.
Summative Evaluation:	Evaluating the worth or other wise of the whole programme (curriculum) through final examination.
Tacit Knowledge:	Knowledge buried or stored in human brain

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In any organization, members only become productive when the less experienced are mentored, instructed and guided by the experienced ones. Thus, the progress of organization requires competent and dedicated experienced hands who could impart the necessary knowledge, attitude and skills to others. This is not possible without knowledge, which is a basis for change process. Change brings about increase in work participation where fatigue could be reduced drastically. It offers an individual member of organization opportunity to reason and contribute greatly in all activities within the organization.

The progress of any organization cannot be possible without preserving, sharing and developing the organizational skills and knowledge. Skills and knowledge are the bases for change in any organization. It is, therefore, necessary for skills and knowledge to be shared for the sustenance of organizational values. This is attainable through group discussion, internal meetings, interaction with people within and outside the organization, seminars, workshops, conferences and community of practice. This calls for knowledge management, which entails identification, within the organization, who knows what is needed so that proper placement, training and use of knowledge could be made.

Knowledge management is all about knowledge identification, capture, application, sharing, storage, re-use and integration. Knowledge management is geared towards enhancing performance of members, competition, innovation, sharing of ideas, integration and sustainability in organizational performance. It is also aimed at improving

the quality of people's contributions to their organization and to make them responsible, cooperative, ready to share what they know and learn, effective in challenging, negotiating and learning from others. This provides avenues for critical issues to be examined for the survival and competence of the organization. Knowledge management is a process geared towards the achievement of organizational goals using the data and information processing capacity of information technologies, creative and innovative capacity of human beings. It can be seen as a mixture or combination of information technology and human innovation. This involves a range of strategies and practices used solely in an organization to identify, create, represent and distribute knowledge insights embodied in individuals or embedded in the organization as whole as a process or practice.

Knowledge management refers to the systematic management of process by which knowledge is identified, created, gathered, shared and applied (Benjamins, 2001). In addition, knowledge management is identified as comprising a range of strategies and practices used in an organization to identify, create, present, distribute and enable adoption of insights and experiences that comprise knowledge which are embodied in individual or embedded in organizations as processes or practices. From the two definitions above, it could be concluded by the present study that the four elements of knowledge management that include: knowledge creation and capture; knowledge sharing and enrichment; information storage and retrieval; and knowledge dissemination as applied in business organizations could equally be applied in evaluation of students' performance. This may be possible since through innovations new ideas are created and acquired by students after which the captured ideas could be shared among themselves

through group discussions, tutorials or seminar presentations that could lead to adoption, application or presentation of such knowledge after graduation. It could equally improve on students' capability and ease assessment on the part of lecturers of Colleges of Education.

In essence, one of the most critical challenges to a knowledge society is to cultivate human capital with capacity to compete, innovate, create and share knowledge. This is one factor that motivated the current study, if these elements are applied to evaluation of students' performance, it could help in producing the caliber of students with above capacities who could be capable of competing with the outer world.

Knowledge management efforts focus on organizational objectives such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvement of the organization (Addicott, McGivern and Ferlie, 2006). In addition, the objectives of knowledge management is to improve the quality of the contributions people make to their organizations by helping them to make sense of the context within which the organization exists, to take responsibility, to cooperate and share what they know and learn, and to effectively challenge, negotiate and learn from others. Organizations have potentials to learn and that new knowledge may be effectively incorporated into specific practices, so that knowledge is accessible when needed (Zhou, 2009).

A complete knowledge management system contains the four elements: thus, knowledge creation and capture; knowledge sharing and enrichment; information storage and retrieval; and knowledge dissemination. Knowledge is continually being created in any group, corporation or organizations since the very interaction among people is to

generate knowledge. Creation of new knowledge will not be possible without creativity and innovation because they are most important skills needed to make the organization highly productive and competitive. This could also be incorporated into education sector so that effective delivery in teaching and learning could be captured and maintained to enable proper evaluation of students' performance by teachers in Colleges of Education.

The NCE programme being a major sector of teacher education, generally aimed at producing teachers with high personal and professional discipline and integrity, teacher who are dedicated with appropriate knowledge, skills and attitudes that would facilitate easy achievement of the national goals spelt out in the National Commission for Colleges of Education (NCCE) minimum standard. This is however, stated in the NCCE (2008) that, by the end of NCE programme at Colleges of Education, students should be able to:

discuss intelligently the main ideas that have affected and still affect the development and practice of education generally and in Nigeria in particular; examine the main psychological, health and socioeconomic factors that may help or hinder a child's educational performance; study learners appropriately to determine the most effective ways of remaining to them to ensure their maximum achievement; professionally combine use of conventional and ICT or other innovational instructional/learning strategies in generating and imparting knowledge, attitudes and skills; among others.

In order to achieve the above therefore, the NCCE minimum standard stipulated facilities, instructional materials and methods, mode of training in terms of subject specifications and boundaries, mode of admission into the colleges, provision of evaluation strategies and human resources, for effective achievement of set educational goals. Despite all its efforts in uplifting the standard of colleges of education, there is still out-cry in the area of evaluation of students' performance and this constitutes a serious problem in Colleges of Education unless something is done. This inspired the present

study to investigate on the application of element of knowledge management to evaluation of students' performance in the study area.

By implication, this research is inspired by the benefits of application of elements of knowledge management in organizations (Colleges of Education). Thus, the study presents the application of the elements of knowledge management to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria. The present study seeks to find out whether the application of the elements of knowledge management to evaluation of students' performance in the study area could enable the sustenance of knowledge through knowledge creation and capture, knowledge sharing and enrichment, information storage and retrieval and knowledge destination. This calls for a study to investigate the application of elements of knowledge management to evaluation of students' performance.

Teaching is a systematic, rational and organized process of transmitting knowledge, attitudes and skills in accordance with professional principles and takes place in an organized structural environment, (Ejili & Anyanwu, 2006). It involves overall intention of getting students not only to acquire knowledge, skills and modes of conduct but also to acquire them in a manner which involves understanding and evaluation of the learners. In a similar assertion, Mkpa (2009), views teaching as a process of giving instruction to impart knowledge, facts, skills, attitudes, interests and aptitude to unknowledgeable and inexperienced individual. So, through the elements of knowledge management those knowledge, facts, skills e.t.c given to an in experience person could be evaluated to ascertain its effectiveness.

Learning on the other hand is acquiring new, or modifying existing knowledge, behavior, skills, values or preferences and may involve synthesizing different types of information. Learning produces changes in an organism and the changes produced are relatively permanent. Going by this definition, it could be added that learners acquire and capture the new and modify the existing knowledge from the teaching they received. It is through effective teaching and learning given by lecturers that appropriate evaluation strategies could be employed.

Evaluation is the process of assessing an individual's understanding of what he/she was taught. It could be formative or summative. Evaluation could also be the process of administering test or examination for the learner. That is to say, the evaluation of learning should focus on important factors using a number of assessment methods or techniques to arrive at a score or judgement in respect of the learner's ability, attitudes and progress. It also stresses the use of multiple assessment techniques, peer and self assessment by the learners and assessment that is systematic continuous diagnostic and integrative.

Considering currency of knowledge management in the world, this work is inspired by the global need to achieve economic strength based on education as the fundamental of knowledge. Since knowledge is the backbone of any economy, there is the need to manage it well through the application of the four elements of knowledge management. General competitiveness of an organization and the renewal of knowledge become necessary in educational sector especially in the aspect of students' evaluation in Colleges of Education in the North-West geo-political zone in Nigeria. Therefore, the

present study would find out the possibility of applying the elements of knowledge management to evaluation of students' performance in the study area.

Many research efforts concentrated on other organizations in respect of the application of knowledge management to issues that relates to production and distribution of products. For example, Uriarte (2008), studied knowledge management in business organizations. The conclusion of the study shows the possibility of applying those elements in the business organization. This, however, has motivated and inspired the present study to identify those elements and see how they could be applied to educational organization especially in evaluating students' performance in Colleges of Education. Evaluation is very central to teaching and learning. This means that knowledge management elements should gain ground from teaching and learning process. School like most organizations, should learn and gain knowledge so as to improve decision making and innovation process, especially in the area of evaluating students' performance. This is why Chu, Wang, Zhou and Yuen (2009), posit that schools knowledge management can facilitate acquisition, sharing and application of teacher's knowledge in school so as to better manage and apply schools' tangible and intangible knowledge assets, especially the professional knowledge, experiences and competencies of teachers. The elements of knowledge management could be used as a strategy by schools to improve competitive performance of both teachers and students. This could be done through giving effective evaluation. The present study seeks to apply, these elements to see how they could assist teachers in evaluating students' performance in Colleges of Education.

1.2 Statement of the Problem

The global focus on knowledge as the basis of any economic, social and political development poses a serious concern for the management of knowledge across human phase of lives. With the use of knowledge management organization will enhance its production. Organizations that do not adopt principles of knowledge management are doomed to fail. Likewise in colleges of education evaluation of students' performance need to be enhanced to meet both the short and long term objectives of the educational policy enhanced. It is common to hear cases of missed results of students due to lack of proper storage of information. It is also common to hear of students not being evaluated properly due to lack of knowledge of proper way and processes of evaluating students by new and inexperienced lecturers. In addition, frequency of retrenchment and retirement and or sudden death of experienced employee constitute another problem if their knowledge and experience are not shared out. The present study therefore, seeks to examine way of applying knowledge creation, captured, shared and enrichment, storage, and retrieval and dissemination to solve this problem so that proper evaluation of performance could be improved.

Organizational brain drain is what every knowledgeable organization should work to avoid. Knowledge management is a major tool that most organizations utilize in today's global knowledge society for it to stay competitive and survive. This is because the most valuable asset to every organization is their skilled workforce. In this regard, capturing knowledge buried in people and in an organization is the fundamental building block of knowledge management implementation (Mezher, Malak, Ghosn and Ajam, 2005). This entails that it is no longer enough for knowledge to be possessed at an individual level.

If knowledge is so important as to form the basis of any positive development, how can the elements of knowledge management be applied to evaluation of students' performance evaluation? In a more general term, the present study shall address the applicability of the four (4) elements of knowledge management, viz: knowledge creation and capture; knowledge share and enrichment; information storage and retrieval; and knowledge dissemination to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

In most Colleges of Education in the North-West geo-political zone in Nigeria, lecturers are overloaded such that they cannot properly or adequately evaluate the performance of students. This poses problem of stagnation of some lecturers where the work load on them prevented them from furthering their studies, hardly make contributions in workshops and conferences to enrich their knowledge. Embarking on a study such as the current one in application of four elements of knowledge management may help enhance their knowledge on how to apply these elements in evaluating their study.

On the part of students, assessment and results are always tempered with in the area of missing result, alteration of students' scores, wrong scoring, wrong grading, improper students' record keeping and omission of students' names or numbers as well as missing files that give access to students' records constitute problem. Others include over population of students which led to shortage of facilities and access work load of teachers that makes it highly difficult for them to assess students effectively. This is because, the staff/student ratio of 1:25 as prescribed in the minimum standard is no longer a reality. These could bring in efficiency in entering scores, computation, storage and retrieval of

students performance in Colleges of Education in the North-West geo-political zone in Nigeria unless serious action is taken to stop or reduce that. This is why application of the four elements of knowledge management to evaluation of students' performance is undertaken as a study in providing lasting solutions to problems that relate to students' evaluation.

Evaluation of Students' performance in Colleges of Education in the current complex and dynamic environment might requires the capability of teachers to create and capture knowledge, share and enrich knowledge, store and retrieve information and disseminate knowledge. Thus, in order to effectively teach, learn and assess students, teachers' understanding of application of elements of knowledge management to evaluation of students' performance could help in the success of Colleges of Education which is determined by outputs of students.

1.3 Objectives of the Study

The study aimed at applying elements of knowledge management to evaluation of students' performance in Colleges of Education. It was out to set to achieve the following objectives:

1. determine the opinions of Deans, HODs and Lecturers on application of knowledge creation and capture to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria;
2. ascertain the opinions of Deans, HODs and Lecturers on application of knowledge sharing and enrichment to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria;
3. examine the opinions of respondents on Deans, HODs and Lecturers of knowledge storage and retrieval to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria; and
4. find out the opinions of Deans, HODs and Lecturers on application of knowledge dissemination to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

1.4 Research Questions

The study finds answers to the following questions:

1. what is the level of opinions of Deans, HODs and Lecturers on applicability of knowledge creation and capture to evaluate students' performance in Colleges of Education in North-West geo-political zone in Nigeria?
2. what is the opinions of Deans, HODs and Lecturers of knowledge sharing and enrichment be applied by lecturers to evaluate students' performance in Colleges of Education in North-West geo-political zone in Nigeria?
3. what is the opinions of Deans, HODs and Lecturers on application knowledge storage and retrieval to evaluate students' performance in Colleges of Education in North-West geo-political zone in Nigeria?
4. what is the opinions of Deans, HODs and Lecturers of knowledge dissemination to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria?

1.5 Hypotheses

The study formulated the following hypotheses:

- H₀₁: there is no significant difference in the opinions of Deans, HODs and Lecturers on the application of knowledge creation and capture to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.
- H₀₂: there is no significant difference in the opinions of Deans, HODs and Lecturers on the application of knowledge share and enrichment evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

H₀₃: there is no significant difference in the opinions of Deans, HODs and Lecturers on the application of knowledge storage and retrieval to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

H₀₃: there is no significant difference in the opinions of Deans, HODs and Lecturers on the application of knowledge dissemination to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

1.6 Basic Assumptions

The study assumes that:

1. application of knowledge creation and capture to evaluation of students' performance could enhance the performance of students in Colleges of Education in North-West geo-political Zone in Nigeria.
2. application of knowledge share and enrichment to evaluation of students' performance could enhance the performance of students in Colleges of Education in North-West geo-political Zone in Nigeria.
3. application of knowledge storage and retrieval to evaluation of students' performance could enhance the performance of students in Colleges of Education in North-West geo-political Zone in Nigeria.
4. application of knowledge dissemination to evaluation of students' performance could enhance the performance of students in Colleges of Education in North-West geo-political Zone in Nigeria.

1.7 Significance of the Study

The study will be significant because it will enable various colleges of education to be able to evaluate the students better through the application of basic elements of knowledge management. The application is in respect of knowledge creation and capture, knowledge share and enrichment, knowledge storage and retrieval and knowledge dissemination. The study will also enable those responsible for evaluation of students' performance to know the need for knowledge creation and capture; to know the importance of storage of information; to know the importance attached to knowledge sharing and how it could lead to the enrichment of individuals' knowledge. It will also enable them to know that unless and until knowledge is disseminated its creation, capture and storage are of no use.

Lecturers of Colleges of Education could benefit from the present study because an important aspect of managing knowledge shall be explored using the four elements of knowledge management. They could be sensitized on the importance of being creative and innovative in teaching-learning processes. This could enhance knowledge capturing as the emphasis today is on continuity (life long learning) thereby making continuous training highly paramount. Knowledge captured and buried in the teachers could be used to enrich other members through knowledge sharing for the betterment of the school organization. It could also benefit lecturers of Colleges of Education in their choices of methods or strategies and emphasis on planning, organizing and presenting a lesson. It could also enhance effective selection of teaching/learning materials, methods and assessment strategy, appropriate to the need of these elements. Lecturers in other levels of education could also benefit from the present study. This is because aspect of

knowledge organization and presentation that involves innovation, sharing, information storage and retrieval and general students' assessment would require insights from studies such as the current one.

Curriculum planners and developers could find this study highly relevant as this could help in making decisions relating to content selection, teaching methods, instructional materials as well as evaluation strategies for development. It could also serve as a conduct pipe for informing and orientating the populace of government policies, programmes and evaluative strategies on education especially those upon which are designed to develop the society.

Government as the beneficiary could be helped by the present study in providing a blue print of quality of knowledge expected of a teacher trainee in Colleges of Education before their absorption for employment in the system. This could provide leading support from the above inputs to the proposed freedom of information presently billed before the national assembly on the need to be given speedy passage.

In the same vein, school administrators could benefit from the present study. Administrators are part and parcel of curriculum implementation at Colleges of Education. However, they are not always in school to interact with teachers. The study could have positive impact on the administrators' decision in planning and executing educational policies, support and evaluation strategies that gear toward the development of teachers' and students' innovative, creative and critical faculties for effective sharing and dissemination. It could also provide an opportunity for school administrators to support creativity of members organizing activities in the colleges for teaching through in-house workshops or team teaching across the board which could be between the

experienced ones and in experienced ones as well as new recruits. This ultimately could help in sharing knowledge for better enrichment and collective interest of all and could equally allow for free flow of information. This could only be achieved by incorporating the four (4) elements of knowledge management in the curriculum of Nigeria Colleges of Education thereby enriching teaching, learning and assessment of students in the study area.

In the area of examination and assessment, examination bodies could also benefit from the present study in the sense that examination norms could be directed toward the most effective strategies i.e the four elements of knowledge management that could influence best teaching, learning and assessment of students' results. It could also enhance adequate storage of students' information (results) for onward retrieval that could lead to devising an effective means of assessing students level of knowledge comprehension (capture).

Through the present research, text book writers could also benefit in such away that they could be helped to sharpen their focus on producing text materials that enhance real teaching and learning. Materials that could boost teachers' ability to be creative and innovative to relate well with the learners and those authentic text materials that could help teachers develop students' thoughts and experiences for easy assessment.

1.8 Scope of the Study

The study is on the application of the elements covered Colleges of Education in the North-West Geo-political zone. It also covers both Federal and State Colleges of Education. Thus the study in terms of substance covered only application of elements of

knowledge management to evaluation of students' performance in terms of continuous assessment, final examinations and teaching practice supervision. The study does not have a timeline because to the best of the researcher's knowledge, it is the first of its kind in Colleges of Education in Nigeria.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed literature related to the study. The areas reviewed are as follows:

- Concepts related to the study;
- Application of knowledge creation and capture in an organization;
- Application of knowledge sharing and enrichment in an organization;
- Application of knowledge storage and retrieval in an organization;
- Application of knowledge dissemination in an organization; and
- Empirical studies.

2.2 Conceptual Framework

Under this section, the concepts of knowledge and management and knowledge management and evaluation are reviewed.

2.2.1 Concept of Knowledge

According to Collins English Dictionary, knowledge is the facts, feelings or experiences known by a person or group of people. Though, knowledge is derived from information, but it gives more meaning than information in terms of substance. Knowledge is made up of familiarity, awareness and understanding obtained via experience or study, which are resultant from making comparisons, identifying consequences and making connections. From the perspectives of organization, knowledge could be seen as being “know-how” or applied action.

Knowledge is recognized generally as the new strategic imperative of any organization. The paradigm which says knowledge is power means one has to hoard it, keep it to oneself to gain advantage. Most people have the belief that keeping knowledge to oneself is important because it is what makes him or her to be an asset in the organization. However, nowadays there is a paradigm shift in the idea of knowledge being power. The new belief within organizations is that knowledge must be shared for it to grow. The organization that practices knowledge share among its members tends to grow stronger and perform high. Sharing of knowledge is the substance of what is referred to as knowledge management.

According to Uriarte (2008) knowledge is the product of organization and systematic reasoning applied to data and information. It is the outcome of learning that provides the organizations only sustainable competitive advantage. As such knowledge is an asset that has become more important than land, labour or capital in today's economy. It is the opinion of Grover and Davenport (2001) that knowledge is the processed information that is valuable because it contains insight, experience, context or interpretation. This definition implies that knowledge is a product of insight, experience, context or interpretation. This definition is relevant to the study area because evaluation of students ought to contain insight, experiences of students and the situation they were taught and examined.

It is opined by Wiig (1993) that knowledge is made up of truth, belief, concepts, judgements and expectations. From what we believe the students were taught on the basic concepts, we can make judgement upon the expectations of students to students. In another dimension, Tiwans (2002) views knowledge as actionable information as it

relates to its relevance and availability in the right place at the right time in the right context and in the right way. In assessing students in Colleges of Education, relevant and available information obtained from the academic office through the normal channel could be used against them or for them. The same process could be used in giving out students' transcript.

Knowledge is of two types: tacit knowledge and explicit knowledge. Tacit knowledge is stored in person's brain, whereas explicit knowledge is that knowledge recorded in documents or in any other form of storage apart from human brain. Therefore, explicit knowledge could be stored or imbedded in things such as facilities, products, processes, services and systems. Through interactions and innovations, both types of knowledge could be produced. From relationships or alliances, the two types of knowledge emerge. Without them permenting the functions of organization, it cannot achieve its objectives. Through tacit and explicit knowledge, organization could manage threatening challenges.

Tacit knowledge is personal and stored in the people's heads. However, it is obtained through study and experience. It could be developed through interaction with other people within and outside the organization. It is difficult to share tacit knowledge. However, it could be shared and communicated through activities and mechanisms such as conversations, workshops, on-the-job training and the use of information technology tools like email, groupware, fax messages, etc.

On the other hand, explicit knowledge is codified. It is found in documents, data bases, websites, emails etc. It is an instant available knowledge that could be shared or transmitted to others through systematic and common languages. It is made up of

anything that is liable to being codified, documented and archived. They include among other things according to Uriarte (2008) knowledge assets such as reports, memos, business plans, drawings, patents, trademarks, customer lists, methodologies, and the like. They represent an accumulation of the organization's experience kept in a form that can readily be accessed by interest parties and replicated if desired. In most organizations, where the chief executives are conscious of data storage, knowledge assets are stored with the help of computers and other forms of information technology.

Explicit knowledge could not be divorced from tacit knowledge. The two complement to one another. One cannot understand what tacit knowledge is without explicit knowledge. According to Uriarte (2008) a person without technical, mathematical or scientific knowledge (tacit knowledge) will have great difficulty understanding a high complex mathematical formulation or chemical process flow diagram, although it may be readily available from the organization's library or databases (explicit knowledge). In a College of Education for instance, a lecturer without the knowledge of mathematics could not assess students well even if he is in possession of marking scheme of mathematics examination Uriarte (2008), went further to say unless we try to convert tacit knowledge to explicit knowledge, we cannot reflect upon it, study it, discuss it, and share it within the organization. This is because it will remain hidden and inaccessible inside the head of the person that has it.

Interaction between Tacit Knowledge and Explicit Knowledge

Through the dynamic interaction between tacit knowledge, it is possible for personal knowledge to be processed to organizational knowledge. This process is what knowledge creation is all about in an organization. According to Nonaka (1996) this

interaction between the two types of knowledge brings about what is called the four modes of knowledge conversation.

Knowledge creation is processed by the use of a double spiral movement between tacit knowledge and explicit knowledge. This movement is captured in table 1, which portrayed the four modes of knowledge conversion: socialization (from individual tacit knowledge to group tacit knowledge), externalization (from tacit knowledge to explicit knowledge), combination (from separate explicit knowledge to systematic explicit knowledge), and internalization (from explicit knowledge to tacit knowledge).

Table 1: Spiral of Organizational Knowledge Creation

	to tacit knowledge	to explicit knowledge
From tacit knowledge	Socialization	Externalization
From explicit knowledge	Internalization	Combination

Source: Nonaka, I. “Dialogue on Leadership” (1996).

Socialization is a process where common tacit knowledge is created through shared experiences. Through such process, a field of interaction is developed which enables individuals to share experiences and space. In such process, common beliefs and skills are built. Through the process, the tacit knowledge of one person is shared and transmitted to another person and it becomes part of the other person’s tacit knowledge (Nonaka, 1996).

