

**IMPACT OF MICRO-TEACHING SKILLS ON NIGERIAN COLLEGES OF
EDUCATION STUDENTS TEACHING PRACTICE PERFORMANCE
IN NORTH-WEST GEO-POLITICAL ZONE, NIGERIA**

BY

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FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY,
ZARIA**

JANUARY, 2018

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**A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES,
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**DEPARTMENT OF EDUCATIONAL FOUNDATIONS AND CURRICULUM,
FACULTY OF EDUCATION,
AHMADU BELLO UNIVERSITY, ZARIA**

JANUARY, 2018

DECLARATION

I declare that this thesis entitled Impact of Micro-Teaching Skills on Nigerian Colleges of Education Students' Performance in Teaching Practice has been carried out by me in the Department of Educational Foundations and Curriculum. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other Institution.

Lawal Sani Garba

Name

Signature

Date

CERTIFICATION

This thesis entitled Impact of Micro-Teaching Skills on Nigerian Colleges of Education Students Performance in Teaching Practice in North-West Geo-Political Zone, Nigeria by Lawal Sani Garba meets the regulations governing the award of the degree of Doctor of philosophy in education (Curriculum and Instruction) of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This research work is dedicated to my father late Alhaji Garba M. Sani and my mother Hajiya Halima Sambo who took the burden of training and praying for the successful completion of my studies.

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ABSTRACT

The study investigated the impact of micro teaching skills on Nigeria colleges of education student performance in teaching practice. The objectives of the study were to; examine the impact of the skill of appropriate use of instructional materials on the performance of student-teacher, identify the impact of the skill of appropriate use of classroom control on the performance of student teachers, determine the impact of the skills of appropriate use of chalkboard management on the performance of student teacher, examine the impact of the skills of stimulus variation on the performance of students teachers, and identify the impact of the skill of appropriate use of questioning skills on the performance of students teachers on to teaching practice. The objectives of the study were transformed into five research questions and five hypotheses. The ex-post facto research design was used for the study. The population for this study comprised of all the 35,618 NCE three (3) (2015/2016) session students of Colleges of Education in the Study Area who were posted to the field for practical experience (teaching practice). The sample for the study was 2,744 NCE III students of federal college of education Zaria, and the federal college of Education Kano had 2567 students presently on teaching practice using purposeful sampling technique. However, 10% of the target population (531) was used for effective conduct of the research work. The instruments used were modified student teacher assessment form (MSTAF) which was modified by the researcher from the original micro teaching practicum assessment guide (MITPAG) approved by National Commission for Colleges of Education (NCCE) and questionnaire in assessing the student, while the interview questions were used to interview the students teachers lecturers of the institutions (see appendix (B,C, &D). The reliability level of the instrument was found to be 0.80 using Pearson product moment correlation (PPMC). Data collected was analyzed using statistical packages for social science (SPSS) version 20 and stata version 13. The major findings from the analysis of the data revealed that the appropriate use of instruction materials have tremendous impact on the student teachers ability to make use of instructional materials. The study also revealed that the ability to use the skill of classroom control has an impact on the performance of student teacher to manage/control the class. Furthermore, the study revealed that the appropriate use of chalk board management skills has a significant impact on the performance of student teacher to manage his/her chalkboard. In addition, the study revealed that, varying stimulus has significant impact on the student teacher. Finally, the study pointed out that, the use of questioning skill have a significant impact on the performance of student teachers to ask questions appropriately. Based on the research finding, the researcher recommended that: The use of instructional materials should be taught to student teachers at all levels of NCE programme to enhance their performance during teaching practice. Also, concerted effort should be intensified by the teacher educator to ensure that student-teachers comprehend the skill of classroom control to enhance performance during teaching practice. In addition, the Head of unit of micro-teaching practicum session should create a special display session to enhance student teachers performance in chalkboard management during teaching practice, teacher educator should be explicitly proactive in guiding the student teacher's skill of stimulus- variation to enhance performance during teaching practice. And effort should be intensified by the teacher educators to adequately acquaint the student teacher to be brief, precise and clear in using questioning skill technique in classroom instruction during teaching practice

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LIST OF ABBREVIATIONS

NCE:	National Certificate in Education
CCTV:	Close Circuit Television
JAMB:	Joint Admission and Matriculation Board
FRN:	Federal Republic of Nigeria
NMC:	National Mathematical Centre
NINLAN:	National Institute for Nigeria Languages
NCCE:	National Commission for Colleges of Education
BGTC:	Board General Teaching Competence
IMM:	Indian Model of Micro Teaching
HMS:	Highly Structure Model
TA:	Teaching Assistant
ETP:	Excellence in Teaching Programme
FGN:	Federal Government of Nigeria
ANCOVA:	Analysis of Conversion
SPSS:	Statistical Package for Social Science
ICT:	Information Communication Technology
MSTAF:	Modified Students Teacher Assessment Form
MTPAG:	Micro Teaching Practicum Assessment Guide
PPMC:	Pearson Product Moment Correlation
FCE:	Federal College of Education

OPERATIONAL DEFINITION OF TERMS

- **Student Teacher:** A student that is receiving training at a teacher training institution.
- **Polish:** An act of empowering the student teacher with knowledge, skills, and techniques adequate for efficiency.
- **Micro-teaching Skills;** These refers to the teaching skills to be acquired by the student teacher during micro-teaching session, for effective teaching and learning to take place.
- **Equip:** It is an act of providing the learner with the teaching skills which will help toward discharging his/her duties in the teaching profession.
- **Impact:** It refers to influence of teaching skills on student-teachers performance especially during teaching practice.
- **Performance:** This refers to the attitude of student-teachers in the application of teaching skills in teaching practice for effective service delivery.
- **Teaching-Practice:** It refers to a situation where the college of education student-teacher is posted to primary/post-primary schools of their choice in order to demonstrate the acquired teaching skills for a specified period of time.

CHAPTER ONE INTRODUCTION

1.1 Background to the Study

Microteaching is a scaled-down simulated teaching encounter designed for the training of both pre-service and in-service teachers. According to Chuajin, & Chummei, 2011; Salawu, 2011, microteaching has been in use worldwide since its invention at Stanford University in the late 1950s by Dwight, Robert and Romney. Its purpose is to provide teachers with the opportunity for concept lessons in any teaching subject. Also Mcnight cited in Millis, Hertel, and Noyd, (2007); Romesh (2013), see Micro-teaching as a scaled down realistic classroom training context in which teachers, both experienced and inexperienced, may acquire new teaching skills and refine old ones. Apart from being an essential process of transforming and modifying the student teacher behavior to demonstrate a given behavior, it also provides a tremendous opportunity for both pre-service and in-service teachers to develop and improve their pedagogical skills with a small group of students mostly (5 to 8) using limited period of (5-10) minutes, records on video tape for reviewing, responding, refining and re-teaching towards perfection (Peker, 2009, p. 872-880).

The micro-teaching environment enables a student teacher to focus attention on the practice of specific skills at a time until he/she acquires competence in it. Provision of feedback accelerates this process. After acquiring competence in a number of skills in this way, the student teacher takes to micro-teaching so as to demonstrate his/her level of competence. It is a vital technique which provides continuous training to serving teachers. Most of professional teachers who have reached their high professional level do not want to improve their skill of teaching. Micro teaching helps in overcoming such pitfalls. It provides setting for experimentation. With the introduction of developed curriculum, teachers are required to acquire new skills of teaching. The National Policy on Education (FGN, 2009,

p56) pointed out that “all teachers in our educational institutions, from pre-primary, will be professionally trained. Teacher education programme will be structured to equip teachers for the effective performance of their duties”. One way to achieve this government pronouncement is the proactive of micro teaching both at pre-service and in-service training.

As a modeling instructional skill, the micro teaching setting is meant for the demonstration of good teaching skills by student- teachers which can be recorded on video-tape or observed by a supervisor. Such a recording or observation is analyzed to identify component skills comprising teaching which is a complex activity (Verma & Sharma in Audu, 2010). Similarly, sub-behaviors underlying each skill can also be identified. The knowledge obtained will help in building various component teaching skills. These models are presented before the trainees so that they may model their behavior according to the models of the skills, by practicing in the micro teaching setting.

In spite of the fact that the approach to supervision under micro teaching is non-evaluative, the supervisor still functions as a guide or an adviser. The supervisor in micro-teaching tries to help the trainee teacher or the practicing teacher to improve his skills of teaching. Prior to the commencement of micro teaching exercise, both the student- teacher and the supervisor are clear about the objective to be achieved or skill to be demonstrated. They are also clear about the mode and instrument of assessment to be used. Such a procedure provides common frame of reference for the supervisor and trainee teacher for a dialogue. The suggestions given by the supervisor are incorporated in the new lesson for a re-teach practice (Verma & Sharmain in Aggarwal 2009; & Audu 2010).

Consequently, micro-teaching provides a golden opportunity to the student teacher towards exercising control over some variables, which may have tremendous effect in teaching and learning e.g. volume of students in a class, the nature/quality of the student, the

length of the period for micro teaching administration, the motivation as well as the evaluation of the student, and so forth.

From experience of the researcher and more importantly contact with pre-service teachers (NCE and Undergraduate), needed skills of teaching are difficult to acquire on different methodology course, hence the need to integrate micro-teaching into the professional development of the pre-service teachers. Therefore, the researcher decided to dwell on some of the major skills of micro-teaching which include; skill of reinforcement, skill of set induction, skill of instructional materials, skill of classroom control, Skill of chalkboard management, skill of closure, skill of stimulus variation, skill of questioning among others

The conducive environment for effective micro-teaching session (micro teaching clinic) is to be equipped with relevant and appropriate furniture and e-learning equipment, like appropriate Closed Circuit Television (CCTV) system with camcorders staged at different angles to pick different behaviors of the trainee and the learners (Verma & Sharma ,in Audu, 2010). This is to enable the supervisor, presenter as well as other participants and members of the community to see the strength and weaknesses of the student-teacher at the point of presentation for immediate correction towards perfection. Furthermore, the student-teacher is trained to be aware of good environment as a correlate to effective and efficient process of teaching.

Experience has shown that, right from the introductory stage, a student teacher cannot demonstrate a sense of commitment in understanding the basic concept for micro-teaching as contained in the teacher training curriculum, of Colleges of Education titled Micro teaching theory and coded EDU 213 offered at NCE level. This factor is not far from the fact that right from the selection of institution, a candidates often disfavor teacher training institutions (College of Education),often selected as their last resort (JAMB, 2013). This might not be

unconnected with the attitude of the members of the society toward teaching as a profession. The ability of the student teacher to transform an abstract idea into reality through the application of relevant as well as the appropriate instructional materials towards boosting their morale for effective comprehension of the lesson appears to be in-efficient. The researcher observed that the state of deprivation as well as deficiency in the application of Classroom Management technique which weaken the learner's attention as well as interest due to student teachers in efficiency in the application of skill of class control and un-conducive atmosphere makes the designed objectives not achievable.

Observation has shown that the microteaching skills which served as a fundamental principle of teaching are un-satisfactorily demonstrated by student teachers. This is seen in the weak application of micro-teaching skills of Chalkboard management by the student teacher which makes the performance in-sufficient in clear writing skill which leads to in effectiveness in drawing the learners attention.

The in-sufficient use of the skill of reinforcement as a means of encouragement by the student teacher as a result of the positive response in the course of teaching is not appropriately used. The process of drawing the attention of the learner to concentrates in teaching and learning activities and to make the lesson more captivating via the skill of set-induction is completely discouraging.

The effort of the student teacher to use the chalkboard towards effective summarization of the lesson to the learners during teaching and learning appears to be very low. The effort of the student teacher in the demonstration of the skills of Stimulus variation through different means of ensuring effective teaching and learning for effective acquisition of knowledge by the learner is absolutely low. A situation which could make the achievement of the designed objective not achievable. Similarly, the possibility of determining the volume of learners understanding through questioning skill during teaching learning process is very

narrow. This makes it difficult for the student teacher to appraise the performance of the learner. The above mentioned teaching skills are mostly in-sufficiently and in-appropriately demonstrated by student- teachers, a situation which can lead to in-effectiveness and inadequacy in discharging their duty of teaching and learning during teaching practice.

The problems in the manifestation of these skills constitute an integral obstacle in the quest for the realization of qualified (professional) and the achievement of Nigeria's philosophy of education (FGN, 2013, p56) which states that "teacher education shall continue to take cognizance of changes in methodology and in the curriculum. Teachers shall be regularly exposed to innovation in their profession. The in-efficient application of the required teaching skills generated a cardinal vacuum in a bid to produce competent workforce (personal)that would handle the pupils and the students at primary and post primary institution of learning. In addition, these limitations have frustrated and adversely affected the current drive towards producing professional teachers as contained in the National Policy on Education (2013, p56), which highlights that:

"All teachers in educational institutions shall be professionally trained. Teacher education programme shall be structured to equip teachers for the effective performance of their duties. Information Technology (IT)training shall be incorporated into Faculties of Education ,Institutes of Education, National Teachers Institutes, School of Education in the Polytechnics etc., National Mathematical Center [NMC],National Institutes for Nigeria Language[NINLAN]

Similarly, Olaofe (2007) remarked that teacher quality has witnessed a steady decline from a large number of teachers who could make pupils to unlearn what they had accidentally learnt somewhere else. In addition, there is a general downfall in the number of professional teachers needed to teach in various institutions of learning in Nigeria.

The aforementioned problems collectively constitute serious setbacks towards effective performance during the teaching and learning process; and eventually they could

hinder the attainment of the designed instructional objectives, during teaching practice programme. These have manifested doubt in the mind of the researcher especially in the efficiency of micro-teaching session in exposing student teachers undergoing teacher training programme. These and many other similar issues have necessitated the need to embark on this research.

1.2 **Statement of the Problem**

The essence of posting student- teachers for teaching practice is to enable them showcase the rich experience acquired during the theoretical and practical aspects of micro-teaching to the learners toward efficiency. It has been observed by the researcher that the skill of drawing learners attention towards learning activities via the skill of Set Induction as carried out by a student-teacher as acquired in the micro-teaching session is not passionately used.

The process of transforming theoretical knowledge into practical aspect is acquired during micro-teaching. Despite the period taken during micro-teaching session, student teachers are still found in-effective, in the use of skill of the instructional materials. Similarly, the ability of a student teacher in using the skill of controlling, coordinating, arranging and managing both the learners, the teaching materials and the non teaching materials for effective teaching and learning to take place is absolutely absent.

The poor use of skill of chalkboard management acquired during micro-teaching session by a student-teacher could lead to the display and mismanagement of teaching materials for the achievement of the designed objectives during teaching practice. However, student teachers thus find it very difficult to use the skill of stimulus variation, a situation which could cripple the effort of securing and sustaining learner's attention towards effective teaching and learning for effective service delivery. A teachers effectiveness in applying the questioning skill towards assessing the magnitude of learners comprehension is completely in-effective. Therefore, the ability of a student-teacher to effectively apply the acquired

teaching skills for effective service delivery becomes very difficult. Situation which makes the performance of learners' handled by such a student-teacher to be weak, ineffective and inefficient.

Moreover, scanty performance of the student teachers in the demonstration of the relevant teaching skills in the teaching and learning situation has created serious problems in the attainment of designed learning experience during teaching practice session. Situation which stimulates parents, teachers-trainee, administrators, and ministry of education and National Commission of Colleges of Education (NCCE) in developing doubts about the competency of these categories of student teachers in transforming the learners' level of academic standard to an advance level.