Externalization portrays a process on how tacit knowledge is articulated into explicit knowledge as concepts or diagrams. In such process, metaphors, analogies and sketches are used. This mode comes as a result of dialogue, which is intended to create concepts from tacit knowledge. Externalization could be obtained in an organization in a process of creating a new product when the tacit knowledge in expert’s brains are articulated and expressed as concepts, which gives room for explicit knowledge to be further studied or refined.

Combination refers to a process whereby new and existing explicit knowledge are recombined into a systematic know-how. Uriarte (2008), likened the process to a researcher who assembles an array of previously existing explicit knowledge in order to prepare a new set of specifications for a prototype of a new product. What commonly occurs is the combination of a newly created concept with existing knowledge to produce something tangible.

According to Nonaka (1996) internalization is a process of embodying explicit knowledge into tacit know-how or an individual's knowledge or operational knowledge. An excellent example of this is "learning by doing or using". Explicit knowledge that is available as text, sound, or video facilitates the internalization process. The use of operating manuals for various machines or equipment is a quintessential example of explicit knowledge that is used for internalization. The instructions are learned and become part of the person's tacit knowledge.

2.2.2 Concept of Management

Management is a term that relates to all human endeavours. It is the life wire of all organizations. Management is established in any organization to consciously direct human behavior towards some future end, Alders (1974).

Both Humble (1966) and Baron (1978) in Richman and Fammer (1997) agreed that management is an activity which entails mapping out strategies towards simple realization of the organizational goals. It has to do with development and implementation of plans as well as identification of techniques to assess programme to determine the success or otherwise. The assessment provides the basis on which future objectives and planning could be carried out.

The definition of Humble and Baron seems to be in line with that of Wilson (1989). However, Wilson stresses on the human side of the managerial functions. Wilson believes that the set objectives in any organization cannot be achieved if there is no cooperation from members through planned allocation of resources. This means success of organization is achieved through joint efforts and cooperation among members. This idea is also relevant in Colleges of Education because knowledge share, capture, creation and dissemination can not be possible without the joint efforts of all members involved in knowledge management. It is believed by Ibukun (1997) that management is a process of delimiting an organization into structural levels, arranging workers and activities into performance units and coordinating resources and production procedure through appropriate leader behaviour to achieve organizational goals. This definition is significant because it points to the fact that the success or failure of any organization depends on the behaviour of leader. The leader makes or mars his organization.

Richman and Fammer (1997) view management in practical term that seems to relate to knowledge management when they stated that:

Management is a strategy, innovation initiating and bringing about change, creative problem-solving actively seeking out alternatives and opportunities, reformulating goals and priorities, redeploying resources, negotiating, resolving conflicts, dynamic or active leadership, dyncomacy, statesmanship and a high degree of risk taking and entrepreneurship.

The definition of Richman and Fammer on management is very much relevant to the study area because knowledge management is all about strategy to initiate, innovate and bring about change, creative problem-solving through knowledge capture, knowledge share, knowledge enrichment, information storage and retrieval and knowledge

dissemination in an organization. Thus, if the essence of management in any organization is to bring among others, change, creative problem-solving activity and conflict resolution, then the relevance of such all encompassing definition of management to knowledge management by Richman and Fammer cannot be overemphasized. Management in any educational institution relates to that of other organizations because it has to do with planning, organization, staffing, directing and controlling. This goes to say that the function of management is the same in all formal organizations irrespective of the set objectives.

2.2.3 Concept of Knowledge Management

It is believed by Davenport (2008) that knowledge management is all about improvement of job and job related issues through on-the-job discussion, formal apprenticeship, discussion fora, corporate libraries and professional training. The knowledge management is enhanced with aid of knowledge bases, expert systems, knowledge repositories, group discussion, support system., face-book, twitter where knowledge could be generated and shared within and outside organization through interactions.

According to Mckeen (2006), knowledge management shifted from an emergent were concept to a growing issue of great concern in every business organization. It was reported in Grossman (2006) that 81% of the leading organizations in Europe and the United States apply knowledge management in one form or the other.

Knowledge management focuses on information technology, which emphasizes on issues such as knowledge creation and capture, knowledge sharing and enrichment, information storage and retrieval and knowledge dissemination, Nonaka and Takeuchi

(1995). In another discussion, Davenport and Prusak (1998) see knowledge management as a strategy used in organizations, to think in market terms, develop market, monitor market pathologies, outcome, trade business, manage artificial scarcity and monopolies. This definition implies that in knowledge management organization ought to study situations and use that to achieve the set objectives.

Knowledge management is perceived by Takeuchi and Nonaka (2004) as a process use to continuously create knowledge, disseminate it widely in the organization and embody it quickly in new products/services, technologies and systems. This implies that knowledge management entails sharing and increase in productivity and services. In the Colleges of Education what is required in the context is improved evaluation process to enhance students' performances. In Davenport and Prusak (1998), Field (2003), Freeman (2001), knowledge management is to sketch out a line gap in hierarchical order on a data – information – knowledge basis. This definition or view point of knowledge management means it is a process of sharing or storage of knowledge, which begins with collection of data, using it for information and necessary knowledge.

Through knowledge management, organizations could generate value form both tacit and explicit knowledge. It implies codification of knowledge process by employers, partners and customers and share it within the units of organization. Thus, knowledge management is a systematic approach adopted to identify, acquire, transform, develop, disseminate knowledge to be used, shared and preserved for the achievement of set objectives. knowledge management enables organization to be conversant with a self understanding of its needs, aspirations and activities through experiences.

2.2.4 Meaning of Evaluation

The term evaluation is referred to as all those activities undertaken by teachers and by their students in assessing themselves, which provide information to be used as feed back to modify the teaching and learning activities in which they are engaged (Black and William, 1998). It could also be seen as the process of documenting usually in measurable terms knowledge, skills, attitudes and beliefs. Nzewi and Ibe (2009), defined evaluation as a process of organizing test data into interpretable forms using test, questionnaire, observations and so on.

Otu (2009) sees evaluation as the determination of the value of a thing. It is the formal determination of a quality, value or effectiveness of a programme, projector process is primarily concerned with measuring the impact of input of the people's lives. Grolund (1986) as cited in Adamu, (2006) states that evaluation means the systematic process of establishing the extent to which instructional objectives are achieved by the learners. Evaluation is defined' by Nwankwo (1974) as cited in Adamu, (2006) as the critical analysis and interpretation of a given situation with a view to determine the extent to which set execution have been realised. While, Hernet (1992) as cited in Adamu, (2006:25) stated that evaluation is a dimension of accountability in that it is a process of instructional self study to enable the instruction and its members assess the strength and weakness of the institution or individual members and thereby improving their operations and programme.

Evaluation can also be used to extract crosscutting lessons from operating unit experiences and determining that need for modifications to strategic results from works. According to UNICEF (2005) evaluation is a periodic exercise that seeks to provide

credible and sustainability. Evaluation is the systematic assessment of an activity, project, programme, strategy, policy, topic, theme, sector, operational area or institution's performance. Evaluation focuses on expected and achieved accomplishments, examining the result chain (input, activities, output, outcomes and impacts), processes, contextual factors and causality, in order to understand achievements or the lack of achievements. Evaluation aims at determining the relevance, impact, effectiveness, efficiency and sustainability of interventions and the contribution of the result achieved.

An evaluation should provide evidence-based information that is credible, reliable and usual. The findings, recommendations and lessons of an evaluation should be used to inform the future decision-making process regarding the programme. Vincent (2011) is of the view that evaluation is meant to influence decision-making, including decisions to improve, reorient, or discontinue the evaluated intervention or policy; decision by national or international policy makers and funding agencies. Adamu (2006) affirms that evaluation in assisted programmes provides the basis for broader advocacy to strengthen global and national policies and programmes for children's rights, through providing impartial and credible evidence. Evaluation involves analysing of data and making judgements: before the project to demonstrate the need for the project; during; and after the project to judge project success and the impact. It involves identifying what have been learnt particularly what works and what doesn't. It involves hearing of one's findings with others, so others can replicate your success or avoid the same falls and then celebrate success or review areas needing corrections. Evaluation is an exercise that attempts to determine as systematically and objectively as possible the work or significance of an intervention, strategy or policy. The appraisal of work or significance

is guided by key criteria discussed below: evaluation findings should be credible, and be able to influence decision making by programme partner on the basis of lessons learned.

The Presidency (2007) has delineated seven principles of evaluation, as follows:

- Evaluation should contribute to improve governance.
- Evaluation should be rights based.
- Evaluation should be development-oriented- nationally, institutionally and locally.
- Evaluation should be undertaken ethically and with integrity.
- Evaluation should be utilization oriented.
- Evaluation should be methodologically sound.
- Evaluation should be operationally effective.

From the views above, it can be seen that, there is significant relevance with the current study as it is also aimed at applying the four knowledge management elements in determining the worth or otherwise of students' performance in Colleges of Education.

In this regard, evaluation of learning should focus on important factors using a number of assessment methods or techniques to arrive at a score or judgement in respect of the learner's ability attitudes and progress. This can however, focus either on an individual learner, the learning community (classroom, workshops or other organized group of learners), the institutions of the education system as a whole in which Colleges of Education belong to such categories.

Purpose of Evaluation

Evaluation is carried out for a variety of purposes. Some of these to the personal observations and experiences of this study are listed below:

- To secure the basis for making judgments at "the end of a period of operation; for example, at the end of a school term, school year or even a week.
- To ensure continuous, effective and improved programme operation
- To diagnose difficulties and avoid destructive problems
- To improve staff and members of the public's ability to develop the educational system
- To test new approaches to problems and to conduct pilot studies in the consideration of which advancements and progress can be effected.

Essentially, management of schools programme involves the evaluation of the following educational objectives

- To evaluate instructional programmes
- To assess students' progress
- To facilitate students' progress
- To understand the individual student
- To facilitate self-understanding by student
- To contribute to a knowledge of students' abilities
- To assist in administrative judgment.

A brief look at each of these, would suffice.

- **To Evaluate Instructional Programme:** The evaluation of instructional programmes is compulsory for both the teacher and the learners to determine the causes of poor learning situation. It could be that the objectives are not realistic; methods of teaching may be ineffective; examination tests may be too hard or inadequate; or that specific characteristics of the students had resulted in poor performance.

- To Assess Students' progress - A student needs to know when he is making progress in his learning and when he is not in order to help him improve.
- To Facilitate Students Progress: In daily, weekly and long term learning tasks, the teacher should ascertain how well the student is learning and on this basis to award him a grade or a rating.
- To Understand the Individual Student: Various interest inventories and academic aptitude tests should be used to facilitate the evaluation of the student's abilities in the cognitive, affective and psychomotor domains.
- To Facilitate Self-understanding by Students: The impact of school on the students' life is crucial on his later life. By the time students finish secondary school, they are expected to set realistic goals and evaluate their progress towards these goals. This depends however, on teacher-student collection of information about ability and the teachers' task of interpreting such information to them if the student is to achieve self-understanding.
- To Contribute to Knowledge of Students Abilities: The improvement in the teaching-learning process can be better induced through an increased knowledge of abilities and instructions.
- To Assist in Administrative Judgment: We need to know which of the students shall be retained in a particular class; who shall we promote; and who shall we give accelerated promotion. In addition, we need to know the student's mental state of fitness.

The purpose of an evaluation is to provide feedback to both the teacher and learner regarding the learner's progress towards achieving the learning objective(s). This feedback if used by lecturers in Colleges of Education could revise and develop further instructions for an effective and efficient performance of both lecturers and students at College of Education.

Importance of Evaluation

The significance of evaluation in education lies in the fact that evaluation is the springboard on which the future development of education and the entire school system repose. Parents, students, members of the public, teachers, government and administrators have their views and judgments with respect to the strengths and limitations of given schools or school systems. Educational administrators recognize that evaluation is a part and parcel of their function, however they are often confronted by issues of validity and credibility of data collected as some of these may be inadequate. While it is understood that the task of evaluation is difficult and complex, however, these are no sufficient reasons for failure to recognize its importance in the school system. If a problem arises in the other numerous task of the administrator, carrying out an evaluation of the problem area would assist him in no small measure on how to go about solving the problem.

Evaluation for learning occur at various stages of learning process. It could be at the beginning of the unit, as the unit progresses and by the end of the unit programme. This is however, supportive by Cooper (2006, where he observed that, the judgement made on the basis of a student's performance could be in any of the two major forms below:

Formative Evaluation: It is the assessment made to determine a students' knowledge and skills including learning gaps as they progress through a unit of study. Ohuche and Akeju (1997) in Kolawole (2009), gave one function of formative evaluation as that which is designed to help them both students and teacher to pinpoint what the former has failed to learn so that this failure may be rectified. They further explained that formative

assessment is not undertaken for the purpose of grading or certifying the learner, but for identification of weak areas that need special help for the overall improvement in the end. This means that strengths and weakness on the part of the teachers, learners and education authorities are identified through formative assessment. Such information is used for the improvement of the teaching-learning progress, the curriculum content and facilities. The various assignments, tests, end-of-term examinations and end-of-year (promotion) examinations conducted by internal agent, the school organization, constitute formative assessment.

Formative evaluation is useful to both the teachers and the students as noted earlier; it is a useful tool for monitoring the students' learning progress during instruction. Bloom (1981) as cited in Adamu, (2006), pointed out that formative evaluation is very much useful to the students by way of providing feedback on their learning progress.

- It enables students to know their inadequacies in learning
- It improves students' performance by providing immediate feedback on their achievement. If they are weak, they will be able to improve on their performance
- Every individual student is given an opportunity to learn at his own pace.

It will enable the teacher to know the effectiveness of his instructional methods. Through formative evaluation teacher will identify his weak point in teaching and learning process so that he can be able to adjust his instructional strategies to meet the demand of the situation.

Summative Evaluation: It is the assessment that is made at the end of a unit of study to determine the level of understanding the student has achieved. It includes a mark or grade against an expected standard. The summative assessment is directed towards assessing

the extent to which the objectives of the programme have been achieved. It is used after the entire programme has been implemented in the entire school system. It assessed the performance of learners, the extent of attainment of the curricular objectives and issue certificate of achievement to the completers of the programme. This is also viewed by Azikwe (2009), when he asserted that assessment involves grading and certifying of the learner and is thus, directed more at passing judgement. Summative evaluation is conducted at the end of a programme to provide potential consumers with judgments about the programme's worth or merit. For example, after the curriculum package is completely developed, a summative evaluation might be conducted to determine how effective the package is with a national sample of typical schools, teachers, and students at the level for which it was developed. The findings of the summative evaluation would then be made available to consumers. It should be noted that the audiences and uses for these two evaluation roles are very different.

In formative evaluation, the audience is programme personnel, that is, in the example given they are those responsible for developing the curriculum. Summative evaluation audiences include potential consumers such as students, teachers, and other professionals, funding agents such as tax payers, and supervisors and other officials as well as programme personnel. Formative evaluation leads to decisions about programme development including modification, revision and the likes. Summative evaluation leads to decisions concerning programme continuation, termination, expansion, adoption and so on. One should be aware that both formative and summative evaluation are essential because decisions are needed during the initial,

developmental stages of a programme so as to improve and strengthen it, and again, when it has stabilized, to judge its final worth or determine its future.

Unfortunately, many educators conduct only summative evaluation. This is unfortunate because the development process, without formative evaluation, is incomplete and inefficient. Try to imagine a situation in which a new aircraft design was developed and submitted to a summative test flight without first testing it in the "formative" wind tunnel. Educational test flights can be expensive too, especially when one does not have clue about the probability of success. Evaluation may also be classified as either internal or external. An internal evaluation is one conducted by the programme employees, and an external evaluation is one conducted by outsiders. An experimental remedial programme in a secondary school may be evaluated by a member of the school staff (internal evaluation) or by a team of inspectors from the schools. Zonal Education Office (external evaluation). These two types of evaluation have advantages and disadvantages some of which are listed below:

The internal evaluator surely knows more about the programme than an outsider; however this closeness to the programme may make her not to be completely objective in her judgment of the programme. It is difficult for an external evaluator to learn as much about the programme as the insider knows. Sometimes an internal evaluator may have unimportant details about the programme but overlooks several critical factors. The internal evaluator may be familiar with important contextual information that would tamper with evaluation recommendation.

In Nigerian Colleges of Education, the Nigerian Certificate in Education (NCE) is an example of summative evaluation. This is relevant to the study in such a way that if these four elements of knowledge management are incorporated to assessment of student it could make a better grading and better way of passing judgement on students in colleges of Education.

2.3 Application of Knowledge Creation and Capture in an Organization

Knowledge creation and capture is the first element of knowledge management. In any group, knowledge is created when interaction among people generates knowledge. According to Unarte (2008) one of the primary aims of knowledge management is to capture the knowledge that is produced during interactions. In view of the competitive nature of markets, the need arises for organizations to create new knowledge, generate ideas and concepts that are novel and capture them, Allee (1997). This view was shared by Argote and Ingram (2000) and Alavi and Leidner (2001). Alipour, Idris and Karimi (2011) believed that fostering competitive advantage and optimizing organizational performance in the current complex and dynamic environment requires an organization's capability to create and transfer new Knowledge and practice, the idea is concurred in Ichij and Nonaka (2007), when they noted that the success of a company in the twenty-first century will be determined by the extent to which an organization's members can develop their intellectual capabilities through knowledge creation. Therefore, to sustain performance, leaders understanding of knowledge creation and transfer is vital as the success of organization is determined by leaders' intellectual capital. For the organizations to perform well, knowledge has to be captured and summed, Marsick and Watkins (2003) and Watkins and Marsick (1993).

To understand knowledge creation and capture, it is important to understand the concept of knowledge because employees may fail to obtain new knowledge because of their misunderstanding of the true concept. To understand what data are, information and knowledge need to be recognized. According to Bhatt (2001) data are raw facts, information is viewed as an organized set of data, and knowledge is conceived of as meaningful information. It is argued in Allee (1997), Nonaka and Takeuchi (1995), O'Dell, O'Dell, Grayson and Essaides (1998), Sverlinger (2000) and Szulanski (2000), knowledge can be created and captured through collaborate, social and individual's cognitive processes.

Nonaka and Takeuchi (1995) developed a four-mode model of knowledge creation and capture through the following processes:

1. **Socialization:** In this process, tacit knowledge will be transferred through social contact (communications and interactions) such as discussions, sharing experience, simulation, practice, observation and so on among organizational members.
2. **Externalization:** In this process tacit knowledge is converted into explicit knowledge in the shapes of concepts, metaphors, hypothesis, descriptions and models. This process occurs when the firm formally articulates its internal rules of functioning or when it establishes its goals explicitly (Martin de Castro, 2007).
3. **Combination:** In this process explicit knowledge will be created from explicit knowledge. In this mode existing explicit knowledge is merged, categorized, reclassified, and synthesized to create new explicit knowledge (Alavi & Leidner, 2001). Explicit knowledge can be transferred through media such as documents, meetings, storytelling and electronic communications (Yahoo Messenger, Skype, E-mail and/or phone conversations).
4. **Internalization:** internalization is achieved through changing explicit knowledge into tacit knowledge through a process in which abstract ideas change into concrete ones and they are finally absorbed as an integral value (Nonaka et al, 1994).

These four processes indicate that the knowledge transfer is effected when the knowledge user gains the same common knowledge of the concept as the knower.

Organizations only survive and improve themselves with their previous knowledge. They need to learn more through knowledge creation and capture to strive hard to overcome the chaotic and changing condition, Hannah and Lester (2009). The need for knowledge creation and capture is more evident in Colleges of Education where population keeps increasing and this couples with fact that students on daily basis keep devising means to cheat in examinations.

Organization consist of parts which relate to organization as whole. Each part is used in knowledge creation and capture and is capable of adapting itself to change and learn at different levels to promote the organization by creating desired prospects, Bill and Baruch (2010) and Senge (1990). Knowledge creation enhances the knowledge of members, modifies their thinking and improves their performances, Pedler, Burgoyne and Boydell (1996), Calantone, Cavusgil and Zhao (2002) and Gonzalez (2010). Organization that creates and captures knowledge has quality knowledge and communication. Thus, knowledge is accessible whether received from people or through information technology, Marquardt (2002). This situation, according to Huber (1991), is capable of creating, acquiring and fiausfeing knowledge which helps to modify the behaviour or the organization to reflect new knowledge and insights. Knowledge creation and capture is all about thinking feedback, questioning, listening, talking, reflecting and making individuals to learn from the experienced ones to help improve the organization's performance, Weldy (2009) and Takeuchi and Nonaka (2004).

According to Anvari, Alipourian, Moghimi & Baktash (2011), mechanisms and strategies such as organizational structural styles, organizational strategies, communication, trust, motivations, learning and training can be considered as factors that influence creating and sharing knowledge culture, Takeuchi and Nonaka (2004), the other factors are stated as follows:

Intention: Intention deals with how individuals' attitude towards the world is formed and how they make sense of their environment. Every organization has its own vision, the objectives to be achieved in the long run, and the performance that is expected which specifies y its future position. Organizational intention, thus, is the outcome of sublime prospects and rigid criteria and standards.

Autonomy: Autonomy as a driver of motivation can encourage individuals and groups to create knowledge. The organization can manage to enhance the possibility of creating unexpected opportunities by providing people with opportunities to act independently. Autonomy gives individuals freedom to absorb knowledge.

Fluctuation and creative chaos: Allowing interaction within the organization and the external environment make feasible questioning of knowledge that is already created and can be enhanced. Individuals and organizations may become more creative when they are stimulated by some external factors that cause them to reconsider how they look at and how they interact with that world.

Redundancy: Redundancy can be considered as one of the knowledge creation conditions. There are some ways for building redundancy into organizations such as : introduction of overlapping approaches for example when different departments work together, having strategic rotation and frequent meetings both on regular and irregular bases.

Required Variety: Refers to an organizational internal diversity that enables it to deal with the variety and complexity posed by the environment (Eliufoo, 2005). An organization that has greater diversity in its resources will be able to draw different perspectives or adopt a multifaceted approach in addressing issues and challenges. This is relevant to Colleges of Education especially as it deals with diversified students' performance in various fields of study.

Anvari, Alipourian, Moghimi & Baktash (2011), believe that knowledge could be created, captured and transferred through the following means:

- **Designing suitable Construct:** Knowledge cannot be created and converted easily. In order to facilitate knowledge creation and transfer, a manager should design a structure, in which organizational members can share their information and experience, improve and synthesize their knowledge, and also evaluate their ideas. A suitable structure can support problem solving, critical thinking and innovation that are very important for knowledge creation and transfer.
- **Training:** To work as a group, to cope with their duty needs, to share their knowledge and experiences with others, and to create and transfer new knowledge, organizational members need to be trained. In addition, people need to know-how they can identify the problems, how they can manage and solve the problems and how they can evaluate their works.
- **Motivation:** Managers should create an organizational culture to encourage individuals and groups in order to share their ideas and knowledge. Organization members must adopt the assumption that collective ideas are better than those held in private. The organization can facilitate knowledge sharing and offer incentives for dialogues and team work.
- **Technology:** One of the important factors that affect knowledge creation and transfer is communication. Without effective communication, organization members cannot share their ideas and knowledge and consequently knowledge creation and transfer will be complex. For this purpose managers can use technology such as the media and internet. For example e-learning, face book, email and video presentation are considered to be very helpful.

Contrary to individual knowledge creation, organizational knowledge creation occurs when all the four modes of creation of knowledge are organizationally managed, Nonaka, Byosiere, Boweki and Konno (1994) and Nonaka and Takeuchi (1995). The four modes of the knowledge creation and capture show how knowledge could be created through the process of the tacit and explicit modes of knowledge, Zollo and Wuiter (2002), Argyris and Schon (1996)) and Conklin (1996).

According to Smith (2000), developers of expert systems use various techniques for knowledge acquisition including interviewing, protocol analysis (asking the person to talk aloud while performing a task), questionnaires, surveys, observation and simulation. She went further to say knowledge management in business is likewise concerned with knowledge capture, finding ways to make tacit knowledge explicit (e.g, documenting best practices) or creating expert directories to foster knowledge sharing through human – human collaboration.

Creativity and innovation are what lead to creation of new knowledge. They are the essential skills requested to make any organization to perform high. Therefore, creativity and innovation need to be managed well because they tracts or skills that are required to discover alternative approaches to do things fast towards completing tasks, cost effective means to produce outputs and simple means to achieve set objectives, Blackler (1995), Boisot (1995), Davenport and Prusak (2000) and Eliufoo (2005). In Colleges of Education, it is lecturers and management staff that are creative and innovatively useful. When it comes to annual evaluation, they are rated high and awarded high marks.

It is believed by Uriarte (2008), that brainstorming is one of the most common methodologies used to bring out creativity and innovation from individuals. Different individuals have different levels of knowledge about some things as well as different ways of looking at the same thing. Through the process of brainstorming sharing of views, ideas and mental models are commonly used by individuals. From the same process the ideas, views and mental modes could be challenged, defended and further elaboration and modification are made.

This is captured in Uriarte (2008), when he elaborated further by stating that:

Through brainstorming, it becomes possible to bring out the diversity of perspectives and mental sets that exist in the brains of the participants. By properly managing such brainstorming sessions, it is possible to produce a composite perspective on a common problem. This composite perspective could lead to innovation and new knowledge (Pg 43).

However, creating knowledge is based on process and it is difficult to manage. Management of an organization needs to intervene for creativity and innovation to flourish. Managing the process of creating knowledge is a must by organization because its survival as a functional organization depends largely on how to manage the process of knowledge creation. It is one thing to create knowledge and it is another thing to capture it. Any knowledge created ought to be captured otherwise it cannot be utilized, Gray and Densten (2005), Nonaka (1994), and Probst, Raub and Romhardt (2000).

There are various ways upon which knowledge can be captured from within and outside organizations. It is the opinion of Uriarte (2008), that knowledge from outside organization can be captured by:

accessing different sources such as publications, websites, emails and the Internet. Explicit knowledge from within and outside of the organization can be captured in various forms such as printed reports, record of meetings, copies of memos and the like. These documented outputs are generally generated at various stages of operation of the organization. On the other hand, tacit knowledge can be created and captured during discussions and meetings with office colleagues, stakeholders, institutional partners, consultants and experts. Seminars and workshops also provide excellent venues for creating and capturing tacit knowledge that may come from the speakers or the participants.

One essential component of knowledge creation and capture is content management. This entails creating information database. To this end, certain decisions need to be involved in formulating the information database. According to Uriarte (2008), the decisions must involve the following:

The first decision is on how new information will be created, contributed and published. Information can be contributed in many ways. It can be submitted into the database via a prescribed form or it can be contributed through web page, email, shared public folders and shared network directories. Content management involves making a decision on acceptable means of adding content into the database.

The second decision is on who will have the access or rights to subsequently update or delete information in the database. Users of a database are usually provided multiple paths to facilitate access to information. On the other hand, contributors to the database should not encounter too many barriers as to discourage them from further contributing useful data or information. For these reasons, the system's ability to distinguish those who have rightful access from those who have not is an important component of content management.

The third decision is on which information are worthy of inclusion in the database. Information from documents, web pages and emails are generally not structured in accordance to the requirements of the database. On the other hand, information that is retrieved from the database is usually structured in a certain way. Content management requires that there be a means to determine which structured information from databases and unstructured information from other sources are to be included in the system.

Ways through which information or knowledge is gathered, and submitted into the knowledge management system are many. From existing data storage systems in an organization, information or knowledge can be collected. For instance, from the hard disks of computer operator of a department in College of Education information about students' performances in different courses as created in the system can be captured. Various examinations submitted the results in score sheets before they are finally entered in the hard disks. It is worthy of note that the knowledge about the results of students is created through score sheets before they are captured in the hard disks for use. Thus, the knowledge about the students' evaluation is created through the process of marking and computation. It is captured when only it goes to the hard disks.

2.4 Application of Knowledge sharing and Enrichment in an Organization

Knowledge sharing and enactment is assumed to be the most crucial among the four elements of knowledge management. It is in the process of sharing that knowledge is refined and enriched through means and instructions, knowledge is shared among by the organization with its employees. It can also occur between employees of the organization with people outside the organization through group discussions and internal meetings as

well as through attending seminars and workshops, respectively, Au (1994), Backscheider, Schatz and Gelman (1993), Bertrand Mervis (1994) and Bromberg, Ullman, Mercus, Kelly and Levine (1994).

An employee shares the captured knowledge production efficiency of an organization with other employees or groups interested or related with the subject matter. Through discussion and debate on the knowledge, the group of employees make comments and inputs, which bring about new insight that could add relevance and enrich the original knowledge that was shared. The more the knowledge on production efficiency is disseminated by the organization to its members, the better various units or individuals could provide a forum where new ideas could be exchanged, debated and more relevant. This is a dissemination process where discussion and debate, which could enrich the organization's knowledge on production efficiencies Covey (1991), Covey (1995) and Covey and Spelke (1994). In a college of education, discussion and debate, preparatory to teaching practice exercise, organized by teaching practice committee, also give room for sharing and enrichment of knowledge that could enable various supervisors to assess students better. It is believed by Estabrooks, Thompson, Lovely and Hofmeyer (2006), Lesser and Fountain (2004) and Lomas (1997), that when staff of an organization presents a seminar, workshop and meetings outside, they share and enrich their knowledge and this goes a long way in making them to perform better in their duties. It is common in Colleges of Education today to see the management encouraging staff to go for conferences even outside the country. The idea is basically to enrich the staffs' knowledge to enable them perform better. In a similar assertion, McDevmott (1999) and Rogers (2003), maintained that performance of any organization is generally determined

by the magnitude of knowledge sharing and enrichment that take place in and outside the organization. They went further to say knowledge sharing and enrichment must be encouraged and nurtured.

It becomes essential for communication to be enhanced and made the right culture to thrive for proper sharing of knowledge manifest in the organization. For a staff whose knowledge is available resource that makes him essential asset of the organization may not share to avoid competition. Also, a staff who is confident of his expertise in a particular field may not like to use the knowledge of others for fear that it may put to risk the quality of the work he is doing in the organization, Acemoglu, Phillippe and Fabrizio (2006), Aghion Jean (1994) and Aghion and Jean (1997). In what looks like a warning note, Aliq (1999), Anderlini and Leonardo (1994) and Antras (2003), stated that knowledge manager needs to know that the natural tendency of human beings to hoard their own knowledge and consider that of others with suspicion when coming out with knowledge management system.

Knowledge can be shared between employees of the organization through group discussion, internal meeting, people from outside the organization i.e through seminars, workshops, conferences, and community of practice etc. The status of a teacher must therefore be maintained to reaffirm the strength of any nation with regard to human development. To make this human development a reality, Kishan (2007), posits that a very different kind of teachers have to be taught and should be prepared to shoulder new responsibilities extending far beyond the confines of the classroom. The training of teachers must be given the required attention by the government through relevant and functional teacher education programmes. This is because, teachers provide the required

competence, skills, knowledge and ideas that would transform the individual into efficient and useful member of the community to which he belongs. These could be achieved through Colleges of Education where Nigerian certificate in Education (NCE) is obtained.

Organizations can enhance knowledge sharing through the implementation of appropriate technologies, operations and systems that could stimulate collaboration, enhance the process of sharing and use reward system for individuals who participate in the knowledge sharing, Antras and Elhauan (2004), Canevazzi (1992) and Conconi, Patrick and Andrew (2012). In Colleges of Education, management sometimes gives sitting allowances to committee members to serve as a motivation for them. According to Dou (2014), Garcia-Mila & McGuire (2002) & Grossman & HelpMan (2002), organizations are generally able to make decisions with the impact when knowledge is efficiently shared. They are able to make and execute decisions rapidly when individuals throughout the organizations can gain access to important strategic ideas. This view is captured in Hart (1995), Hart & Moore (1999) & Helper, MacDuffie & Sabel (2000), noted that knowledge managers must ensure that employees have direct access to one another rather than requiring them to go through higher management when ever needed information or knowledge is required in the implementation of certain projects or the design of certain products. In this manner, the persons who have the right information or knowledge can readily share it with those who can use it to produce the greatest benefit for the organization.

Communities of practice have been proven to be excellent means to share knowledge among people who have a common interest. These comprise groups of people who share knowledge, concern or interest in a given area. As a result of their continuing interaction with one another, generally through the use and application of information and communication technologies, the members of the community enrich their knowledge and expertise in that particular area, Helsley & Strange (2002), Legros & Newman (2008), & Legros & Newman (2013). Communities of practice provide their members with very powerful cooperative tools for further developing their expertise and abilities. These groups are an effective and flexible means to examine some knowledge issues and gain further insights into specific knowledge domains.

According to Levin, Klevroick, Nelson & Winter (1987) and Marin & Verdier (2008), Communities of practice are not synonymous to teams or task forces that are formed for a specific purpose for a certain period of time. Rather, they are peers that form groups to learn from one another and improve their understanding of a particular subject of common interest. What binds them is their common desire to improve their knowledge and their respective need to know what the other knows. In other word, a community of practice is where members share “work stories”. During the process of “story telling”, the exchange of tacit knowledge takes place. This process is particularly important to new staff members since the sharing of knowledge tends to accelerate their movement from a mere tangential contact to a fuller involvement with older staff members.

It is believed by Marin & Verdier (2009) & Marin & Verdier (2012) and Markusen (2001), when an organization starts to manage its knowledge to attain competitive advantage, one key initiative would be to foster the formation of

communities of practice around the core knowledge of the organization. Although, communities of practice generally grow spontaneously around personal relationships, it is important that organizations create a condition conducive for such growth to occur. Once in existence, there would be need to manage such communities of practice in order to optimize their contribution and help ensure their success. There would also be need to have the goals of the communities of practice aligned with goals of organization. Unless there is convergence of objectives, the output of the communities of practice would be of little use to the organization. In other words, the impact of communities of practice would be severely limited if they lack strategic relevance for the organization.

Many progressive organizations rely on communities of practice to maintain the professional excellence of project teams regardless of where the members of the team may be located. Because communities of practice facilitate knowledge sharing, they are critical to overcoming the challenges involved in the creation, sharing, dissemination and use of knowledge, Maskin & Trole (1999), McLaren (2000) and Naghavi & Ottaviano (2008).

It is opined in Puga & Daniel (2010), Sabel (1994), that communities of practice are not just websites, databases and set of best practices, although these constitute the means by which the members interact. Rather, a community of practice consist of members exchanging knowledge, and in the process, they build relationship and develop a sense of belonging and mutual commitment. To some extent, a community of practice also helps develop a homogeneous vision and common approach to solving problems, attaining a desired objective, or designing a product. The members of community have their individual official and nonofficial roles. They create reputation for themselves, and

they acquire status and spheres of influences as they actively participate in interaction. The communities of practice may therefore be viewed as social entities in which views are ventilated and shared and where conflicts and disagreement can sometimes appear, mechanisms are available to handle tensions when required.

According to Segal (1999) and Williamson (1985), in many organizations, communities of practice are informal groupings that are separate from but are not in conflict with the formal organization structure or hierarchy. They act as parallel structure but do not interfere with the regular responsibilities and accountabilities of staff members, Allee (2005). They are groups in which various areas of knowledge connect people. In all organizations, the management structure and hierarchy may change and projects start and will eventually end. Communities of practice, however, can continue indefinitely as long as there are groups of people that are interested in sharing knowledge. Knowledge is the continuous element that binds the members of the community together. For this reason, communities of practice can provide that layer of stability to many organizations, (Barclay & Murray, 2004; Bellinger, 2004¹; Bellinger, 2004²; Bellinger, 2004³; Bellinger, 2004⁴). Through the community of practice, members exchange knowledge that is useful in their own particular fields of practice.

It is believed by Barkman (2004), Bock (2004), Chuo & Lam (2005) and Davenport (2000), that to encourage knowledge sharing, certain incentive schemes have to be provided. In many cases, a worker may feel threatened to introduce or share knowledge into a system while another may feel reluctant to actively search out knowledge that others introduce. Many may also find the process of sharing and searching as requiring considerable amount of time and effort. In practice, the fact that

knowledge is available does not necessarily mean that others will use it. Nevertheless, the knowledge manager of any organization should create an overall situation in which knowledge is shared and reused spontaneously. In other words, the principle of knowledge sharing and re-use must permeate through the entire organization. This can be facilitated through the provision of certain incentives, financial or otherwise to those actively sharing useful knowledge and those frequently reusing knowledge that have been shared. DeCiercq (2003), Denning, Fommier & Shneier (2003) and Denning (2004).

2.5 Application of Information Storage and Retrieval in an Organization

The third element of knowledge management is information storage and retrieval. The organization should ensure that acquired or shared knowledge is readily accessible to others. This can be done by storing information in a centralized location with sufficient provision for easy retrieval. For example, the assessment of students' performance in final examinations can be stored in databases in suitable file systems. The documents and information in databases could then be retrieved through the available system in the College of Education. According to Gochea (2004), Hildreth, Wright & Kimble (1999) and KCO (2004), there are four main options for storing the information that are captured or shared. These are: file system storage, databases, e-mail and websites. In most organizations, the bulk of information is likely to be in relatively unstructured formats. This can be in the form of typical business or office documents such as reports, memos, spreadsheets or e-mails. These documents normally contain valuable information but they are not easily searched and found. For a knowledge management system to be effective, it must provide for search engines that can deal with the search unstructured information.

In most case, however, some form of information structuring is necessary in order to facilitate subsequent information retrieval and use KME (2004), Kushner & Rijpra (2004) and Lesser & Storck (2001).

Some information may require more than a storage format. In order to facilitate retrieval, a two-step process has to be implemented: first, the information should be divided into managerial units; and second, each unit should be categorized. Nonaka (1996) and Por (2004).

Before the information is divided into smaller units, there is the need to determine the size, or granularity, of each meaningful unit. The finer the subdivision or granularity of each unit, the more tedious the time consuming the cataloging effort could be. Databases usually work with the fields and records as unit for searching and retrieval. Rasmus & Ward (2001) and Santosus & Surmacz (2004). It is opined in Shein (2002), Skyrme (2004)¹, Skyrme (2004)², after the information is divided into smaller units, the units must then be categorized by content type. In order to do this, it is necessary to create a list of all the content type for the organization. These lists may include classifications such as proposals, invoices, white papers and correspondence. Each entry is then tagged with the content attributes including meta-data such as documents, document title, auto, client and approval status.

Once the repository of information is created and populated, the next step will be to provide various means for users to have access to the information needed. This involves designing and providing information retrieval pass ways. These pass ways should be designed with user community in mind and made as user friendly as possible, Srinivas (2005), UNSSC (2005), UF (2007), Newman (2004). Since user have different

levels of technical expertise, and have different purposes for accessing information, multiple access methods will have to be provided. Each access method should be designed to meet a specific user level. In this manner, both casual and intensive users will be provided the same body of information, Alex & David (2007), Anantatmula & Kannunga (2006), APO (2010), AKM (2008).

It is submitted in Bhatt (2001), Bose (2004), Choo & Bostin (2002) and Clabushi (2005), that, since different users require different views of the knowledge base, the ability to personalize these views will greatly increase the ease of use. Personalization taps into user profiles to control what content is offered. After the right to access of the user has been verified, personalization can apply for user's preferences for what to present on the page.

Portals, such as Microsoft digital dashboards are capable of showing data from heterogeneous sources side-by-side and simplifying navigation by consolidating views of data. By using integrated search tools, it is possible to reach across application boundaries to find information. For example, it is possible inter gage human resources, finance and time as well as accounting application by cataloguing their data into a single repository. These systems can then allow searches against database, file system and web data in a single query.

According to Cohen (1998), Davenport (1998), Davenport (2008) and Davenport & Prusak (1998), there is another form of information retrieval called Push technology. In this case, information retrieval is initiated by the system rather than by a user. In this form of information retrieval, the users subscribe to areas of interest. They then receive updates via e-mail delivery, personalized web pages and personalized corporate portals or

homepages. For instance, side saver provide for pushing information through active channels. The digital dashboard also offers push capabilities. David & Alex (2008), David (1997), DeGooiser (2000).

The consolidation of information from diverse sources can be consolidated using web based knowledge portals Drucker (1999), Edward (2003) and Easterby-Smith (2000). These portals allow the user to reference, collaborate and interact with the information. These ubiquitous web browsers allow easy access from any location. With these systems, intranets, extranets and even internet knowledge implementations are possible.

2.6 Application of knowledge Dissemination in an Organization

The forth element of knowledge management is knowledge dissemination. Unless knowledge is effectively disseminated, the development impact of knowledge will remain unlimited. For knowledge dissemination to be effective, it will require a transformation of highly individualized tacit knowledge into explicit knowledge that can be more widely shared, Farid & Alif (2008), Fanandez, Gonzalez and Sabherwal (2004), Filemon (2008) and Freeman (2001). In ann organization where there is fear of the management or hierarchy, the employees will have a tendency to keep the knowledge to themselves and share it with others only cautiously. In cases such as this, management must take the lead in creating an environment of understanding, corporation and learning. It should also encourage knowledge sharing even if the positive results of going so are not readily apparent. Such results can best be measured in the long term.

Publications, presentations, websites and libraries are the most obvious forms of dissemination of knowledge. Participation in external networks, establishing partnerships with other organizations and creation of knowledge centers are also effective means to disseminate knowledge, Grossman (2006), Gupta (2000), Holm (2001).

2.7 Empirical Studies

A number of previous works had been carried out in the field of knowledge management and other fields related to present study in the past years. Such works could however, be examined in order to shed more light on the current research. Rismark and Solvberg (2012), for example carried out a research on knowledge sharing in schools: A key to developing professional learning communities. The research was conducted in Norway using case study with a field arrangements of two-years. Forty teachers (40) and 480 students were used. Interviews and observations were used as instruments for collecting pertinent data on various knowledge sharing activities. The data analysis of the case involved the interplay between the researchers, transcribed data material and theory that was taken both in the field and after the data had been collected.

Among the findings include:

- i. Teachers expressed an overall positive attitude towards knowledge sharing and they also valued the opportunities to share knowledge throughout the project period.
- ii. Teachers were convinced that the teaching staff was a knowledgeable group and knowledge sharing brought new knowledge that was used to develop teaching practices.

- iii. The finding also revealed two overriding features of knowledge sharing, captured in the two categories: creation moments (knowledge creation moments can arise when teachers participate in knowledge-sharing activities relating to the spirating process of knowledge creation) and bumpy moment (were especially pronounced during activities that were meant to enhance knowledge sharing across teacher teams).

It recommended that:

- If schools aspire to become professional learning-communities, they need to strive towards an everyday practice that involves knowledge sharing that allows for knowledge conversion within and between all four modes (socialization, externalization, combination & internalization). Such ambitions may need to be organizationally supported.
- Additional studies are needed to identify other qualities of knowledge sharing. Such insight can assist schools in their efforts to tap the learning potential that lies in knowledge sharing.
- Teachers knowledge should be make public and open to critique, refinement, and preservation.

There are areas of similarities and dissimilarities between the above study and the present one. Unlike the above study, the current study dealt with the application of the elements of knowledge management on evaluation of students' performance in Colleges of Education in North-West geo-political zone. It focused on the four elements of knowledge management in which knowledge sharing is among. The research in progress was conducted in Nigeria with emphasis on Colleges of Education. Questionnaire was the

instrument for collecting data as it was an opinion seeking (survey) research design. The North-West geo-political zones were captured using all geographical the population of Colleges of Education with 1916 lecturers as sampled respondents. It employed the use of simple frequency count, percentages, ANOVA and scheffe's test as the appropriate instrument for analyzing data.

Another research was conducted in New York by Chinowsky and Carrillo (2007), on knowledge management to learning organization connection. The research mainly focused on Engineering-Procurement-Construction (EPC) industry o the 21st century. It aimed at emphasizing the need to both retain knowledge within the organization and focus on continuous human resource development through out the organization. It is a case study research with interview as method of data collection. Though no result was analyzed, but the research came out with the following finding and recommendations:

- It was found that organizations who do not retain or focus on supporting employees initiatives beyond the initial knowledge management stage will ultimately fail to realize the full potential of a learning initiative.
- Loss of employee support, reduction in knowledge sharing and generation and reductions in organization communication are few ramifications to reduce leadership support during transition from knowledge management to learning organization initiatives.

It was however, recommended that:

- there should be continued focus on knowledge management assisting the learning effort by expanding an organization communication and learning culture.
- here is need for expansion of learning infrastructure so as to provide greater opportunities for the organization employees to store, access and share knowledge.
- Evaluation of the process is necessary and put in place a support and plan for successful move to a dynamic learning culture.

The above study shared commonality with the current study because it dealt with knowledge management (KM) and learning organization. The above study is mainly on engineering organization while the present research is on educational organization. The study on engineering does not test and analyze any result, but gather data through interview. The study in progress made use questionnaire as its instrument for collecting data and analyze such data using statistical analysis of frequency count, percentages and ANOVA.

Dahawy and Kamel (2009), conducted a study in Cairo on using blended learning technique in knowledge dimension: lessons learnt from the case of the American University in Cairo. It is aimed at examining the important level of active-like (A-like) technique and passive-like (P-like) technique and its relative implications. The research was a survey with questionnaire as instrument for data collection where students studying courses in the Department of Management at American University, Cairo served as the respondents. The data was analysed using frequency count and percentage. Among the findings of the study is that:

- Students joining accounting, finance, management information systems concentrations and management agreed that the best techniques disseminating knowledge is P-like technique especially class presentations, where as international business students rated computerized assignments the highest.
- Preferences of the active like (A-like) technique are both not supported.
- Asian learners prefer to learn through passive like (P-like) technique while Western learners prefer learning through discovery (active-like) technique.

It is recommended by the study that:

- Teachers and instructors should provide all the learning points in class as well as delivering all required discussions.
- Spoon-fed teaching/learning environment should be discouraged because, it provides no space at all for students to give themselves a chance to try any of the active learning techniques.
- It can be seen from the above submission that both the reviewed and present research are having survey as the research design with questionnaire, percentage and frequency count as instruments for collection and analyzing data. There are remarkable differences in the two researches however, the above research concentrated more on only one out of the four elements of knowledge management, it was conducted in America with emphasis on only students studying courses in management/business administration. It was also delimited to two techniques of teaching and learning (P-like & A-like) techniques. The current study on the other hand focused on all the four elements of knowledge management and laid emphasis on Educational organization specifically evaluation of students' performances in Colleges of Education with Lecturers, Deans and HODs inclusive as the respondents in the present study. The purpose is to of sort opinions of respondents on the application of four elements of knowledge management to evaluation of students' performance in Colleges of Education in North-West geo-political zone in Nigeria.