Therefore, the aforementioned problems inform the need to conduct a study on impact of micro-teaching skills on student-teacher performance during teaching practice in colleges of education in Nigeria.

1.3 Objectives of the Study

The study sought to find out whether the micro-teaching session being one of the aspects of teacher training programme has effectively equipped the student-teacher with adequate skills that will enable them to discharge their duties effectively. Therefore, the study was designed to:

1. examine the impact of skill of instructional materials on the ability of the student teachers in the North-west Geo-political Zone, Nigeria to make use of instructional materials during teaching practice
2. identify the impact of skill of classroom control on the ability of the student teachers in the North-west Geo-political Zone, Nigeria to manage/control the classroom during teaching practice

3. determine the impact of skill of chalkboard management on the ability of the student teachers in the North-west Geo-political Zone, Nigeria to manage the chalkboard during teaching practice
4. examine the impact of the use of stimulus variation skill on the ability of student teachers in the North-west Geo-political Zone, Nigeria to vary stimulus during teaching practice.
5. identify the impact of skill of Questioning on the ability of student teachers in the North-west Geo-Political Zone Nigeria to ask question during teaching practice.

1.4 Research Questions

The following research questions were raised and answered in the cause of the study.

1. What is the impact of the skill of instructional materials on the ability of student teacher in the North-West geopolitical zone, Nigeria to make use of skill of instructional material during teaching practice?
2. What is the impact of the skill of the use of classroom control on the ability of student teachers in the North-West geopolitical zone, Nigeria to Manage/Control the classroom during teaching practice?

3. What is the impact of the skill of chalkboard management on the ability of student teachers in the North-West geopolitical zone, Nigeria to manage chalkboard during teaching practice?
4. What is the impact of the skill of stimulus variation on the ability of the student teachers in the North-West geopolitical zone, Nigeria to vary stimulus during teaching practice?
5. What is the impact of skill of Questioning on the ability of the student teachers in the North-West geopolitical zone, Nigeria to ask questions appropriately during teaching practice?

1.5 **Hypotheses**

The following research hypotheses were raised for the study:

1. The appropriate use of skill of instructional materials has no significant impact on the ability of the student-teachers in the North-West geopolitical zone, Nigeria to make use of instructional materials during teaching practice.
2. The appropriate use of skill of classroom control has no significant impact on student teachers in the North-West geopolitical zone, Nigeria ability to manage/control the class during teaching practice.
3. The appropriate use of chalkboard management skill has no significant impact on the student-teacher in the North-West geopolitical zone, Nigeria ability to manage the chalkboard during teaching practice.
4. The use of stimulus variation skill has no significant impact on the ability of the student-teacher in the North-West geopolitical zone, Nigeria to vary stimulus during teaching practice.

5. The use of questioning skill has no significant impact on the ability of the student teacher in the North-west Geo-Political Zone Nigeria to ask questions appropriately during teaching practice.

1.6 Basic Assumptions

This study was carried out based on the assumptions that:

1. All NCE students have participated in micro-teaching before going on .teaching practice.
2. NCE students are exposed to divers teaching skills before being allowed to go on teaching practice.
3. All the students exposed to micro-teaching skills are capable of active participation in teaching practice.

1.7 Significance of the Study

Microteaching is an integral component of teacher education programme. Therefore the result of this research could be of benefit to many stakeholders, such as student-teachers, in-service teachers curriculum planners, teacher trainers (lecturer and non academic staff), school administrators, NCCE as well as in-service teachers.

Firstly, the outcome of this research could assist in polishing student- teachers so as carryout their assignment, especially during Teaching-Practice exercise and after their graduation in order to be more proactive in providing an essential service expected of a professional teacher viz a viz impacting knowledge, managing, controlling, coordinating among others, in order to ensure effective service delivery and academic excellence.

Secondly, it could help tremendously in equipping student-teachers and in-service teachers with relevant information regarding the skill of teaching towards professionalization in the Nigeria as contained in the National Policy on Education(2013 p.56).

Thirdly, the result of this study could also help to a large extent in providing curriculum planners with adequate feedback concerning the effectiveness of micro-teaching in the Teacher Education Programme in preparation for teaching practice exercise at the NCE level, so as to assign it a compulsory status in the course design. Similarly, the result of the study will make the existing/ experience teachers see the need to be more committed in cooperating with the practicing teachers through guiding them in the course of discharging their duty.

Fourthly, the findings could assist teacher trainees in developing confidence in the usage of some of the skills thereby applying them in the normal classroom situation during teaching practice for effective teaching and learning to take place. That is, the practical pedagogical skills needed to promote and enhance good atmosphere in the classroom would be mastered by student teachers.

Fifthly, Provosts and Directors who head teacher training institutions in the country would also find the results of this study relevant as it would provide them with relevant information on the importance of micro-teaching as an alternative pedagogy for academic excellence. This would eventually enable them to be committed in ensuring that effective micro-teaching session is taking place in their respective institutions and be able to give all necessary support to the practicum session of micro-teaching, through ensuring adequate provisions of all its required for successful micro teaching viewing session and the practicum aspect to effectively take place prior to teaching practice exercise.

Sixthly, National Commission for Colleges of Education being a body that acridities teacher training institutions at sub-degree level; state and private colleges of education nationwide would benefit a lot from the outcome of the study through realization of the significant roles the programme provides in producing competent teachers that would effectively interpret the curriculum of primary schools curriculum in order to meet up with professional standards, especially in the provision of proper skills of teaching and learning.

Seventhly, the findings of the study could help in providing information to pre-service teachers, in-services teachers as well as government and non-governmental organizations and the general members of the society to make them see the need of the programme in producing competent/professional manpower to man the affairs of the respective teacher education institutions in the country by giving them the moral and financial support for successful discharge of their duty.

Finally, the study could also be significant to scholars as well as subsequent researchers as the findings would serve as a future reference material for further research elsewhere in related programme of national development. However, the result of the study will provide the general members of the society an insight on the need to give the student-

teachers maximum cooperation to enable them showcase the acquired teaching skills for the attainment of the designed goals.

1.8 Scope of the Study

The study focused on the impact of micro-teaching skills on the Nigerian Colleges of education student performance in North-west Geo-political Zone, Nigeria. Specifically, an in depth research work was conducted on five (5) micro-teaching skills, which includes; the skill of Instructional materials, skill of Classroom control, skill of chalkboard management, skill of Stimulus variation, and Skill of Questioning.

However, the study is delimited to NCE three (3) students of 2015/16 session from Federal college of education Zaria, Kaduna State and Federal college of education Kano, Kano state.

CHAPTER TWO REVIEW OF RELATED LITERATURE

2.1 Introduction

This chapter reviewed some related literature. The sub-themes reviewed are as follows:

1. Conceptual/Theoretical Framework of the Study
2. Micro-teaching Models
3. Overview of Micro-teaching
4. Relevance of Micro-teaching in Teacher Training Programme and Curriculum Development
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2.2 Theoretical Framework

Three sets of theories were identified in this study. These set of theories were the work of Edward Lee Thorndike, Burrhus Frederic Skinner, Ivan Pavlov, Clark Leonard Hull, Carl Rogers and Granville Stanley Hall. This study will be based on Edward Lee Thorndike Behavioral Theory of Learning. This is because the theory is more relevant to the present study as it make use of observational or modeling learning. According to Denier, Wolters and Benzon (2013), observational or modeling learning is as a result of watching the behavior and consequences of models in the environment. Observational learning can take place if there are effective models. There needs to be live demonstration of a behavior or skill by an educator or classmates in teacher training using verbal or written descriptions and video or audio recordings.

Behaviorism has interest in looking at behavior and observable changes. Darby (2003) noted that behaviorists focus on generating new behavior patterns. Thorndike propounded the theory of classical conditioning where the behavior becomes the reflex response to stimulus. As a behaviorist, learning is viewed by Thorndike in terms of establishing connection or bond between stimulus and responses. Learning can take place from a familiar and an unfamiliar situation. Thorndike maintained that a skill should be introduced when a learner is conscious of the need for such skill. McLeod (2007) explained that Thorndike worked on animals' behavior and learning process. He was interested in whether animals could learn tasks through observation and imitation. In order to test this, the father of educational psychology created puzzle boxes. Each box contained a cat and had a door that was pulled open by a weight attached to a string that ran over a pulley which was attached to the door. The spring attached to the door led to a lever or button inside the box. When the animal passed the bar or pulled the lever, the string attached to the door would cause the weight to lift and the door to open. The puzzle box was arranged so that the animal would be required to perform a certain response (pulling a lever or pushing a button).

Thorndike measured the amount of time it took them to escape. Once the animals had performed the desired response, they were allowed to escape and were also given food as reward. When hungry cats were put in the boxes, food was put on the other side. The cats wandered restlessly and meow to get to where the food was but they could not escape because they could not perform the action except when the cats stepped on the switch on the floor accidentally and the door would open. Thorndike wanted to see if cats could learn through observation and imitation. He had them observed other animals escaping from the boxes. He compared the times of those who got to observe others escaping with those who did not and he found that there was no difference in their rate of learning. Thorndike graphed the times it took for the animals in each trial to escape, resulting in a learning curve. The animals had difficulty escaping at first but eventually 'caught on' and escaped faster and faster with each successive puzzle box trial until they eventually level.

The quickened rate of escape resulted in the S- Shape of the learning curve also suggested that different species learned in the same way but at different speeds. To Thorndike, learning is developed from the organism doing something. According to Tega (2007), the following observations were made by Thorndike;

The cats behaved aimlessly on trial and error at the first attempt.

The cats responded correctly by accident.

The cats repeated the successful operation.

The cats were able to get the food (satisfier) as a reward of his effort.

The reward the cats got strengthened the connection between the stimuli and the response made before the reward (satisfier).

From the observations, Thorndike formulated three (3) laws:

Law of effect.

Law of readiness and

Law of exercise.

Therefore, this study is making use of the laws of effect and exercise. In the law of exercise, the response to a situation may be strongly connected with the situation depending on the number of times it has been so connected and to the average strength and duration of the connection. The meaning of exercise is practice. Thorndike claimed that practice in itself did not make perfect but practice in circumstances that allowed the learner to be informed or given comments about his progress could be valuable in strengthening the Stimulus-Response (S-R) Links.

Gandhi (2010) explained the law of exercise. The law means that drill or practice helps in increasing efficiency and durability of learning. In Thorndike S-R Bond theory, the connections are strengthened with practice and the connections are weakened when practice is discontinued. Practice leads to maturity. Practice is the main feature of trial and errors committed by the student teachers in learning how to teach. To Thorndike, learning is developed from the organism doing something. Student teachers cannot teach until they practice how to teach.

According to Maheshwari (2012), the more the practice of behaviour, the more it is strengthened. Things that are most often repeated are the best learned. The mind rarely retains new practices after only one exposure. Learners learn by applying what they have been taught. Thorndike had the cats observed other animals escaping from the boxes. In the same vein, student teachers observe their mentors, imitate them and copy their characteristics especially in teaching professional ethics. As Thorndike bound the research with time, microteaching practicum is bound with time. The student teacher is expected to teach a reduced content for 5-10 minutes instead of 40 minutes in the normal class. There is also reduction in the class size to 5-10 pupils instead of 50 pupils in the class. The cats that could not perform the action wandered restlessly and meow to get where the food was but could not

escape except when the cats stepped on the switch on the floor accidentally and the door open. In the same vein, student teachers that have too many mistakes go for re-teach cycle until perfection is established. Every time they practice, their learning continues. The practices are used in microteaching especially in feedback and teach re-teach cycle which enhances effective teaching practice. Maheshwari (2012) opined that the more the practice of a behaviour, the more it is strengthened. Things that are most often repeated are the best learned. The mind hardly retains new practices after only one exposure. Learners learn by applying what they have been taught. Every time they practice, learning continues.

2.3 Conceptual Framework

The study is based on the concept of micro-teaching developed by Allen and Ryan (1966), at Stanford University in which other concepts were subsequently developed. Micro-teaching is a procedure in which a student-teacher practices teaching with a reduced number of pupils in a reduced period of time with emphasis on a narrow and specific teaching skill. It is a scale down teaching encounter in class size and time (Allen, in Aggarwal. 2009). Micro-teaching is defined as a system of control practice that makes it possible to concentrate on specified teaching behavior and to practice teaching under controlled conditions(Allen & Ryan) in Goodlad (2010).The concept concentrates mostly on behavior modification and effectiveness based on the scheduled objectives. The concept, according to Allen (1996) in Aggarwal (2009) consists of the following sequences: PLAN-TEACH-OBSERVE (critique)-REPLAN-RETEACH-REOBSERVE. Expanded, the model produces the micro-teaching programme presented below:

A particular teaching skill is selected and defined in terms of a teaching behavior, with the objectives of using it in teaching being explained and justified. The given teaching skill is illustrated by the course lecturer and or a video-tape or films is shown of teachers using the skill in micro-teaching or in normal classroom teaching, with a commentary

drawing attention to specific instances of the teachers' use of the skill. The trainee teaches it to a small group of pupils, and the lesson is usually videotaped. A critique session is held in which the micro lesson is analyzed, with the help of feedback from various sources the trainees classmates or peers as the students, the video-tape playback if available, and the supervisor (Bell 2008; Obanya, 2010). Here emphasis is on making reinforcing comment on the teacher use of the skill as well as on drawing the teacher's attention to other areas where the skill in question could have been exercised. In the light of this feedback, the trainee teacher re-plans the lesson in order to use the skill more effectively. The revised lesson is taught to a different but comparable group of pupils. The "re-teach" lesson is again analyzed, with the help of the available feedback information. The "teach-reteach" cycle may be repeated until refinement is attained. After all, the discrete teaching skills have been mastered one by one, the trainee teacher plans and teaches a fuller lesson of at least 15 minutes duration to at least 10 pupils, in order to demonstrate his mastery of all the skills in a well blended manner. And progressively, the subject content, the class size and the lesson duration are increased until they approximate to what obtains in a normal classroom teaching. In reality, the model can be a useful research tool most especially in teacher education program, toward insuring a transformation process of professionalism and competency in achieving teacher education objectives. Therefore, micro-teaching is a procedure in which a student teacher practices teaching with a reduced number of pupils within a limited time frame with emphasis on a narrow and specific teaching skills. Although, the Stanford model is generally believed to be the first and original micro-teaching model, it is not going to be utilized in totality in the present study. This is due to the fact that the model concentrates too much in the theoretical and practical acquisition and application of skill of teaching during the micro-teaching session, without considering the student-teachers preparation for teaching practice,

where the student-teachers are expected to demonstrate the acquired skills for perfection as reflected in this research topic.

2.3.1 Overview of Microteaching in Teacher Education Programme

Globally, the genesis of microteaching could be traced to the evolution of the video technology in Germany. Meanwhile, little did the inventors of the tape recorder, think of the instructional implication of and its utilization in the pedagogical training of teachers until the globally documented efforts of Keith Acheson a doctoral student and Robert and Dwight of the Stanford University in (Salawu, 2011). The unflinching support bestowed on Allen and his team by the Ford foundation boosted the morale of the team thus the team worked copiously on microteaching which was initially christened 'demonstration teaching'. A couple of years later, microteaching was recognized and even acclaimed as an effective and efficient training technique in training of teachers most especially for pre-service preparation. For instance, in the American teachers institutions in the 1970's micro teaching had been giving acceptability and keen implementation.