Dora, Hussin, Sidek (2012) wrote on Impact of Training on Knowledge Dissemination and Application among Academics in Malaysian Institutions of Higher Education. It was purported to explore the linkage of knowledge dissemination and the application of new knowledge in teaching and learning practice. It also examined the changes in behaviour in teaching and learning among academics resulting from the knowledge dissemination, the professional training programs offered by the Academy of Leadership in Higher Education Malaysia known as the Akademi Kepimpinan Pengajian Tinggi (AKEPT). It was a survey research that used questionnaire to gather its data. 519 academics were used as respondents ranging from professor, associate professor, senior lecturer, lecturer and assistant lecturer (five categories) opinions of the respondents were analyzed using percentages and two-tailed t-test.

Findings and Recommendations

- It was found that there was significant change in behavior of academic staff as a result of the training this was seen through.
- Majority of the respondents keep-up with institutional change process.
- Majority of the respondents get involve in departmental changes.
- There was an increase in respondents' confidence to participate in decision making.
- Change behaviours among academics resulting from the dissemination of knowledge do not somehow contribute to the cultivation of community of practice within the organization as ways to achieves it competitive edge.

Recommendations

The study recommended that:

- There is the need for more research on the evaluation of training and to investigate the application of the knowledge on the teaching and learning process.
- Training be conducted to aim at cultivating a work culture that nurture knowledge sharing among the academics.
- Investigation is needed to find out how much faculty can gain from their investment in the training programme.

Similarities and differences exist between above research and the current one. While the above research concentrated on knowledge dissemination the current one carried all the four elements of KM and applied them to evaluation of students' performance. The research in progress as the above one, also made use of academic staff, survey and questionnaire to gather its data but differ in the use of method of analyzing data. Though, both used percentages but the above study used two tail test while the current one used analysis of variance (ANOVA) and scheffes test.

Findings and Recommendations

Among the findings of the above research is that:

- An appropriate teaching and learning approach should incorporate learner centric with students at the centre.
- Effective learning takes place only when the learner is placed at the centre of teaching learning strategies.
- Learning has moved from the traditional fact accumulation model to a more measureable and meaning “learning outcome” based approach.
- That use of black board to teaching do not allow for control and achievement, instead, teaching and learning materials such as lecture delivery slides, tutorial materials, supplementary material and other relevant materials proved to be more effective.

Recommendations

For efficiency, effectiveness, consistency and better management and monitoring of the quality of teaching and learning materials, there should be.

- Better orientation and understanding of academic staff on such materials, this will help them do their work in a more efficient and effective way.
- Use of that by teachers will eliminate needless fears that could prove a barrier to successful implementation.
- Need for a high level recognition from institutional authorities, that, the approach will bring improvement in the teaching and learning quality that could ultimately lead to greater satisfaction to all stakeholders.
- Importance to examine alternative approaches and determine the best way of developing and implementing a system.

The above research differs slightly with the current one. Though the above research dealt with teaching and learning, also dealt with private higher institutions and dealt with academic staff like the present research. The researcher in progress is an empirical one with various methods of gathering and analyzing data. The current research dealt with only colleges of education and is conducted in Nigeria. The above research looked at the whole body of knowledge management to all aspects of teaching and learning approach to ensure quality, the current research adopted the application of the four elements of knowledge management to Evaluation of students' performance. Evaluation is an aspect of determining quality teaching and learning in this regard.

DeBrun (2005) wrote a book in UK on ABC of knowledge management. The main aim of the book was to help in bringing about the idea that knowledge is the key determining factor in organizational and economic success or failure. To assist actualizing one of governments' objectives to make UK one of the world's leading knowledge economics. Only public business sectors were capture in his work. He highlighted deeply in areas of what is knowledge management?, principles and process of knowledge management, general concepts, getting started, developing the knowledge management environment, and measuring the effect of knowledge management.

The current research touched only on an aspect of knowledge management i.e four elements of knowledge management. The current study is basically related to education with colleges of education as area of concern. Evaluation of students' performance is another concern of this research. The research in progress is out to apply the four elements of KM viz: knowledge creation and capture, knowledge sharing and enrichment; information storage and retrieval; and knowledge dissemination to enhance teacher effectiveness and efficiency in evaluating students' performance in colleges of education in Nigeria.

A report on a preparatory workshop (2000) from economic commission for Africa, Africa knowledge networks forum (AFNF) on knowledge sharing for enriched research, training and policy decision making was made. It was aimed at facilitating knowledge sharing and research partnerships between professional networks and key end-users, including policy-matters, trainers at institutions of higher learning, civil society organizations and the private sector. The workshop was conducted in Addis Ababa, Ethiopia.

Findings of the study revealed that:

- AKNF knowledge sharing within and between organization accelerates regional integration and enhances global economy in Africa.
- It brings networking African research on the information economy.
- It strengthens the process of generating gender desegregated data to support gender policy analysis and gender aware decision making.

Recommendations

The report recommended that there is:

- Need to create a permanent mechanism for promoting a dialogue among all networks and in institutions of higher learning.
- To produce medium term strategy and budget, and resource mobilization strategy for the forum.
- To represent the AKNFs interests in the drawing up of a business plan for economic commission for Africa's (ECA's) information technology centre for Africa.
- To contribute to three well researched ECA publications on regional integration, Africa in the global economy s well as gender and governance.

The above research was an outcome of a report during an organized workshop by the Economic Commission for Africa. It concentrated on economic development through sharing knowledge. The research in progress not only looked at sharing knowledge, but also involved other elements as creating, capturing, enriching, storing, retrieving and disseminating knowledge. The current research is basically on education sector and is using knowledge as the only asset to boost individual and organizational performance.

In evaluating students' performance most importantly, it is centralized to colleges of education in Nigeria as part of Africa.

In yet another research by Avari, Alipouria, Moghimi and Baktash (2011), on analysis of knowledge management within five key areas. The main purpose of the work was to identify and assess five pointers that contribute toward knowledge management in a university in Iran. The key areas are: General management, leadership style, human resources, strategic vision and internal process. The study adopted both quantitative and qualitative approaches to evaluate knowledge management based on literature and personal view-points in the university. It was a survey research design with lecturers and other staffs of IAU-BG as respondents. 135 was the population and used 101 participants as sample size using Kokaran model and stratified random sampling technique.

A questionnaire was used in obtaining its data. The gathered data was analyzed using simple percentage, SPSS and mean. To further determine the correlation co efficiency of the variables Krusical-wallis, Mann-whitnesy and spear man correlation test were applied.

Findings and Recommendations

Among its findings are that:

- There is a network of knowledge employees and competition between colleague through improvement, learning by doing, committed top management to creating a learning organization in the area of study.
- Identified and solved shared problems as team, focused on developing employees knowledge

- Procedures, persons, supporting organizational structure and IT are four key success of KAT.
- The main problems of the university is lack of procedure and suitable organizational structure to support internal processes.

Recommendation

The study recommended that principals of IAU-BG and other similar universities to take action by proposing internal process and human resources should be improved or be re-engineered.

The current study shared a lot of similarities, but also differ significantly. This research is also dealing with human resources (academic staff) in higher institutions of learning. They both are surveyed design in nature and used stratified sampling technique to sampled out the respondents. Questionnaires were used by both researches and percentages were adopted.

The research in progress in contrast used four elements of knowledge management on students' performance. Nigeria is the area of coverage of this research using North-west geo-political zone. Instead, frequency count, ANOVA and Scheffe's test were used in analyzing data and determining the extent of differences in opinions of respondents where significant differences exist in the current study.

After a through review of previous works related to this study it could be seen and said that the current study has a base as experts in different parts of the world came up with similar study. This helped the current study in borrowing and adopting various styles and methodologist to make the current work of great standard.

2.8 Summary

Knowledge is made up of familiarity, awareness and understanding obtained via experience or study, which are resultant from making comparisons, identifying consequences and making connections. From the perspectives of organization, knowledge could be seen as being “know-how” or applied action. Management is established in any organization to consciously direct human behavior towards some future end, Alders (1974).

Knowledge management is to sketch out a line gap in hierarchical order on a data – information – knowledge basis. This definition or view point of knowledge management means it is a process of sharing or storage of knowledge, which begins with collection of data, using it for information and necessary knowledge.

In view of the competitive nature of markets, the need arises for organizations to create new knowledge generate ideas and concepts that are novel and capture them, Allee (1997). This view was shared by Argote and Ingram (2000) and Alavi and Leidner (2001). Alipour, Idris and Karimi (2011) believed that fostering competitive advantage and optimizing organizational performance in the current complex and dynamic environment requires an organization’s capability to create and transfer new Knowledge and practice, the idea is concurred in Ichij and Nonaka (2007) when they noted that the success of a company in the twenty-first century will be determined by the extent to which an organization’s members can develop their intellectual capabilities through knowledge creation.

Through discussion and debate on the knowledge, the group of employees make comments and inputs, which bring about new insight that could add relevance and enrich the original knowledge that was shared. The more the knowledge on production efficiency is disseminated by the organization to its members, the better various units or individuals could provide a forum where new ideas could be exchanged, debated and more relevant. This is a dissemination process where discussion and debate, which could enrich the organization's knowledge on production efficiencies Covey (1991), Covey (1995) and Covey and Spelke (1994).

According to Gochea (2004), Hildreth, Wright & Kimble (1999) and KCO (2004), there are four main options for storing the information that are captured or shared. These are: file system storage, databases, e-mail and websites. In most organizations, the bulk of information is likely to be in relatively unstructured formats. This can be in the form of typical business or office documents such as reports, memos, spreadsheets or e-mails.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The need for selecting and using appropriate methodology in any research had been stressed by different scholars. The main focus of the chapter is to explain in details the procedures through which the research was conducted. The procedure of data collection tools for analysis and reporting of results had been given adequate attention. In this regard, the chapter described the research design, population, sample and sampling technique as well as instrumentation. Validity of instrument, pilot study and reliability of the instrument had also been examined. Administration of the instrument alongside the procedure for data analysis is dealt with in this chapter.

3.2 Research Design

A research design is a specific way or an arrangement made for obtaining information and analysis of data in order to answer research questions or verify a research hypothesis (Kajang, David & Jatau, 2004). Kothari (2009), is also of the view that a research design constitutes decision regarding what, where, when, how much, by what means concerning a research study. It is further explained to mean the plan, mode or the conceptual structure of the research and the type of approach adopted in the study (Olaofe, 2010).

In line with the above assertions, the study made use of a descriptive survey research design. This is, however, selected to be more appropriate for the study because, according to Awotunde (2004) it provides information on facts, opinions and attitudes of individuals on educational events, problems and large population. This is said to be

relevant as the present study sorted out the opinions of individuals on application of elements of knowledge management to evaluation of students' performance in Colleges of Education in the North-west geo-political zone in Nigeria because the total population cannot be reached out by the present study. This is in line with idea of Sambo (2005) where he opined that, a descriptive survey research is appropriate when the total population cannot be accessed. In such instance, information is gathered on a representative sample from which inferences are made on the whole population. This is relevant as the variables and respondents covered are in different parts of the North West geo-political zone in Nigeria and because of the turnover rate, the exact number of academic staff was difficult to ascertain.

3.3 Population of the Study

Population implies the totality of cases (items) in an investigation (Gupta & Gupta, 2006). Amin (2005), also views population as the people or objects that the researcher is studying or has studied. In yet another assertion, Olaofe (2010), describes population as the entire area or total number that the researcher is expected to cover.

Based on the above submissions, the population of this study was made up of all State and Federal Colleges of Education. There are seven State Colleges of Education and five Federal Colleges in the North West geo-political zone. Each College of Education by the Bench Mark of NCCE has five schools with thirty-two departments and lecturers where exact number is difficult to ascertain considering the rate of turnover in Colleges of Education in Nigeria today. However, the NCCE statistical digest of 2013 has summed up the total of 5697 academic staff in all State and Federal Colleges of

Education in North-west geo-political zone in Nigeria. The states that make up the North West geo-political zone, number of available Colleges of Education and their population are provided in table 3.1.

Table 2: Population of States in North-West Geo-political Zone, Number of Colleges of Education and Lecturers

S/N	States	Category of COE	No. of COE	Population of Lecturers
1	Jigawa	State	1	227
		Federal	-	-
2	Kaduna	State	1	459
		Federal	1	1286
3	Kano	State	1	909
		Federal	2	836
4	Katsina	State	1	229
		Federal	1	325
5	Kebbi	State	1	158
		Federal	-	-
6	Sokoto	State	1	862
		Federal	-	-
7	Zamfara	State	1	182
		Federal	1	224
Total		7	12	5697

Source: NCCE Statistical Digest (2013)

Table 3.1 highlighted on North-west geo-political zones and the states that fall in within that zones. It also indicated number of State and Federal Colleges of Education available in each state as well as number of academic staff available in each college.

3.4 Sample and Sampling Technique

A sample being part of a subset of the population is made up of those persons/things from the population, which are chosen to participate in a study (Kajang David & Jatan, 2004). It is however, generated to make generalization about the population. Similarly, Olaofe (2010), posits that sample is the process of selecting

elements from the population in such a way that the sampled elements selected represent the population. However, considering the number of colleges, the researcher covered the entire population. Thus, there was no need for sampling in terms of population of the Colleges of Education in the North-West Geo-political zone. However, stratified sampling technique was adopted to sample the Deans and Head of Department, while simple random sampling was used in sampling lecturers from various departments. This was seen when copies of the questionnaire were given to each Head of Department to randomly select the lecturers that will do appropriate justice to the instrument. Therefore, five schools exist in Colleges of Education and in each of the five schools, a simple random sampling of two Lecturers from State and four Lecturers from Federal Colleges were used including Deans and Head of Departments. All the Heads of Department and Deans of schools were involved in the study. The study was made up of the sample size of 133 respondents (subjects) in each State College and 197 respondents (subjects) in each Federal Colleges of Education. The total sample used for the states was 931 and that of the Federal was 985 respondents. Overall sample size used was 1916 respondents (subject). This number was deemed appropriate as Usuala (2007), affirms that using a sample size that is too large is a waste of resources. However, he maintains that where the subjects under study are homogeneous, a small sample is sufficient. Therefore, this number was sufficient for generalization. Table 3.2 shows distribution of sampled lecturers from both State and Federal Colleges of Education.

Table 3: State in the Geo-political Zone and the Number of Colleges of Education with Sampled Lecturers

S/N	States	Category of COE	No. of COE	Sampled Lecturers
1	Jigawa	State	1	133
		Federal	-	-
2	Kaduna	State	1	133
		Federal	1	197
3	Kano	State	1	133
		Federal	2	394
4	Katsina	State	1	133
		Federal	1	197
5	Kebbi	State	1	133
		Federal	-	-
6	Sokoto	State	1	133
		Federal	-	-
7	Zamfara	State	1	133
		Federal	1	197
	Total		12	1916

3.5 Instrumentation

In order for a research to obtain the needed information for the purpose of verifying hypotheses and answering research questions, tools or instrument(s) must be employed (Kajang, David & Jatau, 2004). This is why the present study adopted a structured questionnaire as the instrument used for collecting pertinent data for the study. As the current study is an opinion seeking, questionnaire was found to be relevant for the study because it is said to be the simplest and in many ways, the best procedure of obtaining and measuring views and opinions. The questionnaire was self designed in line with the objectives of the study.

The questionnaire titled “Application of Elements of Knowledge Management to Evaluation of Students’ Performance in Colleges of Education in North-West Geopolitical Zone in Nigeria” was made of five sections. Section one dealt with bio-data

while the remaining four sections portrayed the various issues presented using the four basic elements of knowledge management. Forty eight items were raised in the four sections where section B is having ten items, section C fifteen items, section D thirteen items and section E ten items statements respectively. The questionnaire was designed in a five Likert scale using the fixed response or closed ended questions where the respondents were asked to indicate their level of opinions on each item using Strongly Agree (SA), Agree (A), Undecided (UD), Disagree and Strongly Disagree (SA).

The likert's scaling technique assigned a scale value to each of the five-responses as follows.

Strongly Agree	(SA) = 5
Agreed	(A) = 4
Undecided	(UD) = 3
Disagree	(D) = 2
Strongly Disagree	(SD) = 1

This was found to be relevant to the present study because the nature of the instrument was designed in such a way that it will not over burden the respondents in seeking their opinions on the issues raised. Added to that, closed ended questionnaire is used to verify or confirm issues which demand simple and specific answers.

The respondents Deans, HOD's and Lecturers responded to items related to the following headings:

- Opinions of Deans, HOD's and Lecturers on the application of knowledge creation and capture to evaluation of students' performance.
- Opinions of Deans, HOD's and Lecturers on the application of knowledge sharing and enrichment to evaluation of students' performance.
- Opinions of Deans, HOD's and Lecturers on the application of knowledge storage and retrieval to evaluation of students' performance.
- Opinions of Deans, HOD's and Lecturers on the application of knowledge dissemination to evaluation of students' performance.

3.5.1 Validity of Instrument

Validity is the accuracy with which the instrument measures what it is intended for (Kajang, David & Jatau, 2004). Olaofe (2010), also confirms that, it is the ability of the research instrument to measure as adequate as possible the variables purported to be measured. In this regards, the instrument used for the study was validated by the study supervisors, educational statisticians and other experts in the field of education to obtain its face and content validity. This is in line with submission of Rascoe (2003), who maintains that an instrument for intended research is best validated by experts to obtain the face and content validity. The approval by supervisors and experts was seen as confirmation of the validity of the instrument.

3.5.2 Pilot Testing

The essence of pilot testing is to determine the effectiveness of both face and content validity of the instrument as well as its reliability level. It is also conducted in order to ascertain the strengths and weaknesses of the research instrument, determine the problems that may be faced during the conduct of the study and provide possible solutions. Pilot tests was conducted with a small sample size of similar but not the same as respondents used in the study proper, Olaofe (2010). In such regard, FCE(T) Bichi was used in the pilot study. Reliability coefficient was obtained after administering the instrument to a total of ten (10) respondents; one Dean, two Heads of Department and seven Lecturers.

3.6 Reliability of the Instrument

Reliability refers to the consistency with which a measuring instrument produces the same results from repeated measurement of the same subject (Kajang, David & Jatau,

2004). This implies that reliability of an instrument has to do with the consistency of what is being measured. To ensure the reliability level of the instrument, the Cronbach alpha coefficient and Statistical Package for the Social Science (SPSS) were used and the result was found to be reliable with 0.83 i.e 0.8 level of consistency at a significant level of 0.05. This is because the level of consistency can be approximated to 1. In line with that, Owotunde and Ugoduluwa (2004) opined that, a correlation that is close to one is high, so can be reliable for use in the study proper. This therefore, confirmed the reliability of the instrument used for the current study.

3.7 Administration of the Instrument

The researcher with assistance of two research assistants in each College of Education administered the instrument in the twelve Colleges of Education. This was carried out within thirty days. This is because respondents were given enough time to respond to the instruments and collected back by the researcher and research assistant at an agreed date. This was to enable the respondents do justice to the issues raise in the questionnaire. The retrieved copies of the questionnaire formed the basis for rational decision.

3.8 Methods of Data Analysis

The study made use of descriptive statistics to give the generated description of the data collected. Here frequency counts and percentages were considered appropriate. However, to test the hypotheses, One Way Analysis of Variance (ANOVA) was used. Where significant differences occur in the opinions of respondents, scheffe's multiple comparism multiple test was employed to determine the extent of differences.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF DATA

4.1 Introduction

This study applied the four elements of knowledge management (Knowledge creation and capture; sharing and enrichment; storage and retrieval; and dissemination) to evaluation of students' performance in Colleges of Education in North-West Geopolitical Zone, Nigeria. This chapter therefore, presents, analysis and discussion of data collected for the study. Thus, the opinions of the respondents (Deans, HODs and Lecturers) were analysed by the use of frequency counts and percentages. The hypotheses were tested using One Way Analysis of Variance (ANOVA) and scheffe's multiple comparison test was used where significant differences exist in the opinions of respondents.

4.2 Presentation and Interpretation of Data

The opinions of respondents were presented and interpreted in the areas of application of

- Knowledge creation and capture to evaluation of students' performance;
- Knowledge sharing and enrichment to evaluation of students' performance;
- Knowledge storage and retrieval to evaluation of students' performance; and
- Knowledge dissemination to evaluation of students' performance in Colleges of Education.

4.2.1 Responses of Respondents on the Application of Knowledge Creation and Capture to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.

This section carries the responses of Deans, HOD's and Lecturers on application of knowledge creation and capture to evaluation of students' performance in Colleges of Education. Items 1-10 in the questionnaire were used. For the purpose of this analysis, strongly agree (SA) and agree (A) were merged together and presented as agree. Strongly disagree (SD) and disagree (D) were equally merged together and presented as disagree, while the undecided (U) is left like on its own. Three categories of respondents used were

Deans taking the first raw, H.O.D's taking the second raw and Lecturers taking the last raw of each item statement. Thus, table 4 carries details of the results obtained from the responses

Table 4: Opinions of Respondents on the Application of Knowledge Creation and Capture to Evaluation of Students' Performance in College Of Education in North West Geopolitical Zone, Nigeria.

S/N	Item Statements	Agree		Disagree		Undecided	
		F	%	F	%	F	%
1	Through socialization, discussion emanates and enables academic staff in the College to know how to evaluate students in terms of continuous assessment.	54	98.2	1	1.8	-	-
		138	86.2	17	10.6	5	3.1
		823	82.5	95	9.5	80	8.0
2	Through socialization the discussion that follows enables academic staff in the college to know how to evaluate students in the final examinations.	52	94.6	3	5.5	-	-
		130	81.3	18	11.3	12	7.5
		782	78.4	128	12.8	88	8.8
3	There is an organized social interaction in the college where through discussion the experienced lecturers assist the newly employed lecturers to know how to assess students during teaching practice exercise.	6	10.9	48	87.3	1	1.8
		84	52.6	65	40.7	11	6.9
		595	59.7	282	28.2	121	12.1
4	The newly employed lecturers are asked to follow the experienced lecturers to class and learn how they evaluate the students during lessons.	5	9.1	49	89.1	1	1.8
		68	42.5	87	54.4	5	3.1
		696	69.8	192	19.2	110	11.0
5	The experienced lecturers in the department lead the workshops organized for the inexperienced lecturers where they are taught how to teach in the class.	46	83.0	8	14.5	1	1.8
		103	64.4	46	28.8	11	6.9
		62.3	62.5	238	23.8	137	14.7
6	The inexperienced lecturers are given the answer scripts to work and to be moderated by the experienced lecturers through which knowledge is created and captured.	5	9.1	48	87.3	2	3.6
		54	33.8	93	58.2	13	8.1
		663	66.4	180	18.0	155	15.5
7	Through simulation knowledge is created and captured in evaluating students in my college.	6	10.9	49	89.1	-	-
		84	52.5	62	38.7	14	8.8
		693	69.4	174	17.4	131	13.1
8	Through observation of students' scores, in terms of final assessment, knowledge is created and captured.	6	10.9	48	87.2	1	7.8
		78	48.8	76	47.6	6	3.8
		714	71.4	141	14.1	143	14.3
9	Through the practice of conference marking to assess students' performance knowledge is created and captured in my college.	6	11.0	34	61.8	15	27.3
		80	50.0	41	25.7	39	24.4
		787	78.9	118	11.8	93	9.3
10	Through result presentation at the Academic Board, the observation and discussion make the best assessment of students' performance.	16	29.1	31	56.4	8	14.5
		103	64.4	39	24.4	18	11.3
		840	84.2	84	8.4	74	7.4

It is clearly shown from table 4 above that there is consensus of opinions among all categories of respondents (Deans, HODs and Lecturers) in Colleges of Education that through socialization, discussion emanates and enables academic staff know how to evaluate students in terms of continuous assessment. This is based on the responses of 98.2 percent of Deans, 86.2 percent of HODs and 82.5 percent of Lecturers who responded in agreement with item 1. With this revelation, one expects remarkable performance of academic staff in relation to coming up with various strategic ways of creating and capturing students continuous assessment results.