In the 1970's and later part of 1980's microteaching spread like wide fire to countries like the United Kingdom, Malaysia, Australia and Philippines. Furthermore, in the 1990's it was universally accepted and as an indispensable strategy in the training of trainees in the pedagogy. In fact, it is also tremendously useful to the practicing teachers who want to equip themselves to up-to-date pedagogical practices in consonance with the information and communication technology development (Nwabunu, 2011).

In the 1970's in Nigeria microteaching was incorporated due to its contribution in ensuring quality and effective teacher education programme in 1970's Nigeria government incorporated microteaching into the college programmes of Alvan Ikoku college of education Oweri, with the assistance of UNESCO grants given to the college.

Meanwhile, since the Alvan Ikoku college experience, most of the teacher training colleges in the country adopted and adapted the new innovation (microteaching) in the preparation and training of the students teachers in their various colleges particular in the Nigerian colleges of education. While in the teachers grade two colleges it was still given the nomenclature of teaching demonstration in the 1970s up till early 1980s (Salawu, 2011).

Moreover, in the 1980's some scholars in the universities in Nigeria such as the university of Ibadan, Obafemi Awolowo university and the university of Ilorin carried out researches to examine the efficacy of microteaching on students teachers performance in teaching practice the findings encouraged some of the university in the country to adopt microteaching as one of the strategies in preparation and training of their student teachers in the faculty of education of these universities (Salawu, 2011).

In the early 1990s the National commission for colleges of Education (NCCE) in Nigeria made microteaching mandatory as part of accreditation requirements that must be properly put in place under educational technology centre in the colleges of education before any of their courses can be approved. Therefore, the mandatory condition brought microteaching to limelight most especially in the colleges of education. The federal government gave financial assistance to the colleges for the establishment of microteaching laboratories within the educational technology centres. Since then, microteaching has become one of the compulsory courses for the student-teachers in the colleges of education in the country (Nwabunu & Egunjobi, 2011).

The word teaching has been defined by many authors in the field of education, Isa (2012) sees teaching as a process of impacting the required knowledge/skills to learners by a professional in order to achieve the desired objective. Micro-teaching as a concept is a scientific technique designed to make the teacher education programme scientific in approach. It is a versatile research tool which simplifies the logistics of investigating skills

and learning variables. Micro-teaching is a scaled down teaching encounter where the complexity of the real classroom situations is being reduced to the bare minimums (Romes, 2013); Allen and Ryan in Tanj (2014p.14), defined micro-teaching as a scaled down teaching encounter in class size and class time. Similarly, they defined the term micro-teaching while specifying the following essential prepositions:

- a. Micro-teaching is real teaching but complexities of moral classroom are specified.
- b. There is emphasis on training for the accomplishment of specific tasks.
- c. There is increased control of practice.
- d. Normal knowledge of results or feedback dimension is greatly exposed.

Micro-teaching as a training system in which the normal complexity of the classroom, in terms of the type of audience, the number of learners, duration of time and content of coverage is drastically reduced to enable a trainee teacher conduct a training session in a contrived but especially designed environment (Farrant, 1980 in David, 2008). A trainee teacher is confronted with a comparatively manageable setting of about 5-10 students for a duration of ten or fifteen 10-15 minutes, emphasizing only one or two skills.

Furthermore, micro-teaching is a training technique whereby the teacher reviews a video tape of the lesson after each session, in order to conduct a “post mortem”. In the process, teachers find out what has worked, which aspect has fallen short, and what needs to be done to enhance their teaching techniques, (Singh, 2011 p.363-4).

In micro-teaching, a trained student picks a topic and makes lesson preparation in terms of content, delivery method, instructional materials, statement of objectives, evaluation activities and a host of others that are part of lesson delivery. The supervisor and some other students contribute at the end. Micro-teaching is used for the development of new teaching skills and refinement of old ones. Teaching skills can be referred to as specific teacher behavior designed to enhance the effectiveness of classroom instruction (Sana, 2007 p.452-3).

Micro-teaching or training programme aims at modifying teachers' behavior according to the specific objectives. It is a process of subjecting a sample of human behavior to 5 R's of video tape, recording, reviewing, responding, refining and rejoining. It is a controlled practice that makes it possible to concentrate on teaching behavior in the student-teacher training (<http://edufocu.blogspot.com>, 2012). Observation has shown that micro-teaching is a cardinal tool which provides both the student teacher and the serving one adequate experience toward effective knowledge dissemination. Basically, micro-teaching is an instrument of transforming/modifying student-teachers as well as prospective teachers to acquire and develop the existing skills of teaching theoretically and practically, for academic excellence. Audu (2010) viewed micro-teaching as a laboratory approach to teaching development designed to help individuals develop and refine their teaching skills and to practice constructive criticism. Micro-teaching is thus an innovation in teacher education programmes with a focus on modifying teachers behavior in accordance with specific objectives; that is, in addition to improving teacher effectiveness.

Micro-teaching as a technique begun at Stanford University in 1964 and since then it has been widely used in most English speaking countries (Audu, 2010). It is also extensively used in Northern Europe and in many Asian and African countries. It is therefore, not surprisingly that, micro-teaching has been changed in many ways since it was first used at Stanford (Audu & Agbo, 2010; Chawla & Thukral, 2011; Arsal 2014). Whereas the Stanford School of Education gave practice a very narrowly defined skills, such as introducing a lesson, one at a time, most micro-teaching program nowadays require the student to teach realistic but brief lessons and to focus sharply upon a particular skills or set of skills during the viewing and discussion sessions (Chartzidimou, 2003). There are now so many different forms of micro-teaching that the term micro-teaching must be re-granted as generic rather than specific. Writers who claim to have developed or used the only true micro-teaching

should be regarded with some skepticism. Nonetheless, all micro-teaching programmes are based upon three common principles:

1. Identify the skills involved in successful performance (task analysis)
2. Provide a relatively safe opportunity for practice with feedback of these skills in a simplified situation.
3. Discuss and analyze the feedback (Chartzidimou, 2011).

It has been observed that, no matter the modification put in place upon the Stanford model, they are generally designed to prepare, develop and modify a student-teacher towards skills acquisition and effective communication process for attaining professionalization. It is usually introduced first to provide training methods which can be regarded as an introductory stage to teaching practice.

Similarly, closure is one of the micro-teaching skills which is used to complement set induction. Effective acquisition of this skill helps a student-teacher to provide the learner a sense of accomplishment of having finished or completed a given task. Learning increases when teachers make conscious effort to help students organize the information projected to them and to perceive relationships based on that information (Oyegwe in Audu&Agbo, 2010). The skill of stimulus variation constitutes one of the micro-teaching skills. In actual sense, learning in the classroom depends on the attention of the pupils to the learning task. It is therefore, essential for a teacher to secure and sustain pupils/students' attention in making his teaching effective. Stimulus variation can be introduced in several ways depending upon the teaching activities e.g. movement while teaching, interacting with pupils, change in speech style, among others, (Hagie,2006; Hardman, Drew & Egan, 2008).

The skill of using chalk board management forms one of the major aspects in the teacher training programme. It is one of the visual aids most widely used by teachers for classroom instruction. For effective application and utilization of chalk board, the teacher has to

consider three or more principles for the achievement of the designed objectives, these are:- legibility of handwriting (ii) neatness in the chalk board, and (iii) appropriateness of written work, (Varma & Sharma,2003). The skill of using adequate, effective and appropriate instructional materials acquired via micro-teaching creates an enabling environment for a student-teacher toward transforming an abstract idea into reality, and thereby makes learning more easy and effective, and facilitates the achievement of teaching objectives,(Mill's & Gosie,2007). Effective acquisition of skill of classroom control during micro-teaching session provides a significant impact to a student-teacher toward knowledge dissemination. The student-teacher finds it very comfortable to redirect or refocus the attention of a learner who has been distracted by an unrelated element in a lesson through effective management and coordination of teaching and non-teaching materials during teaching and learning process. It also helps the student-teacher to a large extent, in achieving the stated objective of the lesson, most especially during teaching practice which makes the programme effective. In reality, reinforcement constitutes one of the best acquired skills in the micro-teaching session by a student-teacher. The stimuli that provides or contributes to the pleasant experiences are called positive reinforcement, while the stimuli providing unpleasant experiences can be termed negative reinforcement. In the classroom teaching, positive reinforcements are used for strengthening the desirable responses or behaviors of learners and negative reinforcements are used for weakening the undesirable responses or behavior, (Mills & Gosie, 2007).

2.3.2 Micro-teaching Models

There are many micro-teaching models which were designed to effectively prepare the student-teachers for the challenges ahead of them. Some of the models of micro-teaching include:

Indian Model of Micro-teaching: The development of other models of micro-teaching was carried out by other scholars based on the original model of micro-teaching initiated by Allen

and other colleagues in Stanford University. Jangira, Singh, and Dosangh, in Romesh (2013), developed a model called Indian Model of Micro-teaching (IMM). This was developed as a result of researches conducted at the centre of Advanced Studies, Baroda. The research developed a scale known as Broda General Teaching Competence Scale (BGTC) Romesh, (2013). The features of this model are analyzed below:

1. Micro-teaching is done through written material supplemented by lectures, demonstrations and discussions in lieu of the taped or video-taped presentation
2. Indian model of micro-teaching is a low technology model
3. In respect of verbal skills, symbolic modeling, which is done in some contexts, is as effective as the perceptual modeling in case of non-verbal skills, the latter appears to have an edge over the symbolic modeling
4. Live observers are employed for systematic recording and feedback using VTR and CCTV for such purposes in the high technology models of the West. Also, peer supervisors are used singly or in combination with college supervisors for this purpose without losing the effectiveness of the training
5. The model adopted peers as students instead of real pupils. A studies conducted in India revealed that the use of peer group as students is equally effective in respect of mastery of skills when compared with the situation of micro-teaching where real students are employed for the purpose
6. The microteaching clinic or laboratory in (IMM) may be set up with a minimum of physical infrastructure since it does not rely on costly gadgets such as audio tape-recorder, a video or a CCTV
7. The structure of a micro-teaching clinic in respect of its scheduling of “who, where and when” has become simpler in terms of its “gadget free” orientation. It is flexible enough to suit the varying conditions available in the teacher education colleges and departments

of education.

8. The duration of micro-teaching cycle as adhered to in the IMM varies from 35-50 minutes, and it can be repeated twice in a week to ensure a teaching skill
9. The skill transfer phase of micro-teaching in the IMM implies a systematic practice and guidance of learner teacher from the highly restrictive and simulated situations to the actual classroom situations where the feedback is provided by the teacher supervision

It was observed that, in order to accommodate the present state of teacher training institutions in Nigeria, couple with the volume of students and the prevailing state of the facilities as well as other variables required toward effective micro-teaching program, the researcher decided to support and adopt Indian Model of Micro-teaching (IMM) in this study. The existing teacher education program in India and elsewhere has a number of loopholes and shortcomings, which led to ineffective teaching practice and a defect to the entire program, and (IMM) offers practical solution to these drawbacks. In reality the model helped to a large extent in ensuring effective acquisition of required skills. Micro-teaching therefore, seeks to provide solution to problems in existence in respect of a successful teaching practice exercise (Romesh, Fabino in Audu 2010).

Lesson Study: It is called “Jugyokenkyu” in Japanese, means “the study of teaching”. The term lesson study was introduced by Yoshida in Buczynski (2009), an expert with vast experience in this field (Takahashi, Watanabe, & Yoshida, 2006). Lesson study is collaborative efforts of teachers that can help new and senior teachers develop meaningful learning communities (Fernandez, 2010). Not only that, the lesson study could also be done in collaboration with teachers who teach different subjects at the same school or teachers from different schools who teach the same subjects. However, the most popular lesson study in Japan is a group formed in the school itself.

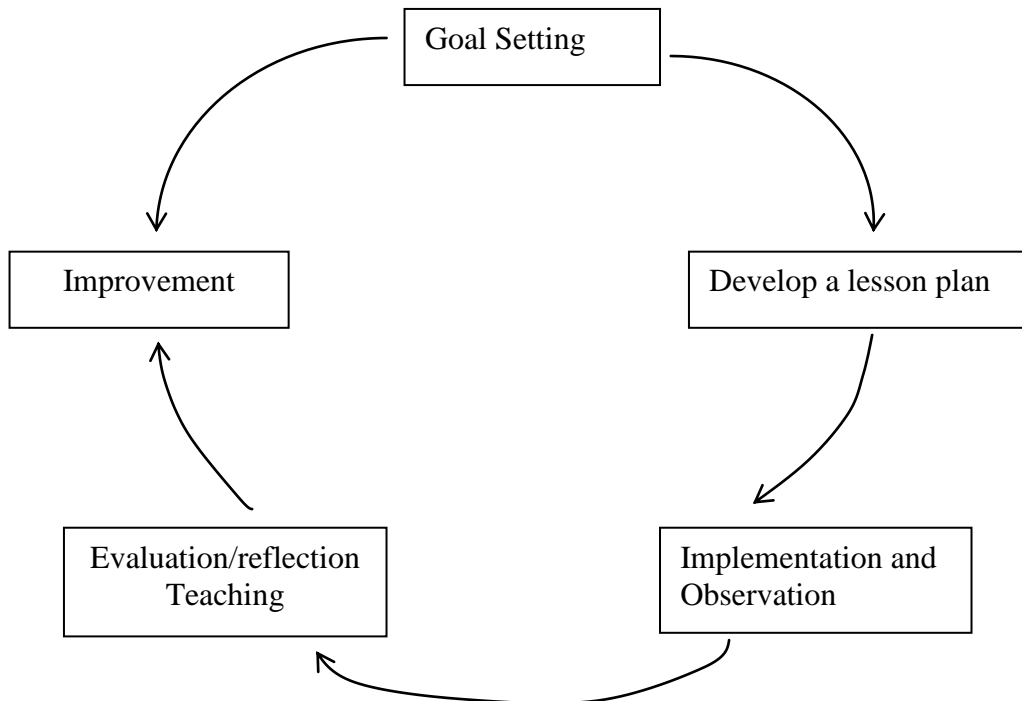
Lesson Study as a Learning Community The implementation of lesson study involves a group of teachers who collaborate to make a lesson plan based on the goals that have been agreed upon (Ministry of Education, 2011). Then, the lesson study group observes the teaching of one of the teachers who used lesson plans which had been built together. After the first lesson, teachers can make changes to the lesson plan and improve on a new one. After that, the second lesson plan is implemented based on a new lesson plan. Observations are made on the second lesson plan delivered by different teachers. Discussion is conducted to reflect on the lessons that have been used. The discussion will identify the strengths and the changes that need to be done if the next instruction is to be executed (Fernandez 2010). Lesson study is an alternative that emphasizes social interaction in building teacher knowledge of students learning and to stimulate the development of teaching practices. The implementation of lesson study provides the opportunities for learning communities to implement partnerships and involve collaborative efforts to improve student learning. The goals set in lesson study allow teachers to determine the best way to improve their teaching practices. Strategies in lesson study produce new ideas in teaching and learning based on the initiative that was taken to better understand the thinking of students (Yoshida, 2002, p. 5). Professional learning communities provide opportunities for teachers to (a) identify the appropriate questions to enhance learning for teachers and students, (b) share experiences in the classroom with a group of friends, (c) identify issues of equality and equivalence, and (d) allow the teacher to learn, implement teaching and enhance student achievement in the classroom (West-Olatunji, Behar-Horenstein, & Rant, (2008). Professional learning communities bring changes to the functionality of students and teachers in school. Taylor and Anderson in yakubu (2011) states that teachers learning either individually or collectively are tested in a professional learning community. In fact, it is an indicator of academic development. Indeed, the characteristics of learning professional learning communities include: (a) learning is not subject to one strategy

or technique alone; (b) social structure provides a space for active learning; (c) linking teacher and student learning, (d) the continuation of teacher learning and students increases along with the support of a collaborative learning culture within the school; and (e) the norms laid out in the school organization is learning partnerships and rather than in isolation. Lesson study should be exposed at the pre-service level and students should be involved directly in the process of their preparation to become a teacher. The implementation of lesson study in teacher training will involve collaboration between experienced teachers, professors and mentors from the university in the field of education, as well as other educators (Fernandez & Yoshida, 2011; Iksan, et al 2014).

Lesson study that is applied in training is to improve students' teaching experiences and to be more meaningfully through improving teaching techniques. In addition, this approach gives students the opportunity to collaborate with partners involved during teaching practice (Gurl, 2011), mentors and lecturers. Observations also need to focus on the learning process (West-Olatunji et al., 2008). The evaluation and reflection for each lesson is not only for teachers but also focuses on the development of students' learning. In addition, the lesson study approach can evaluate the idea of teachers in order to enhance their creative and critical thinking, mutual collaboration in finding a solution to a problem and to expand the understanding, skills and abilities of teachers and students. Based on the features of lesson study, it is suitable to be implemented during teacher training to improve the knowledge and experience of pre-service teachers. Thus, this article will discuss the model developed in integrating micro teaching during lesson study in the course curriculum and pedagogy.

Lesson Study Model "Lesson study" is an approach intended to explore the development of teaching and learning that occurs in the classroom (Fernandez, 2011). This approach can also be used as professional development in schools (Lewis & Perry, 2006). Lesson study has been developed and used in Japan for more than 130 years (Shimizu, 2006) and currently has been

in used through the world as a teaching professional development process. This approach provides an opportunity for teachers to explore and examine the development of teaching in more depth and detail in the teaching and learning process. In general, the process of lesson study involves five steps implemented continuously as shown in Figure 1: set goals, develop plans, implement lessons and observations, reflection and make improvement (Stepanek, 2007). Lesson study model implementation involves several teachers in a teaching session. Iksan et al (2014) has divided the learning community into two parts, preparation community and research community. The preparation community of teachers is directly involved in every step of the implementation of lesson study, and the research community of teachers in teacher preparation and other communities is invited as a volunteer to observe teaching in the open class. The teachers work together for each teaching session from determining the learning objectives to the reflection.



Lesson Study Model

Based on Figure 1, the first step is to talk to the teacher to determine appropriate instructional objectives such as;

1. Goal setting
2. Develop a lesson plan
3. Implementation and Observation
4. Evaluation/Reflection/-teaching
5. Improvement

The targeted students are to determine in using strategies and teaching aids that will be used to help students understand. There should be a limited number of objectives so that students can understand the teaching and the strategy which is more effective for them. The teaching approach should be student-centered as much as possible so that the students are involved actively during class. In the second step, teachers put together a complete lesson plan for the teaching. The collaboration and partnership are expected to generate more brilliant ideas, which result in an interesting lesson plan. The third step, a teacher will implement teaching in a real classroom. Teaching should be based on the lesson plan that has been developed. Another member in a group will monitor and evaluate the teaching. They would understand the lesson as they have developed the lesson plan together. Therefore, the observation of students' responses could be done better. After completing the lesson, all students in a class will make a reflection on the teaching and learning and discuss the strengths and weaknesses of their teaching. Thus, enhancement can be made to improve the teaching plan. Next, a second lesson can be done with reference to the lesson plans that have been improved and expanded. The relevance of this model to the present study is such that the aspect of the phobia of the student teacher is overcome during the micro-teaching process before facing the real students in the classroom during the teaching practice during teaching practice programme. Thus, the model would be adopted to suit the purpose of this study.

The Three-phase Collaborative Coaching Model (TCCM):

The TCCM was developed by Kuter, S., Altinay G.Z., & Altinay A. F. (2012). It was designed around three developmental sessions (during seven weeks) to gradually prepare and equip trainees with the thinking skills and professional dispositions, deemed necessary, to be effective beginning teachers when they start their actual teaching experiences. Within the conceptual framework of constructivist teaching and learning processes, and with the support of technology, the practicum was designed on the premises that learning is an interactive, dialectical, collaborative, negotiate and effective process. Within this framework, trainees were expected to collaborate and negotiate with peers to create pedagogical knowledge for their future professional learning and growth. All microteaching classes used a repeated cyclical framework in three phases . These three phases are as follows:

1. Pre-working session
2. While working session
3. Post working session

Pre-working Session: Though not a part of the trainees' video-taped instructional presentation, this session aimed to equip the trainees with some pertinent foundational theoretical knowledge related to instructional issues and to prepare each group of trainees for microteaching presentations that would be videotaped. To achieve this, each group was initially asked to prepare a lesson plan and instructional materials for a teaching point, either a language skill or content area, which had been identified at the beginning of the program by each group (seven in total). The groups were composed of one, two or three peers. Before their presentation, trainees were assigned to read materials related to language skills or content areas. Also, they were expected to revise and improve the quality of their lesson plans and materials by liaising with the instructor prior to their presentation. This pre-conferencing session aimed to raise trainees' awareness of their lesson plans.

While-working Session (50 minutes): This session aimed to involve each group of trainees in peer teaching presentation which was videotaped to be viewed and discussed in post-working session. Each presentation was timed for thirty minutes and followed by presenters' self-evaluation for twenty minutes in class. At the beginning of the session, all presenters and peers were given an appraisal form including the aspects of lesson planning skills, teacher personality and talk, warm-up, presentation, planning, feedback, and classroom management. The presenters also distributed the lesson plan to their peers to facilitate their peers' observation and evaluation of the presentation. They also informed their peers about the level of students that they were expected to address during the presentation. Peer presentation was conducted and simultaneously videotaped. Meanwhile, the presenters were appraised by their peers in the class. Each peer wrote comments indicating the strong and weak aspects of the presentation using an appraisal form. This session ended with the presenters' oral self-evaluation.

Post-working Session (100 minutes): The ultimate aim of this session was to raise trainees' awareness of instructional processes by involving them in collaborative discussions after each presentation while viewing the video tape. By stopping the videotape at certain intervals, all trainees discussed and reflected on the presenters teaching performance and instructional stages by considering the aspects in the appraisal form. Meanwhile, the teacher, by linking the practical processes to theoretical basis, guided and facilitated co-evaluation process. The session ended by focusing on the aspects that needed further development and the reasons why. After the lesson, all trainees, including presenters, were required to write a reflective journal by focusing on the strengths and weaknesses of the lesson and suggesting ways for improvement and further development. They were also expected to write what they learned from the microteaching and collaborative evaluation. Besides, the presenters were required to

evaluate their own performance as regards its strengths, weaknesses and make suggestions for the improvement of weak areas by writing a self-reflective report.

Highly Structured Model (HSM): The advocates of HSM described it as the latest version of micro-teaching model used for teaching assistants (TA) and faculty training at the University of Nevada, Reno and elsewhere,(Kessing & Daston) in Millis,(2007). The model was developed out of the original model of Stanford by Dwight Allen and Ryan Kevin. Highly Structured Model was used in the Excellence in Teaching Program (ETP) for staff at the University of Nevada, Reno. The program divided the teaching assistants enrolled in a required course, e.g GRAD 701: College Teaching, were staff were grouped into heterogeneous groups of 5-7 students, making certain there was a mix of disciplines, genders and nationalities. The course was given in three days of interactive face to face seminars. After the three days period, the graduate students complete the course by working individually to earn a total of 16 points by producing assignments on a variety of pedagogical tasks, which are submitted electronically (Via WebCT) for credit in the course. Micro-teaching occurs on the third and final day of the face-to-face portion of the course with carefully trained mentors (TAS) guiding each group through the 30 minutes-per-presenter micro-teaching sequence. Each thirty minutes segment is divided into the following three parts:-

1. The individual presentation: 10 minutes. Each TA provides 10 copies of his/her completed planning and feedback sheet for the group. The top portion contains information about the student and his topic and one area in which she/he wants feedback (e.g pacing, clarity of presentation, etc). while the bottom half of the sheet provides a space for feedback as a response to some questions asked, and suggestions about how to make the lesson more effective or understandable. After distributing these forms, each TA presenter delivers his or her mini-lesson while the mentor TA keeps time. A camera

operator, selected from TA participants, records the presentation.

2. One-on-one feedback (A) and Group feedback preparation (B): 10 minutes. The mentor TA (or workshop leader) and the TA mini-presenter run the tape while discussing the presentation. The mentor TA references the videotape whenever appropriate but participants emphasize the value of the discussion between TA and the mentor, not the viewing, with opening questions such as, “How do you think it went?” “What would you change if you could?” This private discussion allows the TAs to reduce their anxiety, to “vent” their concerns, and to receive re-assuring positive feedback as well as constructive ideas for improvement. During this same ten minutes period, the remaining TA participants, working in two separate groups, discuss the presentation and prepare constructive feedback for the TA presenter. Participants assume one of three roles, which rotate with each presentation: discussion leader, recorder, and spokesperson. In all cases, the emphasis is on constructive feedback.
3. Group feedback: 10 minutes.

The teacher assistant presents then receives constructive feedback from the two subgroups. The mentor teacher assistant facilitates this feedback session by calling on the spoke person in the two groups to offer constructive criticism in at least three areas: the feedback requested by the presenter, the positive aspects of the presentation, and the areas that need improvement. During the closing activity for the all-day micro-teaching session, all TAs within their heterogeneous groups reflect on their own performance, by summarizing in a plenary session what they learned from the feedback and from watching fellow TA presenting mini-lessons.

- Benefits of Structured Model
 - Participants place value on the rehearsal time and minimal preparation time required by the sessions. In other words, TAs has an opportunity to present in front of a group

under low-threat conditions.

- They value the feedback from both an expert (the mentor TA) and from peers. This process allows TAs to see themselves as their students.
- TAs benefit from seeing the presentation of other TAs. All participants learn from each other's immediate correction and improvement for effective service delivery.

This model is very important due to its contributions to the development of teacher training programme in ensuring efficiency, but it's not going to be adopted. This is because, there is no immediate provision for the student-teachers to showcase their experience in the normal classroom situation i.e teaching practice exercise which form an aspect in the present research topic.

2.4 Relevance of Micro-teaching in Teacher Training Programme and Curriculum Development

The roles/relevance of micro-teaching towards effective empowering of a student-teacher with adequate knowledge/skill most especially in the NCE program can never be over-emphasized. Prominent scholars/educationists proffered views on how micro-teaching, being a cardinal and essential aspect of the teacher education curriculum helps in modeling the student-teacher as well as developing the in-service teachers in retraining session, and updating their knowledge in ensuring effective acquisition of new skills/methods for efficiency. Audu (2010) is of the view that micro-teaching is a supplement to teaching practice. It is part of a gradual process of training from micro-teaching to the real classroom, as a form of diagnostic and remedial training and as a method of enriching the skills of experienced teachers. In-short, microteaching can be used to develop new skills of teaching and to refine existing skills. Perhaps more important than these, micro-teaching is of great importance as it has the role to play in curriculum development, teacher education and curriculum implementation in schools. It also promotes reflection on teaching approaches and on constructive feedback

(Hertel, Milis & Noyd, 2007; Mergler, 2010; Kadir, 2012; Ajileye, 2013). The pedagogical skill for teaching can be acquired only through more structured and cheaper faculty training techniques. With the introduction of Micro-teaching about five decades ago, the lacunae of scientifically proven or effective methods to be followed in teacher training programme has been overcome (Farnandez, 2010).

Commendable efforts are being made on teacher education in the country, both for pre and in-service teachers, but there are many problems. Fabino, Adesina, & Mkpia in Adeleke (2011), decry the non-cooperation of governments (Federal and State) with teachers undergoing in-service courses. Examination malpractice with poor preparation of student teachers for an examination and lack of self-confidence constitute factors affecting the teacher training programme, (Odia & Omofomwan, 2007). All these attest to the significance of micro-teaching in teacher training programme and curriculum development. By implication, due consideration must be given to micro-teaching and the challenges affecting the attainment of this skill be properly addressed. This could only be achieved when adequate arrangements are made in ensuring that effective and sufficient implementation of micro-teaching is being made as contained in the curriculum.

2.5 Relevance of Micro-Teaching to Student Teachers Preparation

Micro-teaching is playing a very significant role in teacher education program. The teacher training program will not be comprehensive enough without engaging them (student-teachers) into a designed session where they would be expected to demonstrate skills into action in ensuring effective use of such skills for professionalization. Nobody is perfect in teaching because there is always room for improvement in ensuring for efficiency and attainment of effective service delivery.

Basically, teacher training exercises which form aspects of the teacher education program constitute one of the cardinal and essential aspect which brings about development

in human and material resources to any developed nation. According to Obilom in Adeniji (2008), education unlocks the key to modernization, but it is the teacher who holds the key. If this statement is true, then there is need for proper training of teachers since they are to interpret the national goals to the people. In the words of Adeniji (2008), teachers are essential because they are people who interpret the aims/goals and plans of education and ensure that the children are educated in the direction of those goals and aims.

Many research have reported that a number of teaching skills can be taught with microteaching that includes giving a lesson introduction, motivating students, classroom management, asking questions, taking into account the needs of the students, tone of voice, gestures and facial expression, speaking correctly and fluently, choosing and implementing proper teaching methods and techniques summarizing and doing evaluations (Akalin, 2005; Fernandez, 2010 Tasdelen, Kackay and Sali, 2009; Gollightly, 2010, Gorgen, 2003 Anshu and Pratibha, 2009 Gurses et al, 2005 Uzun, Keles, & Saglam 2013; Peker 2009; Semerci, 2009; & Akalin in Bakar 2014; Bilen, (2015)). However, it has been found that pre-service teachers who went through a micro teaching exercise had less difficulty in the areas of preparing or planning for a lesson, doing a lesson introduction, using their tone of voice effectively, speaking Turkish correctly, using gestures and facial expression, present a topic and concluding the lesson, than did those who did not do microteaching, (Fernandez & Robinson, 2011; Sevim, 2013; Donnelly & Fitzmaurice, 2011; Karuran, 2009; Megler & Tangen, 2010; Sahinkayasi, 2009; & Umuzdas, 2010; Miranda (2012); Fernandez 2010; Emmer, et al 2014;).

Also, Benton-Kupper in Ismail(2011) reported that after doing a microteaching exercise pre-service teachers had the perspective that integrating microteaching into the teacher training programme was very beneficial. Most students found that peer evaluations were beneficial. They were able to learn about different teaching strategies by observing the way their peers taught and they found the video recording to be helpful for feedback and

reflection. During the microteaching exercise, the students were able to notice strong and weak point about their own teaching skills. Most of the students said that they appreciated microteaching when it came to making plans and teaching the lesson. The students had quite a positive attitude toward microteaching because it increased their self confidence. Microteaching laboratory exercise provided them with a supportive and safe environment where they could try out ideas and strategies and receive constructive feedback.