Item 2 from the questionnaire revealed a general agreement in the opinions of all categories of respondents with 94.6 percent of Deans, 81.3 percent of HODs and 78.4 percent of Lecturers. Who agreed that through socialization, the discussion that follows enables academic staff know how to evaluate students in final examination. With this submission, issues related to wrong scoring and grading is hoped to be minimized by academic staff. Also, issues of missing scripts or unmarked scripts, especially in education and GSE that have large population of students coupled with newly employed or inexperienced Lecturers is also hoped to be addressed in this regard. In response to item 3 of the instrument a large proportion of the respondents being 52.6 percent HODs 59.7 percent Lecturers are in agreement that there is an organized social interaction where through discussion, the experienced Lecturers assist the newly employed lecturers to know how to assess students during teaching practice exercise. While opinions of Deans representing 87.3 percent disagreed to the item statement. It could be seen from the above that, if Deans who are members of the management denied the existence of organizing such social interaction among experienced and inexperienced academic staff then, it

becomes a challenge in them since through such interactions knowledge is gained and captured and ones knowledge is enriched for better assessment of students in teaching practice exercise.

From responses of 89.1 percent of Deans and 54.4 percent of HODs who responded in disagreement with item 4 that newly employed Lecturers are not asked to follow the experienced lecturers to class and learn how they evaluate students during lessons while the lecturers representing 69.8 percent agreed to the statement. This could be because some newly employed Lecturers are well experienced in their former places of work (in the case of transfer) while some experienced lecturers followed the newly employed ones on personal/voluntary basis not on official assignment. As the saying goes, 'experience is the best teacher'. Therefore, experienced Lecturers should serve as mentors to the inexperienced ones for better evaluation of students performance.

All categories of respondents agreed with item 5 that experienced lecturers in the department lead the workshops organized for in experienced lecturers where they are taught how to teach effectively in the class. However, the opinions of Deans representing 83.0 percent, HODs representing 64.4 percent and Lecturers representing 62.5 percent imply that creation and capture of knowledge in colleges of education could also be done through workshops with experienced lecturers as resource persons.

Views of Deans and HOD's are in disagreement with 87.3 percent and 58.2 percent respectively to item 6 that the in experienced Lecturers are given the answer scripts to work and be moderated by the experienced lecturers through which knowledge is created and captures. Lecturers representing 66.4 percent agreed to the said item. By implication, some experienced lecturers are not doing their jobs as required, this could be

due to laxity or non chalet attitude from their sides. It is only when the newly employed lecturers are mentored in a proper way that they will carryout the task of handling answer script and made appropriate scoring and grading of students performance by that, knowledge is said to be created and captured.

Opinions of deans with 89.1 percent to item 7 are in disagreement with the statement that through simulation knowledge is created and capture in evaluating students' performance in colleges, while both HODs representing 52.5 percent and Lecturers representing 69.4percent agreed in consensus with the item. This implies that simulation should be given emphasis by Dean so that knowledge could be created and captured and be applied in evaluating students' performance. However, a large proportion of Deans representing 87.2 percent disagree to item 8 that through observation of students' scores, in terms of final assessment, knowledge is created and captured. On the contrary, fair proportion of HODs being represented by 48.8 percent and an overwhelming proportion of lecturers being represented by 71.4 percent agreed to the said item. This is likely because HODs and Lecturers deal directly with students' scores at most times, so they are in a better position to ascertain whether knowledge is created and captured through such means. In response to item 9 of the instrument, opinions of Deans representing 61.8 percent disagreed while HODs and Lecturers represented by 50.0 and 78.9 percent respectively are in consensus of agreement that through the practice of conference marking to assess students' performance knowledge is created and captured. This could be because the Deans hardly participate in marking especially large population due to their engagement in office. The result implies that, through such

conference marking the in experienced lecturers learn the created knowledge and captured it in their brains.

Divergence of opinions exist between the respondents in relation to item 10 where a fair proportion of Deans disagreed with 56.4 percent on the contrary, HODs representing 64.4 percent and Lecturers representing 84.2 agreed that through result presentation at the Academic Board, the observation and discussions raised make the best assessment of students' result in Colleges of Education. This could be because HODs being members of the Academic Board and deal directly with Lecturers and issues of examination in their departments, they may both have similar perception from the outcome of such meeting

It could be seen from the above interpretations of items 1-10 of the instrument that to a large extent, knowledge creation and capture are greatly and appropriately applied to evaluation of students' performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.

4.2.2 Responses of Respondents on the Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education North West Geo-political Zone, Nigeria.

This section deals with responses of respondents on application of knowledge sharing and enrichment to evaluation of students' performance in colleges of education. Items 1-15 in the questionnaire relate to this area. This is presented in table 5 as show below.

Table 5: Opinions of Respondents on Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.

S/N	Item Statements	Agree		Disagree		Undecided	
		F	%	F	%	F	%
1	Through group discussion, knowledge is shared and enriched towards properly evaluation of students for continuous assessment in my college.	51	92.8	2	3.6	2	3.6
		142	88.7	13	8.1	5	3.1
		809	81.1	103	10.3	86	8.6
2	Through group discussion, knowledge is shared and enriched towards evaluation of students for final examinations in my college.	51	92.8	2	3.6	2	3.6
		141	88.1	12	7.5	7	4.4
		783	78.5	115	11.5	100	10.0
3	Through group discussion, knowledge is shared and enriched in evaluating students during teaching practice in my college.	10	18.2	13	23.6	32	58.2
		101	63.1	29	18.2	30	18.8
		711	70.9	149	14.9	141	141.1
4	Through internal meeting knowledge is shared and enriched in terms of continuous assessment in my college.	8	14.6	46	83.6	1	1.8
		76	47.5	77	48.2	7	4.4
		702	70.3	152	15.2	31	3.1
5	Through internal meeting, knowledge is shared and enriched towards students' evaluation in terms of final assessment of students in my college.	14	25.5	39	70.9	2	3.6
		80	50.1	70	43.8	10	6.3
		719	72.0	156	15.6	123	12.3
6	Through internal meetings knowledge is shared and enriched towards students' evaluation during teaching practice in my college.	14	25.5	40	72.7	1	1.8
		89	55.6	58	36.3	13	8.1
		803	80.5	123	12.3	72	7.2
7	Seminar is a means through which knowledge is shared and enriched towards students' continuous assessment in my college.	51	92.8	2	3.6	2	3.6
		140	87.5	11	6.9	9	5.6
		809	81.1	115	11.5	74	7.4
8	Through seminar, members share knowledge on how to finally evaluate students' performance in the college. evaluate students in my college.	51	92.7	3	5.4	1	1.8
		140	87.6	12	7.5	8	5.0
		803	80.5	110	11.0	85	8.5
9	Through seminar, academic staff learn how to evaluate students' performance during teaching practice in college.	51	92.8	2	3.6	2	3.6
		142	88.8	12	7.5	6	3.8
		782	78.4	116	11.6	100	10.0
10	Through workshops, academic staff share ideas on how to carry out continuous assessment and this enriches their knowledge in my college.	52	94.5	2	3.6	1	1.8
		136	85.1	16	10.0	8	5.0
		744	74.6	137	13.7	117	11.7
11	Through workshops, academic staff share and enrich their knowledge on how to evaluate students final assessment in my college.	51	92.8	1	1.8	3	5.5
		136	85.0	14	8.7	10	6.3
		752	75.4	138	13.8	108	10.8
12	Through workshops, academic staff share and enrich their knowledge on how to evaluate students' performance during teaching practice in my college.	52	94.6	1	1.8	2	3.6
		137	85.6	14	8.8	9	5.6
		736	73.8	165	16.5	97	9.7
13	Through conferences, academic staff share and enrich their knowledge on how to carry out continuous assessment of students in my college.	51	92.7	2	3.6	2	3.6
		138	86.3	14	8.8	8	5.0
		730		173	17.3	95	9.5
14	Through conferences, academic staff share and enrich their knowledge on how to make final evaluation of students' performance in my college.	52	94.5	2	3.6	1	1.8
		137	85.7	14	8.8	9	5.6
		738	74.0	155	15.5	105	10.5
15	Through conferences, academic staff share and enrich their knowledge how to evaluate students during teaching practice in my college.	50	90.9	2	3.6	3	5.5
		136	85.1	17	10.7	7	4.4
		855	85.7	81	8.1	62	6.2

In table 5, it was evident that, there was consensus of opinions among all the three categories of respondents. High level of agreement exists between the Deans with 97.8 percent, HODs with 88.7 percent and Lecturers representing 81.1 percent on item 1 with tact that through group discussion knowledge is shared and enriched towards knowledge evaluation of students for continuous assessment. This result indicated the importance of group discussion as it helps in enriching one another in colleges of education for effective students' evaluation.

Item 2 was also agreed upon by all respondents that through group discussion, knowledge is shared and enriched toward evaluation of students for final examinations. This represents the opinions of Deans as 92.8 percent, HODs 88.1 percent and Lecturers as 78.5 percent respectively. This statement implies that, participation in group discussions has high positive impact on application of knowledge share and enrichment evaluation of students' performance.

The responses of 58.2 percent of Deans have not decided on whether to agree or not to item 13 that through group discussions knowledge is shared and enriched in evaluating students during teaching practice exercise. However, HODs being represented by 63.1 percent and lecturers being represented by 70.9 percent wholesomely agreed to the statement. This implies that group discussion improves the performance of teachers especially as it relates to evaluating students' performance during teaching practice exercise.

A significant proportion of Deans, representing 83.6 percent and HODs representing 48.2 percent disagreed with item 4 of the instrument which states that through internal meeting knowledge is shared and enriched in terms of continuous assessment in Colleges of Education. While only 47.5 percent of Lecturers agreed to that. This can be interpreted to mean that at internal meeting being conducted by Deans and HODs, issues of exams were not seriously raised especially as it relates to how to update and enrich their knowledge on the conduct of continuous assessment.

From item 5 only the Deans representing 70.9 disagreed that through internal meeting knowledge is shared and enriched towards students' evaluation in terms of final assessment of student in the college. On the contrary, HODs representing 50.1 and Lecturers representing 72.0 are in agreement to the given item. This means that knowledge is shared and enriched at internal meeting. This could be because both HODs and Lecturers are always having contact with student's complain over exams issues. Such issues when raised in the internal meeting could enrich the lecturers in the college.

Similarly, 72.7 percent of Deans are in disagreement to item 6 while HODs and Lecturers representing 55.6 and 80.5 percent respectively, agreed that through internal meetings knowledge is shared and enriched towards students evaluation during teaching practice exercise. This is an indication that HODs and Lecturers benefit greatly during internal meetings especially as it relates to issues of evaluating students during teaching practice in colleges of education

In item 7 of the instrument, all categories of respondents agreed in consensus with the statement that seminar is a means of community of practice through which knowledge is shared and enriched towards students' continuous assessment in colleges. These

opinions are represented by 92.8 percent of Deans, 87.5 percent of HODs and 80.5 percent of Lecturers. This reveals that seminars are organized such that through community of practice knowledge is shared among academic staff for adequate enrichment and better evaluation of students in continuous assessment in colleges of education

In the same vein, Deans representing 92.7 percent, HODs representing 87.6 percent and Lecturer representing 80.5 percent revealed consensus of agreement among them in response to item 8 that through seminar members share knowledge on how to finally evaluate students' performance in the college. The opinions of respondents in this regard implies that in organized seminars, issues are raised and digested among members on final examination results of students. This makes it possible for knowledge to be shared especially among experienced and inexperienced academic staff in colleges of education.

A high proportion of respondents being 92.8 percent of Deans, 88.8 percent of HODs and 78.4 percent of Lecturers were of the opinion that through seminar academic staff learn how to evaluate students' performance during teaching practice. These opinions are revealed in item 9. It is very impressive that experienced academic staff are willing to share their knowledge on teaching practice supervision to improve others on how to better assess students as they engage actively in the practical aspect of teacher education programme.

There is consensus of opinions in agreement to item 10 that through workshops, academic staff share ideas on how to carryout continuous assessment and this enriches their knowledge in colleges of education. This is evident in responses of Deans

representing 94.5 percent, HODs 85.1 percent and Lecturers representing 74.6 percent respectively. This result means that, workshops as avenue for community of practice provides for observations and comments on cases related to continuous assessment of students. By so doing, knowledge is shared and enriched among academic staff.

Views of respondents to item 11 indicated consensus in their opinions that through workshops, academic staff share and enrich their knowledge on how to evaluate students' final assessment in colleges of education. These opinions are represented by 92.8 percent of Deans, 85.0 percent of HODs and 75.4 percent of Lecturers. This implies that academic staff share views and raised issues in workshops on final examination matters and proper ways of assessing and handling such results are said by most experienced lecturers for better enrichment.

Item 12 also revealed a remarkable agreement in consensus among all categories of respondents that through workshops, academic staff share and enrich their knowledge on how to evaluate students' performance during teaching practice exercise. The responses of 94.6 percent of Deans, 85.6 percent of HODs and 73.2 percent of Lecturers are evidences to that effect. Academic staff share knowledge in workshop especially those related to micro-teaching practicum where staff are given orientation on how to assess students in the exercise and that helps in evaluating students at teaching practice exercises.

There is consensus of opinions on item 13 of the instrument. Where all the respondents agreed that through conferences as community of practice, academic staff share and enrich their knowledge on how to carryout continuous assessment of students in colleges of educations. 92.7 percent of Deans, 86.3 percent of HODs and 73.2 percent

of Lecturers agreed that some papers presented at conferences discussed issues related to continuous assessment of students which further enriches the knowledge of academic staff.

An overwhelming proportion from all categories of respondents agreed in consensus to item 14 that, through conferences, academic staff share and enrich their knowledge on how to make final evaluation of students' performance. The opinions of 94.5 percent of Deans, 85.7 percent of HODs and 74.0percent of Lecturers however, revealed that. This means that some papers presented at the conference deal with how final evaluation of students' performance should be handled this further enriches the lecturers in treating students' final exams with ease. This is done specifically during interactive sessions as a better way of sharing and enrichment.

Opinions of Deans with 90.9 percent, HODs 85.1 percent and Lecturers 85.7 percent are in agreement with item 15 of the instrument. It is therefore, accepted by all categories that through conferences, academic staff share and enrich their knowledge on how to evaluate students during teaching practice in colleges of education. This could be seen inviting experienced hands to serve as resource persons or mentors in the conference and to design assessment forms that can be used in assessing the students during the conduct of teaching practice.

Interpretation of items 1-15 of section C of the instrument are in consensus that application and organizations of seminars, workshops and conferences in colleges of education help in sharing and enriching knowledge of academic staff.

4.2.5 Responses of Respondents on the Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

The issue discussed in this study bordered on the Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education. However, items 1-13 were used to analyze this issue and result obtained are presented in table 6 as shown below.

Table 6: Opinions of Respondents on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

S/N	Item Statement	Agree		Disagree		Undecided	
		F	%	F	%	F	%
1	Through file system storage, the students' continuous assessment could be stored and retrieved in my college.	53	96.4	1	1.8	1	1.8
		139	86.9	12	7.5	9	5.6
		856	85.8	81	8.1	61	6.1
2	Through file system storage, the students' final assessment could be stored and retrieved in my college.	51	92.7	2	3.6	2	3.6
		140	87.5	9	5.7	11	6.9
		839	84.1	73	7.3	86	8.6
3	Through file system storage, the students' assessment during teaching practice could be stored and retrieved in my college.	52	94.6	2	3.6	1	1.8
		139	86.9	11	6.9	10	6.3
		714	71.6	147	14.7	137	13.7
4	Through data bases, students' continuous assessment could be stored and retrieved in my college.	50	91.0	5	9.1	-	-
		138	86.3	11	6.9	11	6.9
		717	71.9	153	15.3	128	12.8
5	Through data bases, students' final assessment could be stored and retrieved in my college.	51	92.7	3	5.5	1	1.8
		136	85.0	16	10.0	8	5.0
		665	66.7	174	17.4	159	15.9
6	Through data bases, students' evaluation during teaching practice could be stored and retrieved in my college.	5	9.1	26	47.2	24	43.6
		69	43.2	39	24.4	52	32.5
		472	47.3	47.3	32.1	205	20.5
7	Through e-mail, the continuous assessment of students could be stored and retrieved in my college.	6	11.0	25	45.4	24	43.6
		40	25.0	56	35.0	64	40.0
		474	47.5	323	32.3	201	24.1
8	Through e-mail the final assessment of students could be stored and retrieved in my college.	6	10.9	26	47.2	23	41.8
		36	22.5	59	36.9	65	40.6
		462	46.3	332	33.2	204	20.4
9	Through e-mail, the evaluation of students during teaching practice could be stored and retrieved in my college.	6	11.0	41	74.5	8	14.5
		47	29.4	84	52.5	29	18.1
		576	57.7	288	28.8	134	13.4
10	Through websites, students' final performance could be stored and retrieved in my college.	9	16.4	39	70.9	7	12.7
		53	33.1	82	51.3	25	15.6
		551	55.2	300	30.0	147	14.7
11	Through websites, students' evaluation for teaching practice could be stored and retrieved in my college.	7	12.8	41	74.5	7	12.7
		49	30.7	87	54.4	24	15.0
		517	51.8	261	26.1	220	22.0
12	Through digital dashboards, students' final performance could be stored and retrieved in my college.	39	65.5	6	10.9	13	23.6
		77	48.2	37	23.1	46	28.8
		500	50.1	272	27.2	226	22.6
13	Through digital dashboards, students' performance during teaching practice could be stored and retrieved in my college.	34	61.8	7	12.7	14	25.5
		75	46.9	39	24.4	46	28.8
		672	67.4	192	19.2	134	13.4

In table 6, it was evident that there were no differences in the opinions of the three categories of respondents. A remarkable percentage of 96.4 for the Deans, 86.9 percent of HODs and 85.8 percent of Lecturers agreed to item 1 of the instrument. This result

implies that through file system storage, the students' continuous assessment could be stored and retrieved in colleges of education. This seems to be the most oldest and common means of storing students' performance.

Respondents views to item 2 of the instrument also revealed consensus in agreement by all categories of respondents. This is represented by 92.7 percent of Deans, 87.5 percent of HODs and 84.1 percent of Lecturers who agreed that through file system storage the students final assessment could be stored and retrieved in colleges of education. This is so because it is said to be the most popular and familiar to most academic staff.

Responses of respondents to item 3 showed that, a large proportion of both respondents being 94.6 percent Deans, 86.9 percent HODs and 71.6 percent of lecturers agreed that, through file system storage, students assessment during teaching practice could be stored and retrieved in colleges of education. This is true because, Lecturers due for teaching practice supervision are issued with files containing students' information, cooperating school (s) as well as assessment forms A&B which is to be filled in duplicate, one for the students and the other forwarded and stored in appropriate place for record purpose and on ward retrieval for future use.

Majority of the respondents being Deans representing 91.0 percent, HODs represented by 86.3 percent and Lecturers representing 71.9 percent agreed with item 4 of the instrument which says that through data bases, students' continuous assessment could be stored in colleges of education. Similarly, all categories of respondent agreed in consensus with item 5 that through data bases, students' final assessment could be stored and retrieval in colleges of education. This is represented by opinions of Deans with 92.7

percents, HODs 85.0 percent and Lecturers 66.7 percent. This could be because the global world is full of technology that almost all lecturers are computer literate. Ability to store and retrieve students performance may has not been a difficult task to both categories.

There is diversion in opinions to item 6 where Deans representing 47.2 percent are in disagreement while both HODs represented by 43.2 percent and Lecturers represented by 47.3 agreed that through data bases students evaluation during teaching practice could be stored and retrieved in colleges of education. This implies that HOD's and Lecturers are more familiar with data bases in storing and retrieving student's performance during teaching practice.

In item 7, significant difference exists in the opinions of all categories of respondents. Deans being represented by 45.4 percent disagreed, HOD's being represented by 40.0 percent undecided and Lecturers being represented by 47.5 percent agreed that through e-mail, the continuous assessment of student could be stored and retrieved in colleges of education it could be said that Deans and HOD's being members of the management are in better position to know that. So, their views are rather accepted in this submission

In the same vein, a fair proportion of Deans representing 47.2 percent disagreed while HODs representing 40.6 percent undecided to item 8 that, through e-mail the final assessment of students, could be stored and retrieved on the contrary, only Lecturers representing 46.3 percent agreed to the item. This could mean that Lecturers are working on assumption since not all lecturers may be allowed to have access to final assessment of student only the examination officer under the directives of their HODs can ascertain that.

Opinions of Deans and HODs representing 74.5 percent and 52.5 percents are in disagreement to item 9 that through e-mail, the evaluation of students during teaching practice could be stored and retrieved in Colleges of Education. Lecturers on the other hand agreed by 57.7 percent this revealed that no such result could be store or retrieved through e-mail. This could be because of shortage of some resources coupled with fear of alteration, or other forms of practices.

There is consensus of opinions among Deans and HODs to item 10. They however, disagreed that through websites, students' performance could be stored and retrieved. These opinions are represented by 70.9 percents and 51.3 percent respectively but responses of 55.2 percent of Lecturers agreed to the said item. The result implies that students' performance in colleges of education are never stored and retrieved through websites. Lecturers only assume but may not be sure of what is practiced in the colleges of education especially as it relates to issues of students' performance.

In item 11 of the instrument both Deans representing 74.5 and HODs represent 54.4 percent disagreed that through websites, students' evaluation for teaching practice could be stored and retrieved in colleges of education. But surprisingly, 51.8 of Lecturers agreed to the item. This result is not far from the fact that Deans and HODs are more experienced, more exposed and more current with what is happening to students' performance in teaching practice. So, storage and retrieval of such results is better explained by them. An extremely high proportion of Deans represented by 65.5 percent, fair proportion of HODs representing 48.2 percent and average proportion of Lecturer's representing 51.8 percent supported that through digital dash boards student's final performance could be stored and retrieved. Item 12 of the instrument highlighted that.

Perhaps, this is because technology has reached each angle of social lives and education is not an exception.

In response to item 13, majority of respondents being 61.8 percent Deans, 46.9 percent HODs and 67.4 percent Lecturers agreed that through digital dashboards, students' performance during teaching practice could be stored and retrieved in Colleges of Education. This is a remarkable development in education.

The analysis for items 1-13 revealed that, the responses for agree were larger than responses for disagree. The result was therefore, interpreted to mean that, knowledge storage and retrieval was applied to evaluation of students' performance in Colleges of Education. It is worth noting that, to some extent, the Deans and HODs had the highest percentage of disagreement in some of the items.

4.2.4 Responses of Respondents on the Application of Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education in North-west Geopolitical Zone, Nigeria.

Another issues raised in this study was the Application of Knowledge Dissemination to Evaluation of Students' Performance. Items 1-10 in the instrument were used to analyze this issue and the results obtained are presented in table 7.