Gorgen in Abdulwahab (2011) found that by the end of the microteaching exercise, problems had disappeared in the areas of worrying about making mistakes while teaching a lesson, correcting mistakes made during a lesson worrying about being fluent, using the right tone of voice and rate of speech, worries felt about teaching a lesson to students, keeping the students attention and interest, subjects that require exercises, the inability to control feelings and concluding the lesson.

In a study conducted in Ireland. Donnelly and Fitzmaurice (2011) concluded that even though it caused increased nervousness at the beginning microteaching, its actually increased self awareness and made the participants more self –confident about their own skills and expertise. Microteaching also enabled participants to understand the teacher’s role, to be more interactive during the exercises and to reflect on their performance.

In another case, pre-service teachers reported that they gained even more skills and knowledge of the teaching profession during the second microteaching exercise and that microteaching made a significant contribution to their love of the teaching profession.

Microteaching is an effective device for modifying the behaviours of teachers under training as it is a highly individualized type of teacher training techniques. Moreover, it is useful of pre-service and in-service teacher training where teachers can improve their competencies Adeniji (2008). In the same vein, Isola (2015) states that microteaching is a stimulated social skill development process aimed at providing feedback to teachers for modification of their

behavior. He concludes that it is a clinical teaching programme organized for providing teachers with miniature encourage.

Microteaching as an essential part of formal education training for teachers has its objectives which include enabling teacher trainees gain confidence in teaching by mastering a number of skills on a smaller group of students providing teacher – trainees with n environment for practice based teaching and through this instill some self evaluative skills. The objectives of microteaching reveal that it is a field or branch of teacher education essential for teachers in training because through it, they imbibe the qualities of effective teaching, avoid mistakes often made by teachers and equip themselves with adequate mastery skills an techniques of good teaching (Goodlad, 2010).

In micro teaching, teacher candidates find opportunities to develop skills in drawing learners' attention, asking questions, using and managing time effectively and bringing the lesson to a conclusion. Also, through microteaching, the teachers class management skills improve. They acquire the skills to choose appropriate learner activities, use teaching goals and overcome difficulties encountered during the process. During learner learning, on the other hand, the teacher candidates improve their skills in giving feedback and measurement and evaluation. Furthermore, by observing the presentation of their friends they find a chance to observe and evaluate different teaching strategies (Abdurrahman, 2010)

Observation has shown that, quality teachers are best obtained via effective teacher education in which micro-teaching form one of the vital aspects as contained in the teacher training curriculum. The National Policy on Education (2005:31) adds that “no education system can rise above the quality of its teachers”. In a similar assertion, Ikeotuonye in Isa (2012) comments that, no nation can be developed beyond the condition of its teachers.

Therefore, micro-teaching, according to Ughamadu in Audu (2010), is relevant to teacher education programme because of the following reasons:

- Most teachers initially are in short of skills of teaching and also find it difficult to apply the skills. Micro-teaching empowers them with adequate skills in teaching to enable them carry out their duty effectively.
- Micro-teaching helps teachers to acquire actual training experience in that it enables the teachers to develop their existing basic skills.
- Micro-teaching is relevant in teacher education because it makes the teacher realize that even though he is experienced in the job, he still has some instructional weaknesses and it gives him that feeling that there is room for improvement.
- The actual experience of classroom teaching does not enable teachers to develop and improve on the basic skills of teaching. Micro-teaching program provides an opportunity for teachers to develop and improve on some of the basic skills of teaching.
- Micro-teaching prevents student-teachers from acquiring teaching skills by trial and error as in block teaching, but rather it helps, teachers to perfect and acquire new skills.
- Micro-teaching provides an opportunity for teacher trainees to be involved in actual teaching early in their training and to practice teaching in a conducive setting.

In another development, Sharma in Audu (2010) highlighted six relevance of micro-teaching to teacher education these include:

1. It is a safe practice

Practice is essential for many learning activities. Practice is essential in classroom, whether by a student-teacher or by an experienced teacher because it brings with it certain constraints. It is ideal for students to be skillfully taught, not practiced on.

2. Technique for continuous training

Micro-teaching is a useful technique for providing continuous training to serving teachers. Most of the teachers who have reached their professional plateau do not want to improve their skill of teaching. This is also true of teachers who enjoy high reputation for their skill of teaching. The main reason for such a tendency is that they do not find a way to experiment with new skills of teaching and thereby improve upon them, and help in overcoming such pitfalls.

3. Modeling instructional skills

The micro-teaching setting is a demonstration of good teaching given by teachers which can be recorded on video-tape or observed by a supervisor. Such a recording or observation is analyzed to identify component skills comprising teaching which is a complex activity. Similarly, sub-behaviors underlying each skill can also be identified. The knowledge so obtained helps in building models of various components of teaching skills. These models are presented before the trainees so that they may model their behaviors according to the models of the skills, by practice in the micro-teaching setting.

4. A new approach to supervision

The approach to supervision under micro-teaching is non-evaluate. In the micro-teaching setting, a supervisor functions as a guide or an adviser. A supervisor in micro-teaching tries to help the trainee teacher or the practicing teacher to improve his skills of teaching. Before the commencement of practice, both the teacher and the supervisor are clear about the mode and instrument of assessment to be used. Such a procedure provides common frame of reference for the supervisor and the trainee-teacher for a dialogue.

5. A new approach for research

There are many variables which may affect the teaching-learning process. Such variables include the size of the class, quality of the students, the length of the period, the motivation of the students, etc. Micro-teaching helps a researcher to exercise control over

such variables and thereby enables him to see the effect of independent variables over the dependent variables.

Therefore, with the above contributors' view, it shows to a large extent that, micro-teaching will help in polishing a student-teacher with the required skills to be used in ensuring efficiency as well as the achievement of the designed objective.

Micro-teaching also improves teaching competency. Student-teachers learn by observation, oral and audio-visual feedback of peers and supervisors. Teacher educators find their students motivated; learning skills together and appreciating feedback. This has made students practice teaching, before actually going to practice i.e. at least two skills are practiced before entering the classroom. This mode of training has an increased confidence level in student-teachers, which in turn has positive impact on learners in the classrooms. This has helped in preparation of teachers who in turn have positive impact on learner (Ahmed Aluede 2009).

Micro-teaching may be used as a core activity in education studies and the curriculum built around the themes of teaching and learning. Alternatively, it may be used as the core of methods courses so that students are given opportunities to practice the strategies and skills which are being discussed in lectures. Recently, micro-teaching has become an important method of staff training and development for lecturers who are working in further and higher education. Lecturing, small group teaching and tutorials are complex; they are demanding activities. Nonetheless, these teaching methods may be analyzed and training programmes devised to improve them (Brown 1978; Brown, 1984; in Audu, 2010).

Romesh (2013) stated that, the global concept of teaching is replaced by the analytical concept in micro-teaching approach. Complex tasks of teaching are looked upon as a set of simpler skills comprising specific classroom behaviors. This helps in proper understanding of the meaning and concept of the term teaching. It also caters for the need of individual

differences in the training of teachers; as an individual trainee may work for the development of teaching skills at his own rate depending on his teaching abilities. Being an approach incorporating simulation technique which helps a training institution in overcoming the hardships faced in the task of organizing student teaching for learning the art of teaching, Oyegwe in Ajayi (2009), uphold the view that micro-teaching plays an important role in teacher education. It is most probable that no matter how long one has been teaching, the person would not have acquired all the skills of teaching and continually use them at a high degree of competence. Nobody is perfect in teaching, because there is always room for improvement in the art. One important point to be noted from the above discourse is that microteaching is an inevitable practice needed in building of a student teacher for better performance in the future. Beside the skills acquired by the student teachers, an avenue is created for practical application of the skills and proper evaluation of the act of teaching. There is no doubt as it gives room for re-adjustment and brings about perfection as a popular aphorism holds that, 'practice makes perfect'.

2.6 The Position of National Commission for College of Education on Micro-teaching

Due to the vital role of micro-teaching to teacher education, the government of the Federal Republic of Nigeria, through the National Commission for Colleges of Education posited in the (2009, p.4) Minimum Standards that only students who pass EDU 213 Micro-teaching Theory would qualify to offer EDU 223 Micro-teaching Practicum and only students who pass EDU 223 would qualify to go on Teaching Practice.

In addition, teaching practice is compulsory for all NCE students. It has to be done in the candidates teaching subjects, and has to be passed for such candidates to earn the six (6) credits required for graduation in this course area. Bearing in mind the demands of the UBE, institutions are advised to assign their students to nursing (early childhood care) institutions,

primary schools, junior secondary schools or Adult/Non-formal settings for the Teaching Practice to give them appropriate exposure to teaching. The score obtained by a student should be recorded under a separate heading. In the school of education, Teaching Practice should last for 26 weeks at a stretch in the first semester NCE III(FGN,NCCE, 2012.p34)Appendix F. Similarly the teaching practice assessment form, teaching practice monitoring form A, teaching practice monitoring form B for cooperating school and guidelines for teaching practice orientation/induction workshop are contained in the NCE minimum standards for general education 2012 edition see appendix G, H, I and J. This will help in a long way in reducing the obstacle faced by student-teachers in the acquisition of the skills of teaching and their application during teaching practice programme for effective service delivery.

The effort has categorically proved beyond reasonable doubt that the Nigerian government has taken the right measure toward addressing the challenges facing teacher education program in order to produce the needed quality teachers for the development of the nation.

In support of the above, Baikie in Adeoye(2014) maintains that, only teachers who possess the necessary technical competence and professional skills through a well coordinated teacher education program that can rise to meet the challenges that had bedeviled teacher training program. Although, the position of the NCCE on microteaching is commendable, much needs to be done to ensure more commitment of student teachers in the cause of the training. For instance, the morale of the student teachers could be boosted through issuance of a kind of emolument during the period of the practice.

2.7.1 Micro-teaching Principle for Effective Skills Acquisition and Effective Student Teacher Performance

Micro-teaching is a developing technique of practice of teaching of learners which

works on the basis of learning theories. Therefore, to ensure qualitative and effective skills acquisition via micro-teaching section, Verma in Abdulwahab (2011), outlined the following principles:-

1. Capabilities of the learners must be considered when a decision of what to teach is made. In pursuance of this principle, a trainee is given the opportunity to select a lesson content in an area of his greatest competence so that he may feel at ease with the subject matter.
2. The learner must be motivated intrinsically. In line with this principle, intrinsic motivation in the context of micro-teaching is created through cognitive and effective discrepancy between his ideal self-concept as a teacher and his real teaching.
3. Goals are to be realistically set. In keeping with this principle in the micro-teaching setting, attempt should be made to modify only modifiable behavior which trainee wants to change.
4. Only one element of modifiable behavior is to be worked on at a time. In pursuance of this principle, in any micro-teaching session a trainee practices only one skill at a time and moves to the next only after he has achieved mastery over the former.
5. Active participation by the student is necessary in order to modify his behavior substantially. In accordance with his principle, in any micro-teaching situation, a trainee engages actively in practicing a skill in which he wants to be perfect.
6. Knowledge and information about one performance helps the learner. Transfer of learning will be better if the learner gets the feedback related to his performance.
7. Transfer is maximized due to immediate feedback which informs the trainees of their defective practices before they become habitual.
8. Spaced distributive recalls are advantages as learning and maintenance of a skill are best accomplished through spaced practice over a period of time. In keeping with this principles, in micro-teaching, students are provided experience in various skills over a

considerable length of time.

Although, the aforementioned principles are vital for effective skills acquisition and student teachers performance, it should be noted that human being is dynamic in nature and environmental situation varies from time to time. Putting this at the back of mind would assist the student-teachers in diversifying their principles in the cause of micro-teaching in accordance with the prevailing situation.

2.7.2 Microteaching Process for Effective Skill Acquisition and Teacher Performance

The innovation of micro-teaching technique is also known as skill based teacher training program through which a teacher trainee practices one teaching skill at a time with a small group of students, for a shorter duration of time provided by the supervisor or fellow pupil teacher (Verma, 2003). The process through which a teacher trainee is trained to master teaching skills is known as micro-teaching process. Micro-teaching generally consists of two phases, namely the orientation phase and the practice phase (Passi,& Kulshretha, in Audu,2010).

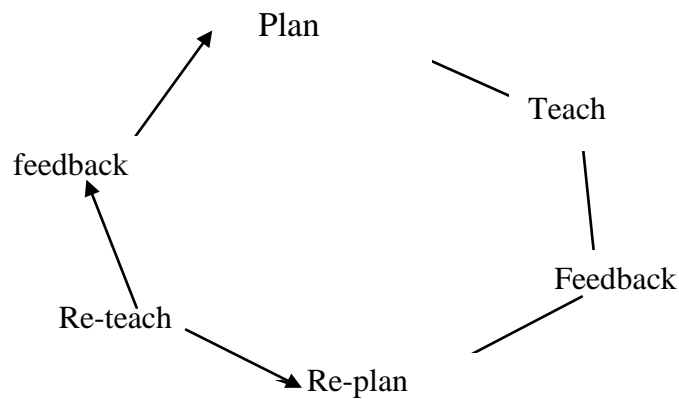
Orientation Phase:

The purpose of this phase is to bring a clear understanding of micro-teaching techniques, teaching skill, process of feedback, observation of the lesson, preparation of lesson plan and other elements of micro-teaching. Actually, the orientation phase forms a base to practice a particular teaching skill. This phase should therefore be completed carefully by ensuring that the trainees have understood the various elements of micro-teaching. For this purpose various criterion test should be administered to the trainees.

Practical Phase:

The practical phase is the main phase of the micro-teaching program. In this phase, trainees practices the required teaching skill. A trainee does so by following some six steps. Following of the completion of the steps means the completion one micro-teaching cycle.

This cycle may continue till the trainee mastered a given skill. Each step of the microteaching cycle is given below:



(Microteaching Cycle) Verma (2003p.151)

1. The trainee plans a short lesson in which he can use the skill which he wants to practice.
2. The trainee teaches the lesson to a small group of pupils which is videotaped or audiotape or observed and analyzed his lesson with the help of a supervisor or peers
3. Feedback is provided to the student teacher by videotape or audiotape recorder or someone who observed, and analyzed his lesson with the help of a supervisor. The supervisor attempts to make reinforcing comments about instances of effective use of the skill and draws the students' attention to other situations where the skill could have been exercised.
4. In the light of feedback and supervisors comments, the student-teacher re-plans the lesson in order to use the skill more effectively.
5. The revised lesson is re-taught to different but comparable group of pupils.
6. Feedback is again provided (re-feedback) on the re-teach lesson which is analyzed with the help of the supervisor.
7. The "teach-re-teach cycle may be repeated till adequate level of skill acquisition takes place (Verma,2003p.152).

Therefore, for a successful micro-teach to be realized Farrant and Dopemu in Audu (2010) provide the process of micro-teaching which include the following six steps:

1. The identification of useful teaching skills
2. The demonstration of these skills by an expert
3. The practice of these skills separately
4. Teaching of small group in order to reduce organizational problems
5. Immediate feedback
6. Eventual combination of the skills that have been learnt.

The first step: This step is diagnostic in nature in the sense that, the trainee-teacher under the guidance of the teacher now picks some skills for practice, as a result of his teaching-observation or viewing of an expert teacher on video tape.