Table 7: Opinions of Respondents on Application of Knowledge Dissemination To Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria

S/N	Item Statements	Agree		Disagree		Undecided	
		F	%	F	%	F	%
1	Through publications, students' final performances are disseminated in my college.	51	92.7	3	5.5	1	1.8
		115	71.9	25	15.7	20	12.5
		654	65.5	199	19.9	145	14.5
2	Through publications, students' evaluation during teaching practice is disseminated in my college.	52	94.5	3	5.5	-	-
		119	74.4	27	16.9	14	8.8
		735	73.6	154	15.4	109	10.9
3	Through presentation of results, students' evaluation is disseminated in my college.	52	94.5	2	3.6	1	1.8
		128	80.0	20	12.5	12	7.5
		699	70.0	164	16.4	135	13.5
4	Through presentation, students' performance during teaching practice is disseminated in my college.	49	89.1	5	9.1	1	1.8
		117	73.8	23	14.4	19	11.9
		542	54.3	286	28.6	170	17.0
5	Through websites, students' final performances are disseminated in my college.	4	7.3	50	90.9	1	1.8
		48	30.0	94	58.8	18	11.3
		498	49.9	316	31.6	184	18.4
6	Through websites, students' performance during teaching practice is disseminated in my college.	4	7.3	50	90.9	1	1.8
		51	31.9	90	56.3	19	11.9
		488	48.9	307	30.7	203	20.3
7	Through libraries, students' performance in the final examinations are disseminated in my college.	8	14.6	47	85.4	-	-
		47	29.4	97	60.7	16	10.0
		448	44.9	324	32.4	226	26.6
8	Through libraries, students' performances in teaching practice are disseminated in my college.	45	81.9	9	16.3	1	1.8
		96	60.0	46	28.8	18	11.3
		716	71.8	180	18.0	102	10.2
9	Through notice boards, students' final performances are disseminated in my college.	48	87.3	6	10.9	1	1.8
		124	77.5	20	12.5	16	10.0
		708	71.0	176	17.6	114	11.4
10	Through notice boards, students' performances during teaching practices are disseminated in my college.	45	81.9	8	14.6	2	3.6
		112	70.0	30	18.8	18	11.3
		624	62.6	164	16.4	210	21.0

As indicated in table 7, the highest response to item 1 being 92.7 percent Deans, followed by 71.9 percent HODS and 65.5 percent Lecturers agreed with the statement that through publications, students' final performance are disseminated in Colleges of Education. It is not surprising that all categories were in consensus without any divergent view to this item.

Responses of respondents to item 2 indicated that 94.5 percent Deans, 74.4 percent HODs and 73.6 percent Lecturers claimed that through publications, students evaluation during teaching practice is disseminated in Colleges of Education this result indicated highest percentage in the responses of Deans who are members of decision making committee in the college. This could be true in all regards.

Consensus of opinions exists among all categories of respondents. This is presented in item 3 with highest percentage in responses of Deans representing 94.5 percent, HODs 80.0 percent and Lecturers 70.0 percent. Who agreed that through presentation of results, students evaluation is disseminated in Colleges of Education this can be seen in presentation of results in Academic Boards where both Deans and HODs are members of such committee.

In a similar vein, Deans who are represented by 89.1 percent, followed by HODs represented by 73.8 percent and Lecturers having 54.3 percent supported in agreement to item 4 that through presentation students performance during teaching practice is disseminated in Colleges of Education.

A good proportion of respondents being 90.9 percent of Deans and 58.8 percent HODs disagreed to item 5 that through websites, students' final performance are disseminated in Colleges of Education, while a fair proportion of Lecturers being 49.9 percent agreed. This indicated diversion in the respondent's opinions. The result revealed that, students' final performance is never disseminated through websites. In response to item 6 of the instrument, majority of the respondents being 90.9 percent Deans, 56.3 percent HODs are in consensus where they disagree that though websites, students' performance during teaching practice is disseminated in Colleges of Education. On the

contrary, Lecturers being 48.9 percent have divergent views. To this end, students' performance during teaching practice is not seen to be disseminated through websites.

A reasonable proportion of two categories of respondents disagreed in consensus to item 7 that through libraries, students' performances in the final examinations are disseminated in Colleges of Education. Their opinions are represented by 85.4 percent of Deans and 60.7 percent of HODs. Lecturers on the other hand, are represented by 44.9 percent who agreed with the item. This shows that dissemination of students' performance through libraries is not a reality in Colleges of Education.

It is not surprising to say that, a remarkable proportion of all categories of respondents agreed in consensus that through libraries, students performance in teaching practice are disseminated in Colleges of Education. This, however, is presented in item 8 and represented by 81.9 percents of Deans, 60.0 percent HODs and 71.8 percent Lecturers. This result revealed that students' performances during teaching practice are disseminated through libraries.

Responses of the respondents to item 9 clearly spelt out general agreement by majority of respondents' opinions. The opinions of Deans representing 87.3 percent, HODs 77.5 percent and Lecturers 71.0 percent supported that through notice boards, students' final performances are disseminated in Colleges of Education. This implies that various Departments in Colleges of Education are seen with mighty notice boards displaying students' relevant information and disseminating students' final results for their consumptions

Responses of Deans representing 81.9 percent, HODs' 70.0 percent, Lecturers 62.6 percent are in agreement to item 10 that through notice board students' performance

during teaching practice are disseminated in Colleges of Education. This revealed a consensus of opinions among all categories of respondents. Their responses proved that student's results during teaching practice are disseminated for student consumption on the notice boards and easy access.

The analysis for items 1-10 could be interpreted to mean that dissemination of students performance are done though publication, presentations, and notice boards by majority of the respondents. However, Deans and HODs do not agree with dissemination by websites and libraries.

4.3 Hypotheses Testing

The four null hypotheses formulated for this study was aimed at examining the Application of Elements of Knowledge Management to Evaluation of Students' Performances in Colleges of Education. For each of the hypotheses some item statements were designed and treated in relation to the hypotheses they represented. In addition, each of these hypotheses was set to determine whether significant difference in opinions of the three categories of respondents used in the study exist In order to arrive at reliable conclusions, each of these hypotheses was subjected to One Way Analysis of Variance (ANOVA), a statistical tool often used to find out whether there is difference in opinions of two or more sets of respondents were significant enough to retain or reject a given hypothesis. Hypotheses that were rejected, the Scheffer's multiple comparison test was used to further examine the extent to which the groups' means differ in their responses. The level of significance set for this study was 0.05. The results obtained from these computations are presented in the table below.

4.3.1: Hypothesis 1: There is no significant difference in the opinions of Deans, Heads of Department and Lecturers on Application of Knowledge Creation and capture to Evaluation of Students' Performance in Colleges of Education in North West

In this section, items 1-10 of the instrument were used in testing the hypothesis.

The scores of the three categories of respondents were subjected to One Way Analysis of Variance (ANOVA) and result presented in table 8.

Table 8: Summary of One Way Analysis of Variance on Application of Knowledge Creation and Capture to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical in Zone, Nigeria.

Sources of Variation	Df	Sum of Squares	of Mean Square	f. Cal.	Prob.	f-Crit.
Between groups	2	5030.651	2515.326			
Within groups	1210	50188.553	341.478	60.642	.000	3.07
Total	1212	55219.204				

It is clear from above computation in table 8 that f-calculated value of 60.642 at 2 df being 1210 and at 0.05 level of significance is greater than the f-critical value of 3.07, in which the probability value P(0.000) was also less than 0.05. This implies that significant differences exist in the opinions of Deans, HODs and Lecturers regarding application of knowledge creation and capture on evaluation of students' performance. Null hypothesis 1 is therefore, rejected. To determine the extent to which mean score of the three categories of respondents differ, Scheffe's multiple comparison test was used and the result presented in table 9.

Table 9: Summary of Scheffe’s Multiple Comparison Test on Application of Knowledge Creation and Capture to Evaluation of Students’ Performance in Colleges of Education in North West Geopolitical in Zone, Nigeria.

Categories of Respondents	N	Mean Score
Dean	55	29.9455
HODs	160	34.8063
Lecturer	998	38.3557

Table 9 highlighted the mean score of HODs representing 34.8063 and Lecturers representing 38.3557 was found to be closer. As such, the difference between them was not significant. However, the mean score of Deans representing 29.9455 was found to be lesser than the mean score of HODs and Lecturers. By implication, the Deans were the group that differed significantly in their opinions in relation to application of knowledge creation and capture to evaluation of students’ performance.

4.3.2 Hypothesis 2: There is no significant difference in the opinions of deans, heads of Department and Lecturers on Application of Knowledge sharing and Enrichment to Evaluation of Students’ Performance.

Items 1-15 in the instrument were used in testing this hypothesis. Mean scores of the three categories of the respondents were subjected to One Way Analysis of variance (ANOVA) and result is seen in table 10.

Table 10: Summary of One way Analysis of Variance on Application of Knowledge Sharing and Enrichment to Evaluation of Students’ Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

Sources of Variation	Df	Sum of Squares	Mean Square	f. Cal.	Prob.	f-Crit.
Between groups	2	2595.243	1297.622			
Within groups	1210	106273.954	87.830	14.744	.000	3.07
Total	1213	108869.197				

Table 10 indicated that f-calculated value being 14.744 was greater than f-critical value being 3.07 at 2 df being 1210. The probability value of P(0.000) is less than 0.05 level of significance. This result suggests that, there is significant difference in the

opinions of both the Deans, HODs and Lecturers on application of knowledge sharing and enrichment to evaluation of students' performance. Null hypothesis in this regard was rejected. To determine the extent to which the opinions of the three respondents differed in relation to hypothesis two, Scheffe's multiple comparison test was used and result is shown in table 11.

Table 11: Summary of Scheffe's Multiple Comparison Test on Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

Categories of Respondents	N	Mean Score
Dean	55	79.7455
HODs	160	83.1188
Lecturer	998	85.7255

From the above table 11 significant difference do not exist in the opinions of HODs and Lecturers which are seen to be closer (83.1188 and 85.7255). Dean's mean score of 79.7455 was found to be lesser to that of HODs and Lecturers. This implies that, the Deans differed significantly in their opinions regarding application of knowledge sharing and enrichment to evaluation of students' performance.

4.3.3: Hypothesis 3: There is no significant difference in the opinions of deans, HODs and Lecturers on Application of Knowledge storage and Retrieval to Evaluation of Students' Performance.

This hypothesis relates to items 1-13 of the questionnaire. The scores of the three categories of the respondents were subjected to One Way Analysis of variance (ANOVA) and result presented in table 12.

Table 12: Summary of One Way Analysis of Variance on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

Sources of Variation	Df	Sum of Square	Mean Square	f. Cal.	Prob.	f-Crit.
Between groups	2	1389.936	694.968			
Within groups	1210	77567.431	64.105	10.841	.000	3.07
Total	1212	78957.367				

As indicated by table 12, the f-calculated value being 10.841 at 2 df being 1210 and at 0.05 level of significance was found to be greater than the f-critical value of 3.07. This implies that, the probability value P(0.000) was also found to be lesser than 0.05 level of significance. By this computation, there were significant difference in the opinions of all categories of respondents used in the study regarding application of knowledge storing and retrieved to evaluation of students' performance. Thus, the hypothesis was rejected. To highlight the extent to which means scores of the three categories differed, the schefee's multiple comparison test was used and presented in table 13.

Table 13: Summary of Scheffe's Multiple Comparison Test on Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

Categories of Respondents	N	Mean Score
Dean	55	79.8182
HODs	160	81.4250
Lecturer	998	83.7084

Table 13 revealed that, the mean score of Deans (79.8182) and HODs (81.4250) were found to be closer. This means that, the difference between the two groups was not significant. However, the means score of Lecturers (83.7084) was found to be higher than those of Deans and HODs. This implies that, the Lecturers differed significantly in their opinions on application of knowledge storage and retrievals to evaluation of students' performance.

4.3.4 Hypothesis 4: There is no significant difference in the opinions of Deans, HODs and Lecturers on Application of Knowledge Dissemination to Evaluation of Students' Performance.

For hypothesis 4, items 1-10 of the instrument were used in testing the hypothesis. The responses of the three categories of the respondents were subjected to One Way Analysis of Variance (ANOVA) and result obtained is presented in table 14.

Table 14: Summary of One Way Analysis of Variance on Application of Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education in North West Geopolitical Zone, Nigeria.

Sources of Variation	Df	Sum of Squares	Mean Square	f. Cal.	Prob.	f.Crit.
Between groups	2	204.285	1021.133			
Within groups	1200	45947.065	37.973	2.690	.068	3.07
Total	1212	46151.331				

In table 14, the computation revealed that, the f. critical value (30.7) was found to be greater than f. calculated value (2.690) at 2 df 1210 and at 0.05 level of significance. It was, therefore, concluded that, there were no significant difference in the opinions of all the three categories of respondents on application of knowledge dissemination to evaluation of students' performance. The hypothesis was therefore retained.

A summary of all the tested hypotheses and results obtained is presented in table 15 below.

Table 15: Summary of Hypotheses Testing

S/N	Statement of Hypotheses	Statistical Method used	Level of Significance	Result	Conclusion
1	There is no significant difference in the opinions of deans, Heads of Department and Lecturers on Application of Knowledge Creation and capture to Evaluation of Students' Performance in Colleges of Education.	ANOVA and Sheffe's Multiple Test	0.05	F.calculated greater than F-critical	Hypothesis was Rejected
2	There is no significant difference in the opinions of deans, Heads of Department and Lecturers on Application of Knowledge sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education	ANOVA and Sheffe's Multiple Test	0.05	F.calculated greater than F.critical	Hypothesis was Rejected
3	There is no significant difference in the opinions of deans, Heads of Department and Lecturers on Application of Knowledge storage and Retrieval to Evaluation of Students' Performance in Colleges of Education.	ANOVA and Sheffe's Multiple Test	0.05	F.calculated greater than F-critical	Hypothesis was Rejected
4	There is no significant difference in the opinions of deans, Heads of Department and Lecturers on Application of Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education	ANOVA	0.05	f-calculated lesser than F-critical	Hypothesis was Retained

Source: Bara'u (2015)

Table 15 revealed that hypotheses 1-3 were rejected, because the f-calculated values 2df at 0.05 level of significance were found to be greater than f-critical value. In hypothesis four, f-calculated value was found to be less than the f-critical value at 2df at 0.05 level of significance, hence, the null hypothesis was retained.

4.4 Discussion of the Findings

The study centered on application of elements of Knowledge Management to evaluation of students' performance in colleges of education in North-west Geopolitical zone, Nigeria. The first element identified and discussed was application of knowledge creation and capture to evaluation of students' performance. In view of the competitive nature of market, the need arise for organizations to create new knowledge, generate ideas and concepts that are novel and capture them. Therefore, to sustain performance, lecturers understanding of knowledge creation and transfer is vital as, the success of organization is determined by lecturers' intellectual capital. In such regards, creation and capture of knowledge buried in individual brains is vital. As such, the finding implies that, knowledge is created, captured and applied to evaluation of students' performance through social interaction, mentoring, conference marking and presentation at Academic Board. This was found to be high on Lecturers, average on HODs and low on Deans. The study observed that, creation and capture of knowledge buried in experienced Lecturers played vital role in improving newly employed or inexperienced Lecturers on how to assess, score, record and store students' performance.

This is confirmed by Uriarte (2008), that the primary aim of Knowledge Management is to capture the knowledge that is produced during interaction. That is why the current study adopted social interaction, group discussion, presentations at Academic Boards and Conference marking to be among interactive strategies of creating and capturing knowledge of the experienced Lecturers to the inexperienced Lecturers.

The strength of this finding lies in the fact that knowledge creation and capture help in organizations' and individuals' improvement. This was confirmed by Hannah et

al (2009) that, organizations only survive and improve themselves with their previous knowledge. They need to learn more through knowledge creation and capture to strive hard to overcome the chaotic and changing condition.

The weakness of this finding revealed absence of mentoring by experienced staff which is due to non-encouragement, motivation and willingness to interact and poor level of creativity and innovation. The ground broken relates to conclusion that life long learning is very important especially those gotten through interactions. That Lecturers are provided with better way of handling students' performance in continuous assessment, teaching practice supervision and final examinations void of alteration, missing script, unmarked script, wrong scoring, wrong grading and so on.

The null hypothesis formulated and tested in regards to application of knowledge Creation and Capture to evaluation of students' performance was rejected. This was indicated in table 8 where F-calculated of 60.642 was found to be greater than f-critical of 3.07 at 2 df 1210 and at 0.05 level of significance. This implies that significant difference exist among all categories of respondents. Scheffe's multiple comparison tests was further used to determine the extent to which these categories differenced. The result presented in table 9 revealed that the mean score of Deans 29.9455 was found to differ significantly from mean score of HODs 34.8063 and Lecturers 38.3557 in their views on application of knowledge creation and capture to evaluation of students' performance in colleges of education in north-west geopolitical zone, Nigeria. Item 1 – 10 has provided on answer to research 1 asks which states that what is the level of Opinions of Deans, HODs and Lecturers on applicability of Knowledge Creation and Capture to Evaluation of Students' Performance in Colleges of Education?

Another issue raised in this study was on application of knowledge Sharing and Enrichment to evaluation of Students' Performance. This element is said to be the most crucial among the four elements. Knowledge Management entails Sharing and increase in Colleges of Education as it will improve evaluation process and enhance lecturers and students performance. Through discussion and debate on the knowledge, the group of employees makes comments and inputs which bring about new insight that could add relevance and enrich the original knowledge that was shared. This was found to be relevant to the words of Estabrook et al (2006); Lesser et al (2004) and Lomas (1997) that when staff of an organization present a seminar, workshop and attend meetings outside, they share and enrich their knowledge and this goes along way in making them to perform better in their duties. It was found that through seminars group discussions, workshops; conferences Lecturers share and enrich their knowledge on how to better assess their students' performance in the continuous assessment final examinations and teaching practice. However, not much is shared among staff during internal meetings. This finding reveals that the progress of any organization and its members depends to a large extent on the willingness of the knowledgeable, skillful, competent and experienced Lecturers to share their vast experiences to the inexperienced Lecturers.

The strength of this finding is the fact that, sharing knowledge buried in individual brains help in no small measure. This is because, those on sabbatical leave, retirement, transfer, withdrawal from service, sickness and even sudden death of experienced lecturers will not in any way affect the progress of an organization, thereby discouraging brain drain. Newly employed or inexperienced Lecturers are seen being

mentored by the experienced ones for enrichment. This is seen through workshops, conferences, seminars and sometimes internal meeting.

Among the weaknesses of this finding is the revelation that most of these experienced Lecturers were seen not to be willing to share their wealth of wisdom with the inexperienced one. This is because no motivation was given to them. Absence of such motivation as issuance of award letter, commendation letter, gifts of relevant standard may make them feel not recognized. Willingness of sharing in evaluating students' performance with help the inexperienced Lecturers acquire the technical know how or the proper way of assessing, scoring, grading, recording, storing and retrieving students' performance.

The null hypothesis formulated to test the opinions of respondents on Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance was also rejected. Reason being that F-calculated value of 14.744 was found to be greater than F-critical value of 3.07 at 2 df 1210 and at 0.05 level of significance. This reveals that significant difference exist in both categories of respondents. To determine the extent to which the respondents differed in their opinions. Scheffe's multiple comparison was employed and shown in table 11. It was found from the table that, there were no significant difference in the opinions of HODs and Lecturers with mean score of 83.1188 and 85.7255. Their mean scores are closer compared to mean scores of Deans at 79.7455. This result means than significant difference exist in the opinions of Deans on Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance in Colleges of Education. Item 11 – 25 has provided an answer to research question 2 what asks that; what is the Opinions of Deans, HODs and Lecturers on

application of knowledge sharing and enrichment to evaluation students' performance in Colleges of Education in North-West geo-political zone in Nigeria?

The next issue is on Application of Knowledge Storage and retrieval to Evaluation of Students' Performance. This being the third element of knowledge management is equally important. This presupposes that, once information is created and populated, the next step will be to provide various means for users to have access to the information retrieval pass ways. These pass ways are said to be designed with user community in mind and made as user friendly as possible, Newman (2004). This can be done by storing information in a centralized location with sufficient provision for easy retrieval. The finding came up with the four main options observed by Gochea (2004) in relation to storing information that are captured and shared for easy retrieval, these are, file system storage, data bases, e-mail, websites, and dashboards. All were found to be applied to evaluation of students in continuous assessment, final examination and teaching practice. In addition, e-mail and databases were not adequately applied in accessing students' performance in Colleges of Education.

This finding indicates low applicability of information storage and retrieval to students' performance in Colleges of Education. Student's information that relates to his performance is a vital record that needs to be stored or kept in an appropriate manner. Storing students' performance through file system storage is not just enough because there might be the risk of alteration, a result theft, impersonation, destruction by Rats or Tamytes, fire out break and so on. In the event there multiple system storage, such risk could be minimize. As the world today is a technology driven, provision of facilities related to the current demand of technology such as data bases, e-mail and websites is a

necessity in Colleges of Education such that students' performance in continuous assessment, teaching practice and final examination could be stored in a very safe channel and retrieved whenever the need for that arise.

It is a weakness of this finding that such facilities as data bases e-mail and website were not available installed in Colleges of Education which could allow for centralization of results and proper documentation. Another weakness is, most Lecturers in Colleges of Education are not seen welcoming computer literacy for them to utilize those facilities in storing and retrieving students' results in continuous assessment and final examination.

The null hypothesis formulated to test the application Of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education was rejected. The rejection was due to the fact that, f-calculated value being 10.841 was found to be greater than the f-critical value being 3.07 at 2 df 1210 and at 0.05 level of significance as shown in Table 4.8. The finding implies that, there was significant difference in the opinions of Deans, HOD's and Lecturers. The result presented in table 13 for scheffe's multiple comparison test was used to examine the extent to which the respondents' opinions differed. This indicated a significant difference of 79.8182 for Deans, 81.4250 for HODs and 83.7084 for Lecturers, implying that, the Deans differed significantly in their opinions on application of knowledge storage and retrieval to evaluation of students' performance in Colleges of Education in the study area. Items 1-13 provided an answer to research question 3 which asks. What is the Opinions of Deans, HODs and Lecturers on the Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North-West geo-political Zone in Nigeria?

Application of knowledge dissemination to evaluation of students' performance was the last issue discussed in the study. This maintains that, unless knowledge is effectively disseminated, the development impact of knowledge remain unlimited. Knowledge dissemination is effective only when individualized tacit knowledge is highly transformed into explicit knowledge that can be widely shared (Farid et al, 2008). The findings in relation to this issue revealed that Colleges of Education disseminate students' performance through publications, presentations and notice boards. The use of websites and libraries were, however, not applied in this regard.

The finding agrees with Grossman (2006) that publications, presentations, websites and libraries are the most obvious forms of dissemination of knowledge. Similarly, participation in external networks, establishing partnerships with other organizations and creation of knowledge centres are also effective means to disseminate knowledge (Gupta, 2000) but were not found applicable in Colleges of Education.

The findings under this segment revealed that after storing students' data (performance), there is need to share out or pass the information to the appropriate destination. Free access to students result is a necessity to this element especially to the management, other departments, lecturers and even students.

The strength of the finding revealed the application of technology even in the dissemination of the students' performances. This revelation frawns at the idea of using publication and presentation of result as the only means of disseminating students' results, rather, use of e-mail, websites and libraries could also be applied as is done in JAMB, WAEC, NECO and other examination bodies. The risk involve in road accidents, for those going to see or collect results, tempering with students results, malpractice, and other inconveniences could be minimized.

The weakness of this findings revealed absence of facilities to allow for creating central website, central examination e-mail address and absence of technical know how on the part of most Lecturers. Most lecturers and students do not have e-mail addresses therefore, not familiar with the technicalities. These call for computer literacy for both students and Lecturers.