Second step: In this step, the skills picked by the trainee teacher are then demonstrated for the trainee teacher. This demonstration could either be done physically by the teacher or through a videotaped playback of the teacher or another expert. Along with the viewing of the demonstration the teacher gives explanation on the requirements of the skills.

Third step: At this stage the prospective teacher makes several rehearsals on the skills with his mates or alone, depending on the skill of practice, in preparation for demonstration in front of teacher/supervisor and his colleagues.

Forth step: The trainee-teacher now practices the skills before the supervisor, the learners and other colleagues of his in the micro-teaching clinic with a camera videotaping the session.

Fifth step: At the end of the demonstration the trainee-teacher receives immediate feedback in three ways, these are:

- a. Feedback from the supervisor
- b. Feedback through the video tape playback
- c. Constructive criticism from the trainee-teacher's colleagues that are present.

As a result of the feedback, and as provided in Stanford Model, the trainee-teacher prepares for the second circle of the five processes above.

Sixth step: The concluding stage of the process is the eventual involvement of the trainee-teacher in Mini-Teaching. Here, the teacher is opportuned to conduct a full lesson using several skills before going out on teaching practice.

These diagnostic training guidance and the feedback process along with the nature of the environment setting justify the micro-teaching session as clinical and the environment as CLINIC.

In addition to the above mentioned steps, provision of adequate and relevant facilities in the micro-teaching clinic would be a major factor in ensuring effective implementation of these steps mentioned above.

2.8 Objectives of Microteaching for Successful Teacher Training Programme

As part of the commitment in ensuring that micro-teaching performs up to expectation in equipping a student-teacher with adequate teaching skills, the teacher education curriculum must be prepared to accommodate certain objectives which the student-teacher is expected to be achieved. The skills are designed and are expected to be learnt and be demonstrated for effectiveness and efficiency in the teaching and learning process.(Audu &Agbo,2010p.200-201), submitted that micro-teaching objectives are designed to:

1. Provide students with an opportunity to develop their understanding of concept of the teacher as a reflective practitioner in a controlled and secure environment;
2. continue the process of core skill acquisition through the process of guided planning, implementation and review of laboratory teaching practice case studies;
3. Motivate and instill confidence in the student teachers before they proceed on teaching practice in cooperative school;
4. introduce students to contemporary approaches to positive discipline and effective

classroom management;

5. allow student engage in an initial period of guided school based teaching practice;
6. allow students expand their analysis of the potential role to be played by ICTs in the development of core teaching competences;
7. equip students with the ability to define, create and maintain effective learning environment
8. develop in the student teacher the ability to be analytical, critical and objective in self-assessment of his/her teaching which hopefully can be transferred to normal classroom situation in his/her school, and
9. assist the student-teacher to be well dispose to supervision and the supervisor who should be seen as a friend concerned with improving his/her skill as a teacher.

Therefore, in achieving the micro-teaching objectives as stated above, the teacher-trainee will require the necessary and constant development in order to enhance effectiveness and efficiency toward training the student-teachers. However, these objectives could only be achieved only if adequate and frequent financial supports as well as provision of needed facilities are put in place in ensuring conducive environment for effective micro-teaching session.

2.8.1 Rational for Teaching Practice Exercise

Teaching Practice (T.P) is a crucial aspect of teacher education. Teaching practice provides students teachers with an opportunity for the acquisition of necessary professional skills through practical experience. This will prepare them for an effective professional practice after graduation (NCCE, 2012).Teaching practice exercise constitute one of the essential aspect that help in ensuring effective teacher education programme. It is through teacher education that the basis for good schools can be created, because no educational system can rise above the quality of its teachers. Teaching practice or practicum is a key

component of a teacher training programme .It should be the central pivot of the professional training (Gujjar,Naoreen ,Saifi & Bajwa, 2010).If the literature folklore of teacher education agree on one point ,it is that the student teaching experience or practicum is important (Farrel,2008). Also, there is no teacher education programme that can be said to be complete without an effective student teaching practice programme (National Open University of Nigeria NOUN,2008).

However, the current NCE Teacher Education reforms lay great emphasis on teaching practice. The present NCE teacher education reforms recognize teaching practice as a vital instrument towards preparing the student teacher to face the challenges attached to teaching profession. The new NCE minimum standards spell out categorically that T/P should be done in the first semester of the third year for a period of three months. Teachers must be assigned to student-teachers for mentoring before the micro-teaching for continuous support till the students graduate. Evaluative comments on the progress of the students should form part of the student's journal. The minimum standard lay further emphasis on supervision of teaching practice. Therefore, NCE awarding institutions must assign supervisors to student teacher based on their areas of specialization such as ECCE, PES, and so forth, to ensure that such supervision is focused, well-informed and based on the supervisors' practical professional skills and knowledge (NCCE, 2012).

Teaching practice is a major component of a teacher education programme (Adeleke, 2011). The main purpose of teacher education is to produce effective practicing teachers (Kalande, 2006). The question of how trainees can best be prepared to become an effective classroom practitioner has been in the mints a teacher educator worldwide for many years (Gorge, 2006).

A pre-requisite to teaching practice is a pass in micro teaching. Students who fail micro teaching shall not proceed on teaching practice. It is essential, therefore, that NCE-

awarding institutions ensure that method courses and their related content courses are planned together with micro teaching opportunities and that they are fully covered before teaching practice. The Centre for Educational Technology (CET) should play a major role in this respect.

Moreover, to ensure effective teaching practice exercise, all the NCE awarding institutions should ensure that teachers design and coordinate a comprehensive teaching practice preparation programme for student teachers. Such a preparation programme should present students teachers with a gradual building up of teaching practice preparation assignment. These assignments should require students teachers to develop lesson plans, learning materials, and assessment tasks which they can use when they are in a school during teaching practice. Micro teaching and classroom observation activities are also to be done. In this way, students teachers are prepared through their various courses in consistent and effective manner for a teaching practice experience that adds value and allows students teachers to develop and apply professional skills. NCE-awarding institutions are also expected to design and operate school based teachers professional development programmes that assist teachers in these schools to enhance their profession and also to become effective mentors. Meeting of various department within a school must be held at least twice in a semester to share ideas and provide peer-support for teacher NCCE shall carry out a regular quality assurance exercise to ensure that NCE awarding institutions comply with the teaching practice guidelines (NCCE, 2012). NCE awarding institutions shall be required to provide reports outlining the quality of the outcomes of teaching practice to NCE.

However, for teaching practice programme to meet its designed objectives, it is of paramount importance to allocate some financial provision to the students teachers on teaching practice in order to boost their moral in motivating them to be more pro-active in service delivery.

2.8.2 Responsibilities of the Supervising Teacher

During teaching practice programme, all supervisors have an important role to play in order to ensure quality or effectiveness. With regard to the school climate, they should support the student teachers give a considerable amount of feedback and collaborate with the students teachers even to the point of team teaching with them Fakomogbon, et al (2012). In the North Michigan University, the supervising teachers first responsibilities to the pupils are to continuously support the student teaching programme. He/she must prepare pupils to work with a student teacher and notify the parents that there will be a student teacher in the classroom provide a working material for the student teacher (a desk or table) and share responsibilities whenever possible, accepting him/her as a co-worker and professional person. The supervising teacher also acquaints the student teacher with pertinent school policies and regulations, philosophy, priorities, and assessment criteria; immediately involves the student teacher in specific classroom tasks plans a schedule with the student teacher for assuming responsibilities of the classroom, which will allow the student teacher for assuming responsibilities of the classroom which will allow the student teacher to assume increasing responsibility as he/she exhibits readiness to do so Wanton (2007).

With regard to teaching, the supervising teacher also requires the student teacher to be solely responsible for all planning, preparation, instruction and evaluation for a minimum of one day before the first progress report, one week before the Mid – Term Evaluation and an additional two weeks before the final evaluation to demonstrate the continuity of instruction and teacher accountability; guides the student teacher in preparing daily lesson plans, unit plans, and test, and approved and critique all plans before they are taught; assists in understanding and applying evaluation techniques demonstrates a variety of effective teaching techniques and arrange for visits to other classrooms from time to time guides the

student teacher in developing and understanding the skills of self – evaluation, evaluates the quality of the students teachers performance and engage in frequent conferences with the student teacher to ensure continuous progress and/or early identification of problems encourages the student teacher to participate in community activities helps the student teacher relate theory to practice and keeps a record of attendance and tardiness of the student teacher. If excessive absences or tardiness or observed, the cooperating teacher reports this to the university supervisor or Director of Field experiences and prepares and submits evaluation reports according to schedule should work closely with associate teachers, support the students teachers, and visit the school sites often.

Supervision is the core of teaching practice exercise. Valid information on student teachers' performances is obtained only through the supervision of their live teaching. The role of supervisors therefore is of great importance in ensuring quality. Gujjar, Naoreen, Saifim and Bajwa (2010) believed that a university supervisor's duty is not only to evaluate the lessons of teaching practice, but to use his/her abilities to make this experience results oriented. He/she should have meetings and conversions with teacher educators, experienced teachers of the institution, educationists, concerned school head teachers and other teachers. Introductory lectures should be arranged before the departure of students' teachers to the practicing schools in order to acquaint the students teachers about the preparation of lesson plans and other assigned activities. During Teaching Practice it is the duty of supervisors to supervise their lesson, other assigned activities, carry out guidance and counseling as well as provide the student teachers with feedback to enable them to criticize and reform themselves. According to North Michigan University, university supervisors serve as a liaison between the schools and the university, cooperate with school personnel in a manner that will enhance the partnership between the school system and the university, identify and recommend potential supervising teachers, recommend assignments of student teachers, initiate

conferences with student teachers, supervising teachers and others concerned sixth student's progress, all aimed at enhancing the continuing growth and quality of the student teaching programme.

Similarly, NCCE (2012) viewed that the supervisors role majority is to develop the needed teaching skills and competencies in the student teacher to enable him demonstrates the professional experience effectively. The teaching practice supervisor is expected among other things to be:

- ✓ A model in all ramification
- ✓ Able to utilize methods and strategies that put the students teachers and their pupils at the centre of learning.
- ✓ Knowledgeable in your subject matter and versatile in the facilitation of learning.
- ✓ A prudent manager of time and resources.
- ✓ Able to plan and design programmes that will facilitate effective teaching practice.
- ✓ Able to use appropriate resources to stimulate and facilitate the development and assessment of teacher trainers during teaching practice.
- ✓ Able to observe and assess students teachers objectively (NCCE, 2012).

2.8.3 Duration of Teaching Practice

Teaching practice exercises serve as an avenue where the students teacher showcase and develop the acquired experience upon the use of teaching skills. The duration of teaching practice varies amongst institutions and/or from country to country. Some programmes provide for brief periods of classroom placement, others have yearlong internships, with student being assigned regular teaching obligations. In the University of Puerto Rico the clinical experience requires a minimum of 300 hours in a semester Nakopodia (2011), that the National Commission for Colleges of Education (NCCE) in Delta state Nigeria recommends a period of twelve weeks for the teaching practice and this is the practice in

most colleges of education. In Pakistan teaching practice duration is very short it is about 4 to 8 weeks or teaching of 60 to 75 lessons (Gujjar, Naoreen, Saifi & Bajawa, 2010). Some institutions manage to send their students teacher a day per week while some manage a block of practicum (Perry, 2004). The practicum of Laurentian University in Canada comprises three different elements pre practicum placement (PPP), initial placement (IP), and Profession Year Practicum (PYP), PPP comprises 120 hours in total.

In a study of practicum in nine universities around the world, Lu and (Manzar & Abbas 2013; Toman, 2017), report that the university of Glasgow follows a more integrated practicum structure. In the first semester of the first year, the student teachers go to schools once in every week for time of six weeks. In the second semester of first year, they experience four full weeks in a middle or primary school. Again before the first semester and second year (overall 3rd semester). The students go to school for three full weeks and then one day every week for four weeks in the second semester of second year (overall 4th semester). Before the first semester of third year the students go to schools for four full weeks with the focus on moral and religious education. They again have four full weeks practice in the second semester of that year with the focus of expressive arts. In the last semester of the last year they have to teach in the schools for ten full weeks focusing on science.

In another university of UK, the university of Edinburgh, the practicum is consisted of four phase; one in each year. In the second semester of first year there is a five weeks nursery school experience in the second semester of second year they offer school experience of six weeks for early stages; in the first semester of third year there is practicum for middle and upper stages for ten weeks and in the last semester of the programmed (2nd semester of 4th year) there are 11 weeks for practicum at a school of the student – teacher's choice.

The university of Brunei Darussalam also offers a developmental kind of practicum structure both in competence and in duration of time spent in the field. Teaching practice 1 is offered

in the second semester of second year s teaching assistantship for three weeks. Teaching practice 2 is offered in the second semester of 3rd year for seven weeks and teaching practice 3 is offered in the second semester of fourth year for fourteen weeks.

The practicum structure of the university of Hong Kong offers three practicum experiences throughout the programme. Etching practice 1 is offered in the second year for three weeks which has six credit hours; teaching practice 2 is offered in third year for eight weeks of 12 credit hours; and teaching practice 3 is offered in fourth year for eight weeks of 12 credit hours.

In most of the Chinese Normal universities the practicum experience is offered mostly in the 7th semester (beginning of 4th year). The duration of the practicum is from 8 to 10 weeks (Chen & Mu, 2010)

2.8.4 Guidelines for Effective Teaching Practice

For an effective teaching practice exercise to be actualized, the National Commission for Colleges of Education (NCCE, 2012) stipulated that:

- a. NCE awarding institutions provide a comprehensive preparation programme for teaching practice by effectively coordinating content and method courses and linking these meaningfully with micro teaching opportunities;
- b. Micro teaching is coordinated by the school/department of education in collaboration with relevant departments;
- c. Teaching practice shall take place in the appropriate school content area for example ECCE, primary 1-3, 4-6 and JSS 1-3;
- d. Student-teachers must go to their practicing schools with a set of prepared lesson plan, learning materials and samples of assessment tasks;
- e. Student-teachers shall participate in all activities of the school when on teaching practice;

- f. Each student teacher shall be assessed at least ten times during the teaching practice period.
- g. NCCE is to ensure that NCE awarding institutions comply strictly with the use of teaching practice assessment form;
- h. Supervision of teaching practice exercise will be carried out by both the internal and externals supervisors and Head of Schools;
- i. Student teachers shall keep a student reflective journal as part of the teaching practice assessment.

2.8.5 Leadership Role for Positive Change in Teaching Practice

The possibility of igniting change requires realistic vision which teachers can contribute to via constructive problem talk (Robinson, & Timperly, 2007, p 253). It might focus on higher teaching standards, greater creativity or a more stimulating curriculum. Timperly (2008, p 22) pointed out the role of leaders in developing a vision of new possibilities. She remarks that a vision can serve as a powerful catalyst for teachers to engage in new learning. OPM (2008), reporting on teachers as innovative professionals, identifies having a clear vision as a condition for leader led innovation (p 22). It is important to know what one's school is trying to achieve through its innovation. A roadmap should follow, indicating the steps needed to meet the vision. Robinson and Timperly (2007) in their reviewing leadership, observe the importance of direction or goal setting. They refer to this process as creating a discrepancy between what is currently happening and some desired future state (p 250). This discrepancy, they note, creates constructive discontent that motivates goal relevant behaviour (p 250). Timperly (2008) warns against the fragmentation of effort through the introduction of competing reforms. And also for innovation or changes to take place, the school must be theoretically coherent with new learning. A roadmap might require a new driver, according to OPM (2008s) & Mourshed et al (2010). OPM argues that changing the leadership of a school

can increase motivation which will lead to improve performance for effective delivery. However, it is not just changing the leadership of the school and its curriculum, but the appointment of the committed leaders who would contribute in ensuring positive in teacher practice exercise.