The null hypothesis formulated and tested was found to be retained. This is so, because the f-calculated value of 2.690 at 2df 1210 at 0.05 level of significance was found to be less than f-critical value of 3.07. By implication, no significant difference exist in the opinions of Deans, HODs and Lecturers on application For Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education in the study area. Items 1-10 provided an answer the research question 4 which asks, what is the Opinions of Deans, HODs and Lecturers on application of knowledge dissemination to evaluate students' performance in Colleges of Education in North-West Geo-political zone in Nigeria?

The overall ground broken relates to conclusion that elements of knowledge management are found to be applicable to evaluation of students' performance. Empirically, this revealed that, curriculum planning and development are not on the knowledge production and consumption alone, but more significantly, the extension of that knowledge by way of creation, capture, sharing, enrichment, storage, retrieval and dissemination. The study has contributed to knowledge in the area of curriculum evaluation. This is because, elements of knowledge management are found to apply and enhance both in the formative and summative evaluation of students' performance.

4.5 Summary of Major Findings

The findings of this work were summarized as follows:

- i. Knowledge creation and capture was applied to evaluation of students' performance (continuous assessment, final examination and teaching practice exercise). This was found through socialization, organization of social interaction, use of more experienced lecturers as mentors, through simulation, conference marking and presentation at Academic Board. On the other hand, majority of the respondents do not go by saying newly employed or inexperienced lecturers are asked to accompany experienced ones to classroom. And that answer scripts given to inexperienced lecturers to mark and forwarded to experienced lecturers for moderation was not applied. Observation of students' scores in terms of final assessment was also not applied in colleges of education. (ANOVA = 60.642, $df=2$, $P=0.000$ ($P<0.05$) critical value at $df=2$ and at $0.05=3.07$).
- ii. To a large extent, knowledge sharing and enrichment was also found to be applied in evaluating students' performance. This could be seen through community of practice such as group discussion, seminars, workshop and conferences. All categories of respondents agreed at a high level that knowledge shared in the above places help improve them in assessing students better in continuous assessment, final examination and teaching practice exercise. However, there was high level of disagreement on internal meeting. The Deans do not agree with the use of internal meeting as the right avenue for sharing and enriching knowledge. (ANOVA = 14.774, $df=2$, $P=0.000$ ($P<0.05$) critical value at $df=2$ and at $0.05=3.07$).

- iii. To a large extent, file system storage and digital dashboard were found to be largely applied to students' continuous assessment, final examination and at teaching practice exercise especially as it relates to knowledge storage and retrieval. On the contrary, students' performances were not stored and retrieved through data bases, e-mails and websites. This was found high in the Deans and HODs but low in Lecturers. (ANOVA = 10.841, df=2, P=0.000 (P<0.05) critical value at df=2 and at 0.05=3.07)
- iv. Through publications, presentations and Notice Boards students' performance are disseminated. This was found to be high in all categories respondents. It was found at a high level of disagreement by Deans and HODs that, students' results in continuous assessment, final examinations and teaching practice were not disseminated through websites and libraries. (ANOVA = 2.960, df=2, P=0.000 (P<0.05) critical value at df=2 and at 0.05=3.07)

A tabular representation of the summary of knowledge management elements' application to evaluation of students' performance. This is shown in table 16.

Table 16: A Summary of Knowledge Management Elements' Application to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone, Nigeria.

Elements of Knowledge Management	Degree of Applicability	Areas of Applicability
Knowledge creation and capture	High applicability	Continuous Assessment final examination
Knowledge sharing and enrichment	High applicability	Final Exams, continuous assessment
Knowledge storage and retrieval	Low applicability	Teaching practice, Continuous assessment
Knowledge dissemination	Low applicability	Teaching Practice

Source: Researcher

Table 16 presented a summary of applicability of knowledge management elements to evaluation of students' performance. It could be seen from the table that, the first two elements i.e knowledge creation and capture, and sharing and enrichment appeared to have high degree of applicability. This is seen through continuous assessment and final examination. On the other hand, the last two elements were seen to be at the lower level of applicability especially in teaching practice and continuous assessment.

Below is a sample package developed by the study and presented in table 17.
Table 17: A Mapping of Knowledge Creation and Capture Programme to Evaluation of Students' Performance for experienced and Inexperienced Teachers

Variables	Area of Assessment	Period
Continuous Assessment 1. Assignment 2. Attendance 3. Test 4. Promotion Exam	- Logicality of sanitation - Relevant points - Added supporting details - Readability	First week of resumption
Final Examination	- Same as above - Relevant content coverage of semester load	Second week of resumption
Teaching Practice	- Presentation for lesson planning - Subject matter mastery - Class control - Confidence - Use of language - Attainment of objective - Teacher's personality	Third week of resumption

The above table17 is the recommend programme that is scheduled for three weeks. This means, in the first three weeks of resumption, both experienced and inexperienced Lecturers be seen engaging themselves into the programme while some experienced ones will be selected to serve as resource persons. This is aimed at making the inexperienced lecturers know how to evaluate students' performance in class during lesson, in continuous assessment, final examination and teaching practice exercise and to make the experienced Lecturers be up-dated with current changes.

The study had contributed to knowledge by way of designing a model named: **Bara'u's Elements of Knowledge Management Mapping Model**

Fig 1: A Mapping of Elements of Knowledge Management to Evaluation of Students' Performance

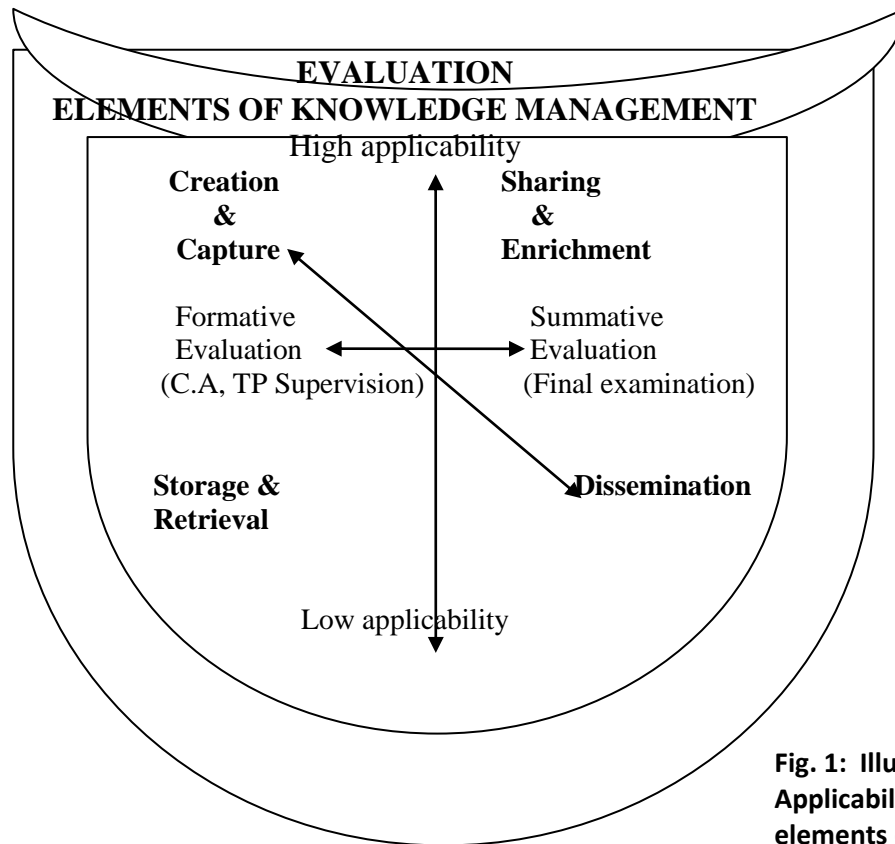


Fig. 1: Illustration of the Applicability of the four (4) elements of knowledge management to evaluations of

Source: Researcher (2015)

Figure 1 explained clearly the possibility of mapping the four elements to evaluation of students' performance. It also revealed strong connectivity, link or interrelatedness of the elements with formative and summative evaluation. High level of application on creation and sharing was shown at the top. While, low applicability was revealed on storage and dissemination at the bottom.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, summary of the study is presented. This includes conclusions arrived at and recommendations offered from the findings of the study. Suggestions for further studies were also presented along side limitations faced by the current research.

5.2 Summary

This study was out to examine the application of elements of knowledge management to evaluation of students' performance in Colleges of Education in North-West Geopolitical Zone in Nigeria. The study has four objectives, four research questions and four hypotheses stated in a null form. All the objectives, research questions and the null hypotheses were centered on areas related to the four elements of knowledge management. These are application of Knowledge Creation and capture to evaluation of students' performance; application of knowledge Sharing and Enrichment to evaluation of students' performance; application of knowledge Storage and Retrieval to evaluation of students' performance; and application of knowledge Dissemination to evaluation of students' performance in colleges of education. Only Colleges of Education (States and Federal) in North-West Geopolitical Zone were covered by the study. The study also focused on academic staff (Dean, HODs and Lecturers) as respondents used in the study.

Related literatures were reviewed and that gave the study a focus in the following areas: concepts of knowledge; Management; Knowledge Management; and Evaluation. Application of Knowledge Creation and Capture in an Organization; Application of Knowledge Sharing and Enrichment in an organization; application of information

storage and retrieval in an organization; application of knowledge dissemination in an organization and empirical studies

The study adopted the use of descriptive survey research design because it is an opinion seeking research as well as the population of the study is large and scattered. All Colleges of Education in North-West Geopolitical zone were used. This gave the total of seven states and five Federal Colleges of Education. A self structured questionnaire was used as the instrument for collecting pertinent data 1916 copies of the instrument were administered to the three categories of respondents (Deans, HODs and Lecturers) selected by cluster in twelve Colleges of Education used for the study and 1213 copies of the questionnaires were correctly completed and returned. In order to give a general description of the data, frequency distributions and simple percentages were used to compiled and analyzed the data collected. To test the null hypotheses, One Way Analysis of Variance (ANOVA) and Scheffe's Multiple Comparison Test were used as statistical methods for retaining or rejecting the hypotheses set for the study.

The study came up with some major findings. These findings revealed that through socialization, organization of social interaction, use of more experienced lectures as mentors, simulation, conference marking and presentation at academic board, knowledge creation and captured is applied to evaluation of students' performance. Though the findings revealed non application of observation of students score and the newly employed lecturers were not asked to for follow the experienced lecturers to class. To a large extent, group discussions, seminars, workshops and conference are channels through which academic staff share and enrich their knowledge on how to assess students' in continuous assessment, final examinations and teaching practice exercise.

It was also found that through file system storage, and digital dash boards, knowledge is stored and retrieved adequately while there was record of inadequacy of use in data base, e-mail and websites. However, publications presentations and notice boards were found to be applied in disseminating students' performance in colleges of education.

The tested hypotheses revealed that three hypotheses (1-3) were rejected because, f-calculated value were found to be greater than f-critical at 2df at 0.05 level of significance. On the other hand, hypothesis four was retained because the f. calculated was found to be less than f. critical at 2df at 0.05 level of significance.

5.3 Conclusion

Based on the findings of this study, the following conclusions were made:

5.3.1 Application of Knowledge Creation and Capture to Evaluation of Students' Performance

- i. Under this heading, it was concluded that to a large extent knowledge creation and capture is applied in evaluating students' performance in Colleges of Education.
- ii. That academic staff in Colleges of Education create and capture knowledge on how to evaluate their students in continuous assessment, final examinations and teaching practice. This is seen through socialization, organization of social interaction, simulation, presentation at Academic Board, conference marking and use of experienced staff as mentors.
- iii. That most Colleges of Education did not adopt the application of observation of students' scores in final assessment, answer script marked by inexperienced lecturers were not moderated by experienced hands and newly employed lecturers were not asked to follow the experienced lecturers to the class to learn how to evaluate students during lessons.

5.3.2 Application of Knowledge Sharing and Enrichment to Evaluation of Students' Performance

- i. It was concluded that Colleges of Education embraced the use of group discussions, seminars, workshops and conferences in sharing and enriching their knowledge on how to evaluate students' continuous assessment, final examination and teaching practice supervision.
- ii. Although internal meetings were held, but is not seen to help in sharing and enriching ones knowledge especially in evaluation of students in continuous assessment.

5.3.3 Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance

- i. Although, students' continuous assessment, final examination and teaching practice results were seen to be stored and retrieved through file system storage, digital dash boards, and data bases, but, data bases is not seen to be applied in storing teaching practice results.
- ii. Also concluded that, no College of Education is using e-mail and website in storage and retrieval of students' performance as far as the study is concern.

5.3.4 Application of Knowledge Dissemination to Evaluation of Students' Performance

1. It was concluded that Colleges of Education disseminated students' performance through publications, presentation of results, notice boards and to a limited level, libraries. This is because, students' performance in final examinations and teaching practice are not seen to be disseminated through libraries.
2. Concluded that none of the students' performance is disseminated through websites in Colleges of Education.

5.4 Recommendations

Based on the findings and conclusions drawn from this study, the following recommendations are made:

- i. The study recommends that the College Management through its various Schools and Departments organize a programme that will allow the newly employed and inexperienced lecturers to create and capture knowledge for better evaluation of students' performance. The experienced lecturers are to be the resource persons for the programme. This will help put them in focus and make them capture how best they are to mark, score and grade their students in a better and appropriate manner. When scripts are given to newly employed or inexperienced lecturers to mark, such script should be moderated by experienced lecturers. The inexperienced lecturer who marked the script is to be called upon after the moderation to see what was observed and what needs to be done for better improvement in evaluating students' performance. Students' scores in final assessment be observed by the heads of department, departmental Examination Officer and all academic staff in the department. This will give an opportunity for creation of new ideas where observations raised by the experienced lecturers will be assimilated and captured by inexperienced lecturers and that will help in no small measure in the evaluation of students' performance in Colleges of Education;
- ii. Both the Federal and State Ministries of Education endeavour to provide more opportunities for academic staff with such training programmes in order to improve on evaluating students' performance. School management through Deans of schools and Heads of department be encouraged during their internal meetings to include

issues related to students' performance specifically continuous assessment issues which are not centrally controlled and left to be handled any how by individual lecturers. Sharing ideas in such regard will help greatly in enriching all staff on how to handle students' performance. Those who are used as mentors or resource persons in the training programmes be richly encouraged in such ways as giving letters of commendations, awards, gifts etc, so that they will willingly cultivate the habit of sharing their knowledge and experiences with the inexperienced ones for better improvement in students' evaluation or else they will die off with their vast knowledge and experiences;

- iii. Federal and State Colleges of Education be encouraged to provide of facilities and equipments such that will lead to access to databases, e-mail and websites in storing and retrieving students' performance records. This is seen to be important considering the fact that, the world is a technologically driven world. Computer literacy be enforced among lecturers and other stakeholders in Colleges of Education. This will enhance efficient and effective storage and retrieval of students' performance; and
- iv. Federal and State Colleges of Education should emphasize on the use of websites and libraries in disseminating students' performance. Admission requirement, continuous assessment scores in test and assignment, final examination, and teaching practice supervision result be centralized so that any department can click and find the needed information. Central e-mail examination board be provided. Students be made to open e-mail addresses. Websites be created and made available

to both lecturers and students for effective dissemination of students' performance in Colleges of Education. By so doing, teaching as a profession and curriculum evaluation will add more weight, and issues related to malpractice as forging results, issuance of fake certificates or alteration of results may be minimized or eliminated.

5.5 Suggestions for Further Studies

As the findings indicated positive application of all the four elements of knowledge Management to evaluation of students' performances in Colleges of Education, it further suggested that:

1. Similar research be conducted to cover Colleges of Education in other geo-political zones to see the possibility of further generalization since they are also curriculum driven.
2. Similar study be carried out in universities to see whether it can follow suit in seeing its applicability. This is because, universities curriculum is also subject to and also calls for evaluations of students' performance.
3. Another research is suggested to be conducted on knowledge management tools as it relates to education (curriculum). Various studies revealed applicability of knowledge of management to business organizations. The need to apply it to educational institutions is necessary.

5.6 Limitations of the Study

No research of this nature can be conducted and completed without difficulties. This research equally faced the following challenges:

1. **Lack of co-operation**

In the cause of administering the instrument, some respondents could not co-operate in responding or returning the copies of instrument as agreed. Logistics problems due to inaccessibility of some areas become limitations to the study.

2. **Time Factor**

The time given coupled with exhaustion from the field, frustrations at the researcher's place of work, strike, challenges of election, etc, formed some of the limitations of this research.

3. **Frustration**

This is where pressures are mounted on the researcher from place of work, conduct of Lectures, CA, invigilation and recording students' result.

It is hoped that, prospective researchers should study the preceding limitations and guard against them in their works.

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APPENDIX 1

QUESTIONNAIRE ON THE APPLICATION OF ELEMENTS OF KNOWLEDGE MANAGEMENT TO EVALUATION OF STUDENTS' PERFORMANCE IN COLLEGES OF EDUCATION IN NORTH-WEST GEO-POLITICAL ZONE IN NIGERIA.

Department of Educational
Foundations and Curriculum,
Ahmadu Bello University,
Zaria.

Dear Respondents,

I am a PhD student in Curriculum and Instruction and currently undergoing research on “**Application of Elements of Knowledge Management to Evaluation of Students' Performance in Colleges of Education in North-West Geo-political Zone in Nigeria**”. As a major statement, you are requested to respond to the questionnaire. Information you provided will help the findings of this research in no small measure.

While assuring you of the confidentiality of information you provide, it is my hope that you will respond to the questionnaire with all sincerity.

Yours sincerely,

Rabi Bara'u

Please tick (√) in the appropriate box that relates to you.

Section A: Biodata

1. **Status**
 - (a) Dean ()
 - (b) Head of Department ()
 - (c) Lecturer ()
2. **Gender**
 - (a) Male ()
 - (b) Female ()
3. **Years in the service**
 - (a) 1 – 5 ()
 - (b) 6 – 10 ()
 - (c) 11 – 15 ()
 - (d) 16 – 20 ()
 - (e) 21 and above ()
4. **Ownership of College of Education**
 - (a) State ()
 - (b) Federal ()
5. **State where College is Located**
 - (a) Kaduna ()
 - (b) Katsina ()
 - (c) Sokoto ()
 - (d) Zamfara ()
 - (e) Kebbi ()
 - (f) Kano ()
 - (g) Jigawa ()

Section B: Application of Knowledge Creation and Capture to Evaluation of Students' Performance in Colleges of Education in North-West Geopolitical Zone in Nigeria

S/N	Item Statements	SA	A V	U	D	SD
1	Through socialization, discussion emanates and enables academic staff in the College to know how to evaluate students in terms of continuous assessment.					
2	Through socialization the discussion that follows enables academic staff in the college to know how to evaluate students in the final examinations.					
3	There is an organized social interaction in the college where through discussion the experienced lecturers assist the newly employed lecturers to know how to assess students during teaching practice exercise.					
4	The newly employed lecturers are asked to follow the experienced lecturers to class and learn how they evaluate the students during lessons.					
5	The experienced lecturers in the department lead the workshops organized for the inexperienced lecturers where they are taught how to teach in the class.					
6	The inexperienced lecturers are given the answer scripts to work and to be moderated by the experienced lectures through which knowledge is created and captured.					
7	Through simulation knowledge is created and captured in evaluating students in my college.					
8	Through observation of students' scores, in terms of final assessment, knowledge is created and captured.					
9	Through the practice of conference marking to asses students' performance knowledge is created and captured in my college.					
10	Through result presentation at the Academic Board, the observation and discussion make the best assessment of students' performance.					

Key:

- SA - Strongly Agree
- A - Agree
- U - Undecided
- D - Disagree
- SD - Strongly Disagree

**Section C: Application of Knowledge Sharing and Enrichment to
Evaluation of Students' Performance in Colleges of Education in
North-West Geo-political Zone in Nigeria**

S/N	Item Statements	SA	A	U	D	SD
1	Through group discussion, knowledge is shared and enriched towards proper evaluation of students for continuous assessment in my college.					
2	Through group discussion, knowledge is shared and enriched towards evaluation of students for final examinations in my college.					
3	Through group discussion, knowledge is shared and enriched in evaluating students during teaching practice in my college.					
4	Through internal meeting knowledge is shared and enriched in terms of continuous assessment in my college.					
5	Through internal meeting, knowledge is shared and enriched towards students' evaluation in terms of final assessment of students in my college.					
6	Through internal meetings knowledge is shared and enriched towards students' evaluation during teaching practice in my college.					
7	Seminar is a means through which knowledge is shared and enriched towards students' continuous assessment in my college.					
8	Through seminar, members share knowledge on how to finally evaluate students' performance in my college.					
9	Through seminar, academic staff learns how to evaluate students' performance during teaching practice in my college.					
10	Through workshops, academic staff share ideas on how to carry out continuous assessment and this enriches their knowledge in my college.					
11	Through workshops, academic staff share and enrich their knowledge on how to evaluate students' final assessment in my college.					
12	Through workshops, academic staff share and enrich their knowledge on how to evaluate students' performance during teaching practice in my college.					
13	Through conferences, academic staff share and enrich their knowledge on how to carry out continuous assessment of students in my college.					
14	Through conferences, academic staff share and enrich their knowledge on how to make final evaluation of students' performance in my college.					
15	Through conferences, academic staff share and enrich their knowledge on how to evaluate students during teaching practice in my college.					

Section D: Application of Knowledge Storage and Retrieval to Evaluation of Students' Performance in Colleges of Education in North West Geo-political Zone in Nigeria

B/N	Item Statements	SA	A	U	D	SD
1	Through file system storage, the students' continuous assessment could be stored and retrieved in my college.					
2	Through file system storage, the students' final assessment could be stored and retrieved in my college.					
3	Through file system storage, the students' assessment during teaching practice could be stored and retrieved in my college.					
4	Through data bases, students' continuous assessment could be stored and retrieved in my college.					
5	Through data bases, students' final assessment could be stored and retrieved in my college.					
6	Through data bases, students' evaluation during teaching practice could be stored and retrieved in my college.			-		
7	Through e-mail, the continuous assessment of students could be stored and retrieved in my college.					
8	Through e-mail the final assessment of students could be stored and retrieved in my college.					
9	Through e-mail, the evaluation of students during teaching practice could be stored and retrieved in my college.					
10	Through websites, students' final performance could be stored and retrieved in my college.					
11	Through websites, students' evaluation for teaching practice could be stored and retrieved in my college.					
12	Through digital dashboards, students' final performance could be stored and retrieved in my college.					
13	Through digital dashboards, students' performance during teaching practice could be stored and retrieved in my college.					

Section E: Application of Knowledge Dissemination to Evaluation of Students' Performance in Colleges of Education in North West Geo-political Zone in Nigeria

S/N	Item Statements	SA	A	U	D	SD
1	Through publications, students' final performances are disseminated in my college.					
2	Through publications, students' evaluation during teaching practice is disseminated in my college.					
3	Through presentation of results, students' evaluation is disseminated in my college.					
4	Through presentation, students' performance during teaching practice is disseminated in my college.					
5	Through websites, students' final performances are disseminated in my college.					
6	Through websites, students' performance during teaching practice is disseminated in my college.					
7	Through libraries, students' performance in the final examinations are disseminated in my college.					
8	Through libraries, students' performances in teaching practice are disseminated in my college.					
9	Through notice boards, students' final performances are disseminated in my college.					
10	Through notice boards, students' performances during teaching practices are disseminated in my college.					