2.9 Microteaching Skills

The following are some of the micro-teaching skills identified by Aggarwal (2009p.52) in which the researcher intends to review in this study. These are:

- i. The Skill of Reinforcement
- ii. Skill of Set Induction
- iii. Skill of Instructional Materials
- iv. Skill of Classroom Control
- v. Skill of Chalkboard Management
- vi. Skill of Closure
- vii. Skill of Stimulus Variation
- viii. Skill of Questioning

- The Skill of Reinforcement

In the process of teaching and learning, the classroom teacher is by all means expected to adopt appropriate steps towards ensuring effective achievement of learning objectives. The skill of reinforcement constitutes one of the major teaching skills which arouse the learners' attention toward the task of teaching and learning.

Reinforcement has been conceived as any event that increases the probability of a response occurring again or be suppressed. Students behavior can be reinforced through the use of reward and punishment. There are basically two forms of reinforcement, namely positive reinforcement which generate a kind of a stimulus that when presented following a

respond increases the probability of the response occurring again. The second type is a negative reinforcement which is a stimulus which decreases the probability of the learners to respond during the course of teaching and learning (Oyegwe in Adepoju (2008).

The skill of reinforcement has also been described as anything that increases the probability of occurrence of a response or behavior that precedes it. Oyegwe and Ughamadu in Adepoju (2008) further stressed that in a layman's view, reinforcement simply means a reward which is used to strengthen or weaken the association between a stimulus and a response. In the classroom setting, a teacher has a lot of reinforcement straggles at his disposal. These include facial approval, smiling, praising, nodding, asking students to clap, presentation of gift items, among others (Ugwu in Eze ,2013).

Reinforcement as a method that result into pleasant experiences are called positive reinforcement, while the stimuli providing unpleasant experiences can be termed as negative reinforcement. Thus, in the classroom teaching positive rein forcers are used for strengthening the desirable responses or behavior of learners and negative rein forcers for weak or eliminating the undesirable responses or behavior,(Verma & Sharma, 2003).

The teacher could use positive verbal reinforcement in the form of praise words like "Good" "Yes", "Correct", "Right", "Very good", "Splendid", "Excellent", sometimes he may encourage the pupils by verbal prompts like carry on", think again" etc. The teacher employs positive non-verbal reinforcement in the form of gestures expressing Pleasants feelings like "smile", and "nod". Providing encouragement to the pupils; the teacher may also use extra verbal reinforcement such as "um-um", "Aaah, "hm-hm", it may be noted that extra verbal reinforcement are neither properly verbal nor non verbal. If the teaching situation so demands, the teacher may use negative verbal reinforcement in the form of discouraging words like "no", it is wrong, incorrect, or a sarcastic remark. Furthermore, the teacher may use negative non-verbal reinforcement in the form of gestures conveying unpleasant feelings

like frowning, staring, and looking angrily at the responding pupils. Reinforcement is seen as a consequences that increase the nature rate of a behavior. The use of reinforcement or rewards that encourage student to repeat positive behaviors. It is a critical component of behavior modification of the learner. Reinforcement are very personal, a teacher may have to try various reinforcement with a specific student before finding the most powerful one (Brown, 2010; Addison,&Tosti,2012).

Reinforcement is related to the law of effect propounded by Thorndike. The law states that learning which is accomplished by satisfaction on the part of the learner is likely to be more permanent than that which is accomplished by dissatisfaction. People tend to do the kind of thing they find satisfying and avoid things that are painful. Reinforcing a response or a set of responses increases the likelihood that the particular behavior will re-occur. Reinforcement increases the response frequency and facilitates learning. However, it can be negative or positive. Positive reinforcement emphasis or praise and such positive modes of showing appreciation for the good thing a person has done or for a correct response which a student has given (Audu,2010) . It is a variable in a teaching learning situation and motivates students learning and contribution in classroom discussion,(Ughamadu in Audu,2010),Positive reinforcement is of much importance to the classroom teacher as it assists him to capture the students attention and have them highly motivated. Ughamadu further added that, reinforcement it captures the students attentions and have them highly motivated, it increase their verbal responses, and it increases their participation in classroom discussion, as well as improves the students general attitude towards the teacher and the school subjects. Similarly, Lehigh University (2014) collectively viewed Reinforcement as a way to increase or maintain behavior. Furthermore, praise which is often easy to give can be a very powerful form of reinforcement. Negative reinforcement is characterized by a decrease

in the number of responses and as a consequence, it may be painful or it may remove a pleasant stimulus.

In order to ensure adequate reinforcement toward ensuring effective facilitation of teaching and learning process, it is necessary to apply some following principles. These are:

- The closer reinforcement follows the desired behavior. The more influence it has on the behavior, while the longer reinforcement is delayed, the less impact it will have.
- Paying attention to students deprivation state and condition in which an individual has a strong need and desire for a particular thing at a particular time can have positive influence on the behavior output.
- In delivering verbal reinforcement, teachers should be careful to ensure that the praises correspond to the responses made by the students. If students' response is particularly outstanding, the teacher may make such exclamation as "excellent" "very good" "fantastic" or "tremendous". This can be given different connotations by simply varying the tone or by employing different non-verbal feedback such as smiling, nodding or gesturing with the arm and hands (Audu, 2010p.215).

From the foregoing, it is becoming clear that reinforcement will not only provide the learner with pleasant feelings, but it will also make the lesson lively and attractive which consequently could lead to the attainment of the designed goal. Therefore to ensure effective and successful teaching and learning process, a teacher is by all means expected to apply the most appropriate method of reinforcement as the need arise.

- The Skill of Set Induction

Teaching skills constitute the basic ingredient needed for an effective transmission of learning experience by the teacher in the achievement of the designed objectives. Set induction being one of the essential skills of micro-teaching is usually designed to applaud

the level of learners curiosity, and thereby reinforced and direct the learners for effective teaching as well as learning acquisition.

Set induction is simply the introductory step or beginning step of a lesson. It is a teacher's device to open the room of knowledge. The practical aspect of set induction can be illustrated by people everyday experiences (Eze,2003). When one talkon such matters like examination, dramatic performances, athletics and battles one finds out the importance of preparation. Audu (2010) viewed set induction as the cognitive and effective rapport between the teacher and his pupils. In the cognitive sense, it usually involves the teacher evolving a very clear starting point for an intellectual exercise. In the effective sense it demands the generation of state of interest that is likely to lead to involvement of the pupils in a learning episode to follow.

Set induction is also viewed as predispositions to respond in some prescribed way towards a given group of learning experience. Amajironwu in Audu (2010) sees set induction as a pre-planned action by the classroom teacher to arouse the interest of his pupils, create an atmosphere of curiosity and motivation in a classroom and thereby energizes, directs and sustains the learners interest throughout the lesson. Therefore, in order to ensure effective inducement by the student teacher for effective teaching and learning to be made, the teacher should provides motivating experiences that would arouse the interest and enthusiasm of the learner in the lesson. Learner enthusiasm should make them to be able to visualize and actualize the relationship between goals and learning experience. Quite often, a good beginning is needed if the pupils are to be aroused and motivated. Set induction is a process of capturing the attention of the pupils, prepare their minds and motivate them to receive the new knowledge imparted to them naturally and spontaneously Erma (2014).It is conceived (anticipatory set) as step taken by a teacher to begin a lesson or other classroom activity. Erma, (2014) added that if adequately used, it will help to arrest or gain the attention of the

learners and prepare them into a state of readiness, as part of the measure to ensure good set induction is by putting the lesson in context. This can be done by asking questions to assess prior knowledge/skills and review previous lesson and link it to what is to be learnt in the class. From the above submissions, it would appear to that set-induction is a parameter employed by prospective as well as the student-teacher in discharging their duty for effective service delivery (Yusuf , 2013).

Going by the above submissions by Scholars, Set induction could be defined as a captivating skill used by teachers in arousing learner's interest/attention towards effective acquisition of learning experience. The information as well as the skill of set induction skill is acquired by student-teachers as well as the in-service teachers at the teacher training institution as contained in the curriculum for teacher professionalization. In conclusion, it is highly imperative to note that, set induction when properly utilized provides an enabling environment for learners to be captivated right from the beginning of the lesson. However, teachers need to be encouraged in order to effectively incorporate the skill of set-induction in the classroom activities by providing them with an enabling environment.

- The Use of Instructional Materials

Instructional materials are teaching materials which are expected to help the teacher in interpreting ideas and make understanding not only easier but retentive and effective. The teachers are by all means expected to familiarize themselves with varieties of such materials. Nwosu, in Usman(2007) defined instructional materials as resources to include facilities, apparatus, consumables such as science equipment and chemicals, textbooks, supplementary books, journals, periodicals and other forms of reference materials. They are also considered as objects of study which facilitate the teaching process and bring about success in the classroom. These include both human and material resources that bring about the desired changes that ensure the learner has imbibed the school culture (Usman,2007).

Effective use of instructional materials help to a large extent to improve students' knowledge, abilities and skills, to monitor their assimilation of information and to contribute to their overall development and upbringing. There are three basic types of instructional materials: The first type includes such objects, and phenomena as minerals, rocks, raw materials, semi finished and finished manufactured articles and plant and animal specimens,(Prek-12 report,2014).The second type of instructional materials includes the three dimensional materials (castings, globes and experimental models),the two-dimensional materials (Chart, Pictures, Photograph, Maps, Diagrams, and drawing), and audio visual materials (Motion, Pictures, Films, Clips, slide sequences, Records, and Tape recording, Television broadcast).Others are audio vision materials, including the resources of films, radio and television. The third types of instructional materials are written descriptions and they include scientific, scholarly, reference and methodological teaching aids, textbooks and so forth, (Prek-12 Report, 2014). Without adequate and appropriate use of application of instructional resources, learning may not take place effectively. It is in that regard that Grant in Yakubu ,(2012) and Fakomogbon, et al (2012) stressed that a teacher can only achieve his objectives in teaching if enough resources are available to him and the learners. The use of instructional materials could be done in three ways:

- a. Use of materials at the beginning of the lesson, i.e. when introducing the lesson, in order to arouse the interest of the learners.
- b. Use of materials at middle of the lesson so as to develop the lesson demonstrates the concepts and stimulate discussion.
- c. The use of the materials by the end of the lesson in order to enable the teacher to summarize and evaluate the lesson toward focusing on one aspect.

The instructional materials are categorized into three (3) groups, these are:

1. Audio materials.

2. Visual materials

3. Audio-visual materials.

- The audio aids are teaching equipment which deals with the sense of hearing. Adequate and appropriate use of these aids will no doubt simplify knowledge dissemination and as well acquisition of learning experience. There is a variety of aids which will fall under this category, among which are radio, tape recorder among others.
- Visual aids consist those aids which are used through the sense of seeing. These are objects specimen, models, charts ,field trip, e.t.c, the appropriate use of this will not only help in making a concept clear but also helps the students to develop a better mental image or structure of learning.
- Audio visual aids: combine the two sense organs; the sense of seeing and hearing. The aids under their category are television, computer, and projector e.t.c. These materials offer enormous contribution in the transformation of theoretical idea into reality (Goktas et al 2009;Yakubu, 2012; Zamani, 2013p.13).

Educational resources are used to improve students' knowledge, abilities, and skills, to monitor their assimilation of information and to contribute to their overall development and up bring(Ishola,2015).

There are three basic types of instructional materials: concrete objects, including objects from the world of nature; representations of concrete objects and phenomena; and descriptions of such objects and phenomena by means of the signs, words, and sentences of natural and artificial languages.

The first type of instructional materials includes such objects and phenomena as minerals, rocks, raw materials, semi finished and finished manufactured articles, and plant and animal specimens. Included among these materials are reagents, and apparatus for producing

chemical and other reactions and for demonstrating and studying such reactions during laboratory sessions. Also included in the first group are materials and equipment for students' expeditions and other travel well, as supplies, instruments, and equipment for production training and for courses in drafting and the representational arts. Among such supplies, instruments, and equipment are wood, metal, plastic, and glass objects, measuring and monitoring instruments and equipment, equipment for the assembling and finishing of various products, and machines and machine tool second type of educational materials, that of representations of actual objects and phenomena, includes three-dimensional materials (castings, globes, and experimental models), two-dimensional materials (charts, pictures, photographs, maps, diagrams, and drawings), and audiovisual materials (motion pictures, film clips, filmstrips, slide sequences, dispositive, transparencies, records and tape recordings, and radio and television broadcasts). Audiovisual materials, including the resources of films, radio, and television, help acquaint; students with the achievements of modern science, technology, industry, and: culture and with phenomena that are inaccessible to direct observation. Audiovisual materials also acquaint students with early periods of history and: with distant places in rid and in space. Such materials elucidate natural and social phenomena and enable students to study the inner world of matter and the internal motion of waves, elementary particles, atoms, molecules, and living cells.

The third type of instructional materials, that of written descriptions, includes scientific, scholarly, reference, and methodological teaching aids, as well as textbooks, books of problems and exercises, books for recording scientific observations, laboratory manuals, manuals for production training, and programmed textbooks.

Another type of instructional materials is technological instructional media. Among these are equipment for the transmission and assimilation of information recorded on film or on phonograph recordings: film projectors, tape recorders, phonographs, and television sets.

Monitoring devices include punched cards and various types of automatic apparatus. Teaching machines include language-laboratory machines, closed-circuit television systems, and computers.

Instructional materials are made to comply with functional, biotechnological, aesthetic, economic, safety, and hygienic requirements. The most effective use of education equipment is achieved by means of centralized study facilities. It is important to be in the know that instructional materials would not only help in knowledge assimilation or help in the acquisition of knowledge, but help to a large extent in facilitating and motivating both the teachers and learner thereby ensuring the designed objective achievable.

Principles for the use of Instructional Materials

The use of any instructional materials must be planned, based on its ability to support a specific point in a lesson. A simple framework can be used to determine if and where instructional materials are necessary clearly establish the lesson objective. Be certain of what is to be communicated. Gather the necessary data by researching for support materials. Organize the material into an outline or a lesson plan. The plan should include all key points that need to be covered. This may include important safety consideration (Agbo, 2010).

The materials should be concentrated on the key points. Materials are often appropriate when long segments of technical descriptions are necessary, when a point is complex and difficult to put into words, when teachers find themselves forming visual images, or when students are puzzled by an explanation of description.

Instructional materials should be simple and compatible with the learning outcomes to be achieved. Obviously, an explanation of elaborate equipment may require detailed schematics or mock ups, but less complex equipment may lend itself to only basic shapes or figures.

Since instructional materials are normally used in conjunction with a verbal presentation, words on the instructional materials should be kept to a minimum. In many cases, visual

symbols and slogans can replace extended use of verbiage. The teacher should avoid the temptation to use the instructional materials as a crutch. The tendency toward unnecessarily distracting artwork also should be avoided.

Instructional materials should appeal to the student and be based on sound principles of instructional design, if it is practical, they should encourage students participation. They also should be meaningful to the students, leading to the desired behavioural or learning objectives, and provide appropriate reinforcement. Materials that involve learning physical skills should guide students toward mastery of the skill to task specified in the lesson objective.