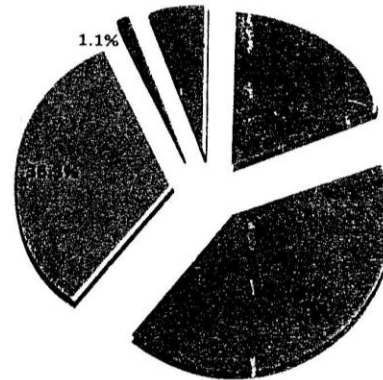
APPENDIX 2



NATIONAL COMMISSION FOR COLLEGES OF EDUCATION

Digest of Statistics on Colleges of
Education and other NCE-Awarding Institutions
in Nigeria

2010/2011, 2011/2012 and 2012/2013



- FEDERAL COLLEGES OF EDUCATION
- STATE COLLEGES OF EDUCATION
- PRIVATE COLLEGES OF EDUCATION
- ARMY COLLEGE OF EDUCATION
- POLYTECHNICS AWARDING NCE CERTIFICATE

VOLUME 11

Statistical Digest on Colleges of Education and Other NCE Awarding Institutions in Nigeria

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This is the Publication of the National Commission for Colleges of Education
Plot 829, Ralph Shodeinde Street, Central Business District
P.M.B. 0394, Garki,
Abuja.

ISSN 118 – 1435

DISTRIBUTION OF STATE AND FEDERAL COLLEGE OF EDUCATION

EDUCATION
ADDRESSES OF APPROVED NCE-AWARDING INSTITUTIONS BY YEAR OF ESTABLISHMENT AS AT DECEMBER, 2013
FEDERAL COLLEGES OF EDUCATION

S/No	Name of College	Address and Location	Year of Establishment
1	FCE Abeokuta	PMB 2096, Abeokuta, Ogun State	1976
2	FCE (T) Akoka	P.O. Box 269, Lagos, Lagos State	1967
3	FCE (T) Asaba	PMB 1044, Asaba, Delta State	1986
4	FCE (T) Bichi	PMB 3473, Bichi, Kano State	1988
5	FCE Eha-Amufu	PMB 2001, Eha-Amufu, Enugu State	1981
6	FCE (T) Gombe	PMB 60, Gombe, Gombe State	1986
7	FCE (T) Gusau	PMB 1088, Gusau, Zamfara State	1986
8	FCE Kano	PMB 3045, Kano, Kano State	1965
9	FCE Katsina	PMB 2041, Katsina, Katsina State	1976
10	FCE Kontagora	PMB 39, Kontagora, Niger State	1986
11	FCE Obudu	PMB 1038, Obudu, Cross River State	1986
12	FCE Okene	PMB 1026, Okene, Kogi State	1974
13	FCE (T) Omoku	PMB 11, Omoku, Rivers State	1986
14	Adeyemi COE Ondo	PMB 520, Ondo, Ondo State	1964
15	FCE (SP) Oyo	PMB 1089, Oyo, Oyo State	1977
16	FCE Pankshin	PMB 27, Pankshin, Plateau State	1974
17	FCE (T) Potiskum	PMB 1013, Potiskum, Yobe State	1986
18	FCE (T) Umunze	PMB 189, Umunze, Anambra State	1986
19	FCE Yola	PMB 2043, Yola, Adamawa State	1974
20	FCE Zaria	PMB 1041, Zaria, Kaduna State	1962
21	Alvan Ikoku FCE Owerri	PMB 1033, Owerri, Imo State	1963

STATE COLLEGES OF EDUCATION

S/No	Name of College	Address and Location	Year of Establishment
1	Akwa Ibom COE, Afaha Nsit	PMB 1019, Afaha Nsit Etinan, Akwa Ibom	1991
2	COE, Agbor	PMB 2090, Agbor, Delta State	1979
3	COE, Akwanga	PMB 05, Akwanga, Nasarawa State	1978
4	COE, Ankpa	PMB 1033, Ankpa, Kogi State	1981
5	Adamu Augie COE, Argungu	PMB 1012, Argungu, Kebbi State	1993

6	COE, Arochukwu	PMB 1000, Arochukwu, Abia State	1993
7	COE, Azare	PMB 44, Azare, Bauchi State	1977
8	Umar IBN Ibrahim Elkanemi COE, Bama	PMB 16, Bama, Borno State	1987
9	Isa Kaita COE, Dutsin Ma	PMB 49, Dutsin-Ma, Katsina State	1991
10	COE, Ekiadolor	PMB1144, Benin, Edo State	1988
11	COE, Gashua	PMB 02, Gashua, Yobe State	1988
12	Kaduna State COE, Gidan Waya	PMB 1024, Gidan Waya, Kaduna State	1978
13	COE, Gindiri	PMB 1000, Gindiri, Plateau State	1980
14	COE, Gumel	PMB 1002, Gumel, Jigawa State	1987
15	COE, Hong	PMB 2237, Hong, Adamawa State	1982
16	COE, Ikere Ekiti	PMB 250, Ikere Ekiti, Ekiti State	1977
17	COE, Ila-Orangun	PMB 207, Ila-Orangun, Osun State	1988
18	COE, Ilesa	PMB 5089, Ilesa, Osun State	1977
19	COE, Ilorin	PMB 1375, Ilorin, Kwara State	1974
20	COE, Zing	PMB 1021, Jalingo, Taraba State	1978
21	COE, Katsina - Ala	PMB 2008, Katsina-Ala, Benue State	1979
22	COE, Kumbotsho	PMB 3218, Kumbotso, Kano State	1981
23	COE, (T) Lafiagi	PMB 01, Lafiagi, Kwara State	1993
24	Kashim Ibrahim COE,	PMB 1469, Maiduguri, Borno State	1978
25	COE, Maru	PMB 1002, Maru, Zamfara State	2001
26	COE, Minna	PMB 39, Minna, Niger State	1978
27	Michael Otedola College of Primary Education, Epe	PMB 1028, Noforija Epe, Lagos State	1995
28	COE, Nsugbe	Pmb 1734, Nsugbe, Anambra State	1981
29	COE, Oju	PMB 2035, Oju Otukpo, Benue State	1992
30	COE, Oro	PMB 309, Oro, Kwara State	1984
31	Adeniran Ogunsanya COE, Oto - Ijanikin	PMB 007, Oto-Ijanikin, Lagos State	1973
32	Delta State College of Physical Education, Mosogar	PMB 4088, Mosogar, Sapele, Delta State	2003
33	Emmanuel Alayande COE, Oyo	PMB 1010, Oyo, Oyo State	1980
34	COE, Port-Harcourt	PMB 5047, Port-Harcourt, Rivers State	1974
35	Shehu Shagari COE, Sokoto	PMB 2029, Sokoto, Sokoto State	1970
36	COE, Waka-Biu	PMB 1502, Waka-Biu, Borno State	1986
37	COE, Warri	PMB 1251, Warri, Delta State	1990
38	FCT COE, Zuba	PMB 61, Garki-Abuja	1998
39	Muh'd Goni College of Legal and Islamic Studies, Maiduguri	PMB 1526, Maiduguri, Borno State	1982

40	Ebonyi State COE (T), Ikwo	PMB 002, Ikwo, Ebonyi State	2001
41	Enugu State COE (T), Enugu	PMB 01793, Abakaliki Rd, Enugu State	2006
42	Tai Solarin College of Education, Ijebu-Omu	Ijebu-Omu, Ogun State	1977
43	Cross River State College of Education, Akamkpa	PMB 1171, Akamkpa, Calabar, (Re-established), C/River State	2008
44	Bayelsa State COE, Okpoma	P.M.B. 74, Yenagoa, Bayelsa State	2010
45	YBUCLGS, Daura	PMB 2201, Daura, Katsina, Katsina State	2004

PRIVATE COLLEGES OF EDUCATION

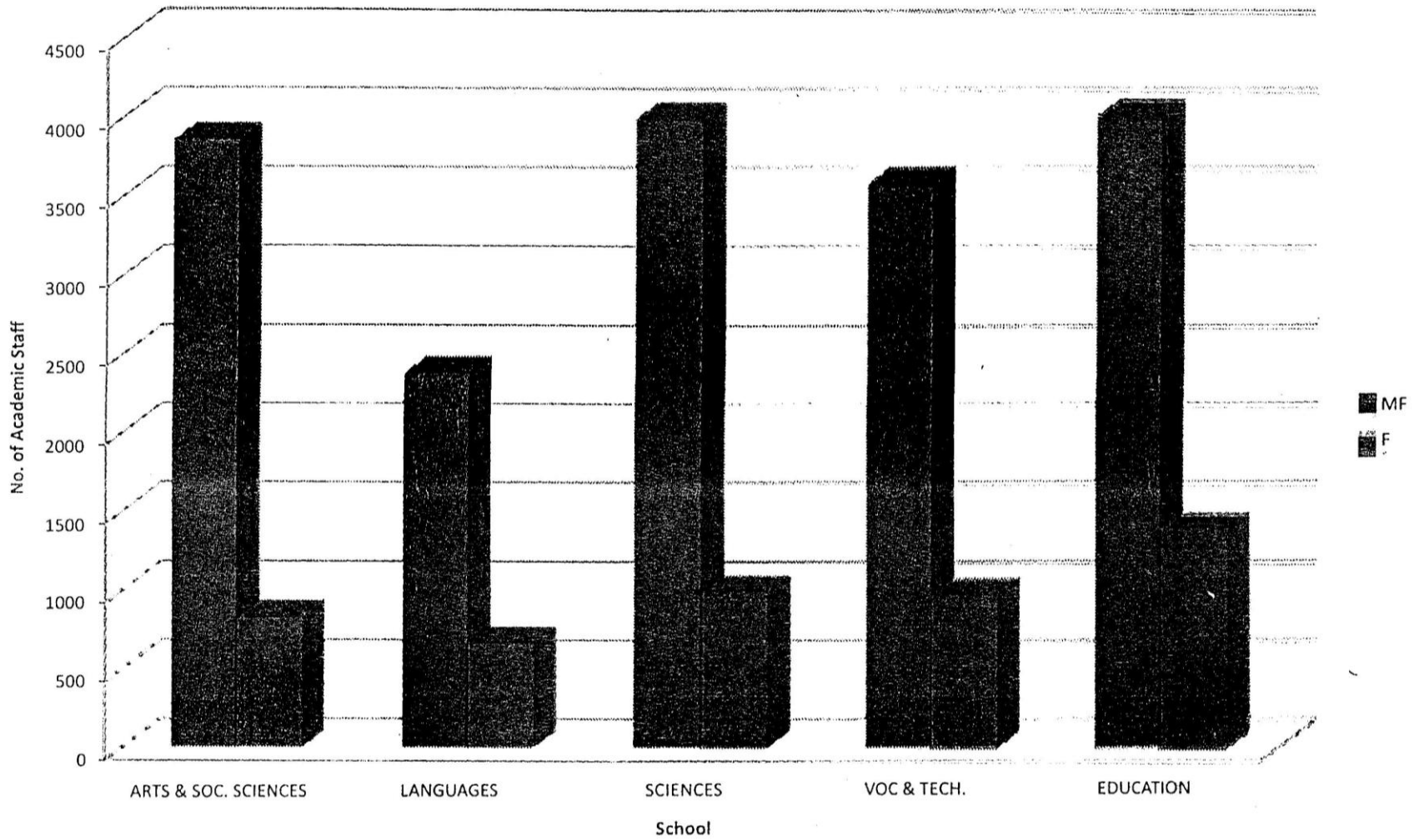
S/NO	Name of College	Address and Location	Year of Establishment
1	Institute of Ecumenical Education (Thinkers Corner), Enugu	P.O. Box 2001, Enugu, Enugu State	2004
2	Jama'atu Nasril Islam COE, Kaduna	P.O. Box 96, Kaduna, Kaduna State	1997
3	OSISA Tech COE, Enugu	PMB 1161, Enugu, Enugu State	2001
4	St. Augustine COE, Akoka, Lagos	PMB 1140, (Project Time), 2 Morofolu Str., Akoka, Lagos.	1975
5	African Thinkers Community of Inquiry COE, Enugu	PMB 15510, Enugu, Enugu State	2004
6	Ansar-Ud-Deen COE, Isolo	6 Karimu Street, Isolo, Lagos, Lagos State	2003
7	Delar COE, Ibadan	PMB 6379, Ibadan, Oyo State	2003
8	Muftau Lanahun COE, Ibadan	PMB 2705, Agodi Gate, Ibadan, Oyo State.	2004
9	Harvard Wilson COE, Aba	P.O. Box 5216, Aba, Abia State	2003
10	City College Of Education, Mararaba	P.O. Box 3094, Garki -Abuja	2008
11	Muhyideen COE, Ilorin	13, Idiorombo Lane, P.O. Box 370, Ilorin, Kwara State	2006
12	College of Education, Ilemona	P. O. Box 433, Osunte Rd, Offa Kwara State	2005
13	Bauchi Institute of Arabic & Islamic Studies, Bauchi	Bakari Duku Pry Sch, Bauchi, Bauchi State. P.O. Box 2031	2006
14	Corner Stone College of Education, Ikeja	Jones Avenue, Ikeja, Lagos State	2006
15	All States College of Education, Ero	Ero, Akure, Ondo State	2008
16	African Church COE, Agege	P.M.B. 21112, Agege, Lagos State.	2005
17	Assanusiya COE, Odeomu	P.M.B. 2002, Odeomu, Osun State.	2007
18	Best Legacy College Of Education, Ogbomosho	Oke - Owode Ikirun Road, Ogbomosho.	2003
19	Yewa Central College of Education, Abeokuta	P.M.B. 2014, Abeokuta, Ogun State	2000
20	Calvin Foundation COE, Makurdi	P.O Box 2744, Makurdi	2008
21	College of Education, Nsukka	P.M.B. 2003, Nsukka, Enugu State	2007
22	UCOE, Aukpa -Adoka	Aukpa - Adoka, Benue State	2010
23	Hill COE, Akwanga	P.O.Box 2399 Gwanje, Akwanga, Nasarawa State	2006
24	COE, Igueben	P.M.B. 003, Igueben, Edo State	2010
25	Kingsley College of Education, Ilorin	No 11 Olorunsogo Ilorin, Kwara State	

DISTRIBUTION OF ACADEMIC STAFF

NATIONAL COMMISSION FOR COLLEGES OF EDUCATION, ABUJA
DISTRIBUTION OF ACADEMIC STAFF BY INSTITUTION, QUALIFICATION AND SEX 2012/2013 SESSION

S/NO	COLLEGE	HND		HND + PGDE		BA/BSC		BA/BSC+P GDE		BA/BSC. ED		B.ED		MA/MSC		MA/MSC ED		MED		PhD		OTHERS		TOTAL		
		MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	
1	FCE ABEOKUTA					25	15			16	8	8	3	80	33	5	1	82	32	33	10	16	5	265	107	
2	FCE(T) AKOKA	4	2	2		13	7			28	7	3	2	59	18	3	1	53	22	17	5	19	6	201	70	
3	FCE(T)ASABA	20	13			62	22	16	6			82	49	53	23	38	16	15	8	17	5			303	146	
4	FCE(T) BICHI	12	1	16	2	43	11	54	15			53	16	39	4	2		33	10	8	1	1		261	60	
5	FCE EHA-AMUFU			11	4	56	27			2		13	5	24	6			46	13	24	4	8	3	184	62	
6	FCE (T) GOMBE	5	3	19	6	80	16			22	6	66	13	39	9	15		34	11	9		1		290	64	
7	FCE (T) GUSAU			15	3	63	12	2				48	12	23	4			21	9	3	1	7	1	182	42	
8	FCE KANO					62	14			55	22	51	30	61	14	73	19	43	17	27	5	17	5	389	126	
9	FCE KATSINA			2		28	10	78	23			37	10	22	8	36	11	26	8	15		10	1	254	71	
10	FCE KONTAGORA	1	1	7	2	18	2	43	8			43	10	6		44	5	48	17	6	1			216	46	
11	FCE OBUDU	6	4	4	1	47	9			47	13	61	21	45	7	16	3	46	12	21	4	20	2	313	76	
12	FCE OKENE			5	2	23	8			71	18	21	9	27	7	73	11	43	10	18	3	2	1	283	69	
13	FCE (T) OMOKU	11	3	1		62	7			20	11	48	18	49	5	12	3	65	6	26	6	8	6	302	65	
14	ADEYEMI COE ONDO	1				16	5			4	1	5	5	187	53			55	14	54	10	11	3	333	91	
15	FCE (SP) OYO	2		6	1	41	10			17	10	22	13	92	26			122	43	43	14			345	117	
16	FCE PANKSHIN	1	1	4	2	72	11			51	11	41	15	64	4	24	9	64	26	17	3	34	6	372	88	
17	FCE (T) POTISKUM	8	4	1		55	6			25	2	48	7	9	4	21	8	12	4	6		50	6	235	41	
18	FCE (T) UMUNZE	5		13	5	7	3	131	70			1	1	17	8	50	34			31	18			255	139	
19	FCE YOLA	1	1	3		28	6			71	19	38	14	45	14	25	5	42	17	11	2	9	5	273	83	
20	FCE ZARIA					198	65	106	39			145	76	122	33	18	9	134	55	66	20			789	297	
21	AI COE OWERRI	5		15	6	157	100			53	30	48	27			234	93	133	79	117	57	1	1	763	393	
22	COE AFAHA-NSIT					21	6	14	6			11	6	26	13	43	4	38	14	40	20			193	69	
23	COE AGBOR													108	4	117	30	44	31	23	12			292	77	
24	COE AKAMKPA	4	1	2		29	3			18	3	3		34	8	15	5	26	6	27	7			158	33	
25	COE AKWANGA	2		10	1	26	3			80	18	26	12	46	11	23	5	30	12	5		1		249	62	
26	COE ANKPA			9	3	2	2			88	7	39	6	28	4	10	2	65	15	15	1	29	1	285	41	
27	COE ARGUNGU	4								110	7					34	1							149	9	
28	COE (T) AROCHUKWU	1		7	1	14	2			24	7	10	6	16	3	1		16	9	9	2	5	3	103	33	
29	COE AZARE	DNS	DNS																						0	0
30	UICEST BAMA	DNS	DNS																						0	0
31	YBU COE DAURA	1	1							45						9								55	1	
32	IK COE DUTSIN-MA	5	1	2	1	83	4			56	2	38	4	16		4		10	1			2		216	13	
33	COE EKIADOLOR			11	5	30	11			33	13	7	1	49	13	7	1	38	19	11	2	4	4	190	69	
34	ENU STATE COE ENUGU	5	3	3	1	19	9			8	2	32	18	10	4			16	6	3	1			96	44	

Chart of Academic Staff by School and Sex 2012/2013 Session



DISTRIBUTION OF SUBJECTS

NATIONAL COMMISSION FOR COLLEGES OF EDUCATION, ABUJA DISTRIBUTION OF ACADEMIC STAFF BY INSTITUTION, SUBJECT AND SEX 2012/2013

S/NO	SUBJECT	AOCOE OTO-IJANIKIN		EACOE OYO		IAUNI OF EDU. P/HACOURT		SSCOE SOKOTO		COE WAKA-BIU		COE WARRI		FCT COE ZUBA		NASE ILORIN		UCOE AUKPA-ADOKA		YEWA CENTRAL COE AYETORO		TOTAL	
		MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F	MF	F
1	ACCOUNTANCY																					0	0
2	AGRIC EDUCATION	14	2	17	1			26	3			11	1	2	1	7	2	5		5	1	87	11
3	ARABIC EDUCATION			4				97	4					6		10	1					117	5
4	AUTO EDUCATION																					0	0
5	BUSINESS EDUCATION	9	5	15	3			35	5			15	6	13	4			4		6	1	97	24
6	BIOLOGY	4	1	9	4			25	4			13	7	8	5	8	2	6	2			73	25
7	BUILDING EDUCATION																					0	0
8	CHEMISTRY	6	3	10	5			34	5			12	5	8	4	8	4	6				84	26
9	COMPUTER SCIENCE	4	2	9				10	2			5		6	2	8	3	3		8	1	53	10
10	CRS	7	3	7								8	3	7	3	6	4	4				39	13
11	ECONOMICS	10	2	10	3			36	9			13	4	9	1	11	4	5		13	1	107	24
12	EDUCATION G&C							100	31							8	2			4		112	33
13	ELECTRICAL/ELECTRONICS																					0	0
14	ENGLISH	8	6	14	4			47	11			14	8	9	5	9	5	5		15	6	121	45
15	FINE AND APPLIED ARTS	7		4				7	1			7	1	10	2							35	4
16	FRENCH	3		10	3			6	1			7	5	5	2	7	3					38	14
17	GEOGRAPHY	5	1	11				36	6			11	4	5	2	7	2	4				79	15
18	GOVERNMENT																					0	0
19	HAUSA	5	1					53	12					7	3							65	16
20	HOME ECONOMICS	4	4	9	5			9	9			8	8	9	9							39	35
21	HISTORY	7	2	8	2			25				6		6	1	6						58	5
22	IGBO													4	3							4	3
23	INDUSTRIAL EDUCATION																					0	0
24	INT. SCIENCE	5	2	7	4			16	6			10	4	5	2							43	18
25	IRS	4		6	1			48	4					7	1	6	2			5	2	76	10
26	MATHEMATICS	5	3	7	1			30	1			11	2	8		6	3	4		9	1	80	11
27	METAL WORK																					0	0
28	MUSIC EDUCATION	7	1	6																		13	1
29	PHYSICS	5		11	1			6				9	1	9	1	9	2	4				53	5
30	PHE	9	1	8	1			11	1			10	3	9	2	6	2					53	10
31	PES							19	5			9	4	9	4			6				43	13
32	PRIMARY SCIENCE	6	2	14	3																	20	5

NATIONAL COMMISSION FOR COLLEGES OF EDUCATION, ABUJA
DISTRIBUTION OF ACADEMIC STAFF BY INSTITUTION, SUBJECT AND SEX 2012/2013

33	POL. SCIENCE	5		11							11				7	2	2		11	1	11		
34	SECRETARIAL STUDIES																				0	0	
35	SOCIAL STUDIES	7	2				42	7			9	2	8	3	7		5				0	0	
36	SPECIAL EDUCATION																				49	1	
37	TECHNICAL EDUCATION	20	1	14			15														0	0	
38	TECHNICAL DRAWING																				12	2	
39	THEATRE ARTS	7	1								5	1								12	4	39	16
40	YORUBA	6	4	12	5						3	3	6								16	6	
41	OTHER NIGERIAN LANGUAGES										16	6									0	0	
42	WOODWORK																				44	15	
43	GENERAL STUDIES	7	2	24	6						6	3	7	4							7	4	
44	LIBRARY EDU			7	4																0	0	
45	REMEDIAL																				53	15	
46	EDU CURRICULUM	9	2	32	7						6	3	6	3							0	0	
47	HEALTH EDUC																				0	0	
48	LITERATURE																				0	0	
49	KANURI																				0	0	
50	PRE-NCE SUB (NOT SPECIFIED)																				4	0	
51	FULFUDE						4														43	20	
52	PSYCHOLOGY OF EDUCATION	10	5	7	2						13	7	13	6							0	0	
53	OFFICE EDUCATION																				0	0	
54	VOCATIONAL																				20	10	
55	ECCE	4	1	3	1						3	3	10	5							0	0	
56	ADULT EDUCATION																				0	0	
57	GUIDANCE & COUNSELLING																				52	20	
58	EDUCATION FOUNDATION	11	5	14	7						18	6	9	2							0	0	
59	ADULT & NON FORMAL																				0	0	
60	MGT																				0	0	
	TOTAL	220	64	320	73	0	0	737	127	0	0	269	100	220	80	136	43	63	2	99	20	2064	509