Instructional materials have no value in the learning process if they cannot be heard or seen. Example, recordings of sounds and speeches should be tested for correct volume and quality in the actual environment in which they will be used. Visual materials must be visible to the entire class. All lettering and illustrations must be large enough to be seen easily by the students farthest from the materials. Colours, when used, should provide clear contrast and easily be visible.

The usefulness of instructional materials can be improved by proper sequencing to build on previous learning. Frequently, good organization and natural patterns of logic dictate the sequence. However, use of standard materials, including a syllabus, is recommended. Sequencing also can be enhanced simply by using overlays on transparencies, stripping techniques on charts and chalk or marker boards and by imaginative use of magnetic boards. Sequencing can be emphasized and made clearer by the use of contrasting colours.

The effectiveness of instructional materials and the ease of their preparation can be increased by initially planning them in rough draft form. Revision and alteration are easier to make at the time than after their completion. The rough drafts should be carefully checked for technical accuracy; proper terminology, grammar, spelling, basic balance, clarity, and

simplicity, instructional materials should also be reviewed to determine whether their use is feasible in the training environment and whether they are appropriate for the students.

In practice, the choice of instructional materials depends on several factors. Availability, feasibility, or cost may impose realistic limitations. The number of students in a class and the existing facilities are other considerations. In some school situations, the designers of the curriculum determine the use of instructional materials. In this case, the teacher may have little control over their use. On the other hand, an independent teacher may have considerable latitude, but limited resources. Often, teachers must improvise and adapt to the existing circumstance in order to incorporate quality instructional materials.

The guidelines for instructional materials are summarized as follows:

Support the lesson objective.

- ❖ Be student-centered
- ❖ Contain useful and meaningful content that is constant with sound principles of learning.
- ❖ Appeal to students
- ❖ Maintain student participation, when appropriate
- ❖ Lead students in the direction of the behavior or learning outcomes specified in the learning objective.
- ❖ Provide proper stimuli and reinforcement
- ❖ Contain quality photos, graphs and text, as required.
- ❖ Then check prior to use for completeness and technical accuracy.
- ❖ Contain appropriate terminology for the student.
- ❖ Be properly sequenced.
- ❖ Be easy understand
- ❖ Include appropriate safety precautions.

The above discourse explicate the significance of instructional materials towards effective teaching and learning process. It shows that appropriate application of instructional materials in teaching and learning provides an enabling ground in transforming the theoretical aspect of the lesson into practical, thereby making the lesson more captivating and attractive as well. Therefore, in teaching and learning process, instructional materials are inevitable in a bid to accomplish the desired goal.

- The Skill of Classroom Control

The skill of classroom control has to do with the teacher employing a effective techniques towards redirecting or refocusing the attention of a learner who has been distracted by an unrelated element in lesson. Gootman (2008), opined that classroom control/management as a term is used by teachers to describe the process of ensuring that classroom lessons run smoothly despite disruptive behavior by students. It is possibly the most difficult aspect of teaching for many teachers, indeed experiencing problems in this area causes some to leave teaching altogether. In 1981, the US National Educational Association reported that 36% of teachers said they would probably not go into teaching if they had to decide again. A major reason was “negative student attitudes and discipline”. To ensure effective classroom management, the teacher must be consistent, and skillful. They should establish classroom rules regarding bullying and harassment and enforce them. In-appropriate behavior should draw consequences that are administered immediately and calmly. Informing the child about the reason of the consequences administered immediately (White, in Orlich & Albert (2010; Arevalo, 2017). Also, research shows that the time a teacher has to take to correct misbehavior caused by poor classroom management skills results in a lower rate of academic engagement in the classroom. From the students’ perspective, effective classroom management involves clear communication of behavioural and academic expectations as well

as a cooperative learning environment, Douglas, Booply and Berliner, cited in Gootman (2008), report seminal research on the first day of school activity selection and sequence of novice middle school teachers' component with experienced and successful classroom managers organized their activities on the first day of school consistent with the emerging needs of the students by creating conducive environment, students are much more likely to want to do well. Ideally, this transforms a classroom into a community of well-behaved and self-directed learners. Classroom management is also closely linked to issues of motivation, discipline and respect. Methodologies remain a matter of passionate debate among teachers approaches vary depending on the beliefs a teacher holds regarding educational psychology. A large part of traditional classroom management involves behaviour modification, although many teachers are using behavioral approaches alone as overly simplistic. Many teachers establish rules and procedures at the beginning of the school year. According to Gootman (2008), rules give students concrete direction to ensure that their expectation becomes a reality.

Among the deducible facts from the above discussion, is that classroom control is seen as a systematic process of arranging, managing as well as coordinating the learners, structuring the learning materials for the actuality of effective teaching and learning process. However, with the current increase in the number of pupils per class, appropriate use of skill of classroom management by the student-teacher would help to a large extent in ensuring conducive atmosphere for effective teaching and learning to take place, most especially during teaching practice. Also, area research indicates that teachers action in their classrooms have twice impact on student achievement as assessment policies, community involvement, or staff collegiality; and a large part of teachers actions involves the management of the classroom,(Marzano & Marzano,2003).Similarly, as contributed by many scholars on

classroom management, it is important to add that proper arrangement of pupils in the classroom based on height is a factor to be reckoned with in classroom management.

- Effective Use of Skill of Chalk Board Management

The success of teaching depends to a large extent on the effective application of the use of skill of chalkboard management by the student-teacher in teaching and learning process. Very often, it is also one of the most misused aids. Many teachers seem to forget the availability of a versatile tool close at hand. Chalkboard is a real asset in class teaching as it serves to make direct appeal to a child's senses and strengthens his retention. The way of using blackboard/chalkboard is called skill of using blackboard, (Rolyer, 2003; Agina-Obu, 2005; AFT,2008;Height,2008;Trotter,2008; Holmes,2010). The components of the skill of using blackboard are (a) writing legibly on the blackboard using different letters which are large enough to be read by pupils and adequate space in between the letters (b) neatness on the blackboard work which can be achieved by retaining only relevant matter under focus and by seeing that there is no overwriting (c) appropriateness of written work in respect of meaning, brevity, simplicity and continuity in the points being presented, underlining important words using colored chalks and developing the necessary and proportionate diagrams along with the lesson(Sampath,Panneerselvam, & Santhanam, 2006).

Similarly, Bhagoliwal and Peter (2008) see chalk board as the most widely used learning resource. As a result of the importance of the chalkboard, it should be ensured that it shall possess a good quality, and a functional size. Be fixed at the middle of the wall, and be maintained regularly. Chalkboard as a plain surface at the disposal to write, to draw and calculate to make the learner learn a particular concept of knowledge. It is a visual aid at the disposal of a teacher which assists him like a stick in hand of an old man. Chalk boards are of different kind, most for the construction of chalkboard, wood, slate, glass, plastic paper and cement mixture were used (Verma & Shama,2003; Agina-Obu,2005; Holmes,2010).

Types of Boards: There are different types of boards available for educational purposes. In brief all are meant to be used for efficient use by the teacher to meet specific educational purposes. The following are its type:-

1. Chalkboard or blackboard
2. Template and stencil board
3. Yellow or olive green board
4. Magnetic board
5. Flannel board
6. Bulletin board
7. Display board
8. Computer board (Verma & Sharma,2003).

From the researcher's point of view, chalk board is a teaching material which the teacher uses for note to pupils through writing, drawing or in presentation for effective teaching and learning. When effectively utilized by the teacher, it will help in achieving the designed objective. It is on this basis that a report by UNESCO (2007a) emphasized that the National Government had to recruit and train teachers on a vast scale to achieve the EFA goals. The report estimated that the world will need appropriately 18 million additional primary teachers by 2015.

Skills Involved in Effective Use of Chalkboard:

Effective use of chalkboard by a teacher is a most complicated job because of that reason, an efficient use of chalkboard requires a lot of patience, practice, insight and certain fundamentals of writing techniques. Therefore, in order to use chalkboard efficiently, a teacher needs to learn graphic rather than the grammar of lines. The grammar of lines is an appropriate medium to communicate non-verbal information with greater speed and accuracy. For instance, the use of symbols on the road side helps a driver to understand the

modes of driving on a particular route. In the same way, the grammar of graphic helps a teacher to use chalkboard. The grammar of lines that is, the use of horizontal lines can communicate the sense of vastness, the use of vertical lines on the other hand indicates greatness, while the use of oblique lines indicates the speed; in the same way the use of zigzag lines indicates the rhythm. Furthermore The use of curved lines communicate the beauty, and the use of thick lines indicates great force. Similarly, when a teacher uses thin lines on the board it means he wants to indicate the delicacy or sharpness of a thing. In this way a teacher is using grammar of lines.

A teacher while using chalkboard has to learn to draw:-

1. Straight lines
2. Squares, triangles and proportions
3. Headlines and sub-lines
4. Essentials lines and so forth.

At the same time, a teacher has to develop the following abilities:

1. Ability to learn to perceive thing: a teacher can use chalkboard effectively when he is able to observe things closely and really see the details of such things, only then he is able to train his hand to set down accurately, what his eyes see. The good things is that the chalk board will become pleasure rather than a labor.
2. Chalk board in practical work: chalkboard writing has certain rules and a teacher can prove himself when he applies the following rules:-
 - i. Always use firm, clear and bold lines.
 - ii. Draws lines reasonably quickly that is the speed of writing should be moderate.
 - iii. Makes work as comprehensive as the chalk board allows.
 - iv. Keeps the chalkboard work simple and systematic.

- v. Writes on the chalk board when it is essential only. A teacher should not write everything on the blackboard otherwise, the very use of chalkboard becomes futile. (Verma & Sharma, 2003; Holmes, 2010).

Inferentially, scholars posit that no matter the degree of mastery of subject matter, a teacher must acquire the necessary skills that will enable him utilize the chalk board effectively in the process of impacting knowledge. Few among the requisite skills he needs to include how to draw straight lines, squares and the ability to summarize points in precise form through sequential order.

Generally, it is very important by the teacher to always make use of stick or long ruler in pointing information written on the board, and be devoid of barking the learners during teaching. Studied have shows that learners always learn by seeing what is taking place on the board. Strict compliance to the above will create an enabling environment for the student-teachers to demonstrate the skill in focus during practical teaching.

The Skill of Closure

The term closure is a teaching skill which the teacher uses to focus students attention to the completion of a specific sub-task, lesson or unit of instruction. Closure as a skill is observed in most cases during the evaluation or conclusion of a lesson by a teacher during the teaching learning process. Closure has been considered as identification of major points which demonstrate an accomplishment of a given task (Wanton, 2007).

According to Barrett (2007) the central idea of closure concerns the teachers ability to integrate the major points of a lesson to establish a cognitive link between the familiar and the new which provide the students with a feeling of accomplishment. Closure is an act of teacher ability towards solidifying effort upon the major points of the lesson which provides the learners with a sense of direction in teaching and learning process. In this regard

Closure is also referred to as the ways of closing the teaching and learning process. In this regard, Yusuf (2013) provides the following kinds of closure: (1) Instructional closure (2) cognitive closure (3) Social closure. Closure according to (Audu & Agbo,2010), refers to those actions by the teacher that are designed to bring a lesson to an appropriate end. It can also refer to the teacher's ability to "wrap things" up at appropriate points in a discussion or instructional activity. The teacher uses closure to help students bring things together in their mind in order to make sense out of what has been going on during the course of the presentation.

Types of Closure

- Cognitive closure: This is concerned with the pulling out of the major points in a lesson segment by way of recapitulating what has been learnt and drawing their attention to important areas in the lesson.
- The social closure: This is directed towards giving the students a sense of achievement at the end of an activity or performance.

Closed the lesson with a brief review or summary, if student are able to provide the summary so much the better, for it shows that they have really understood the lesson, (Stella & Audu, 2010p.106).

Its functions

The following are some of the functions of closure which contribute to a large extent in ensuring effective achievement of the designed objectives, these are:

- a. Closure enables students to understand and master relationships among the various ideas, concepts, principal issues and activities covered in the lesson.
- b. It is used to provide students with feelings of achievements. It focuses attention essentially on the most vital points of the task or the silent facts, attitudes, values and skills which are made clear in the students' minds.

- c. It is achieved when the major purpose of the lesson has been learned. Here, it is intended to ensure that the new knowledge can be related to past knowledge during the development of the lesson(Audu, 2010p.107)

Its Purpose

Audu (2010), proposed three (3) major purposes of closure, these are to:

- i. Draw attention to an end or segment of a lesson: Many teachers tend to neglect the development of this important skill during their teaching. Effective learning depends on the effective sequencing of lesson presentation, as such, there must be opportunity provided for review and feedback. This must be carefully planned for so that closure proceeding could be initiated well before the activity is due to end.
- ii. Organize learning: Another purpose of closure is to help organize student learning. It is the teacher's responsibility to tie all the activities together into a meaningful whole so that students would not be left with a feeling of incompleteness and frustration.
- iii. Reinforce major learnt facts: Closure can be used to consolidate or reinforce the major points of focus which students have learned. It is important at this point for a teacher to refocus briefly on the key ideas or processes presented in the lesson. The ultimate objective here is to help students retain the important information presented in the lesson and thus increase the probability that they will recall and use the information presented at a later time.

From the researcher's point of view, closure is a systematic process which the teacher uses to provide emphasis on the major point of the lesson towards accommodating the fast and slow learners in the acquisition of the designed goal. Based on the above, appropriate use of skill of closure helps greatly to draw the attention of the learner, consolidate, reinforce the major point of the lesson, thereby help in achieving the designed objects.

- The Skill of Stimulus Variation

Stimulus variation constitutes a teaching skill which aids in attaining effective teaching and learning process toward achieving a desired objective. According to Hardciandan (2010), stimulus variation refers to the process of sustaining the attention of the pupils by the teacher through the use of hand gestures, head and body movements, use of certain verbal statements like “look carefully”, listen and watch what happening”. He added that the skill of stimulus variation has the following components movements, gestures, change in speech pattern, focusing change in interaction style, pausing and oral-visual switching.

It has been observed that effective and sufficient use of variety of objects form a significant role in sustaining the learners attention in teaching and learning. Beretia, Giandano and Daniel,(2005), stated that the quality of images transmitted with color facile is sufficient for many communication task for people working in the various color areas.

In a study conducted by Bhagoliwal and Peter (2008), it was revealed that more effective teachers were characterized by a family that had a higher level of differentiation and integration in their cognitive and perceptual functioning. The study highlighted that there is a pertinent need to identify and implement various components of stimulus variation on enhancing student’s achievement. The skills of stimulus variation involves a deliberate change in attention and drawing attention of the teacher in order to secure and sustain student attention to what is been taught.

The following are some of the factors which have bearing on student attention: intensify, contrast, movement, extensity or size, novelty, change, striking or unusual quality, self activity, systematic and definite form, Audio visual aids, and teacher personal behavior(Dembo&Howard,2007;Sana,2007;Fakomogbum,Bada,Omiola, Adebayo,2012)

- Importance of stimulus variation for effective teaching and learning.

The diversifying skills of teaching and learning in the classroom situation forms a very important part of a teacher's personality which pupils mark as the teacher overview, energy, confidence and competence, (Strayer, 2003). This perception of the students plays a vital role in focusing, sustaining and alerting their attention towards objectives thereby making teaching productive, efficient and interesting. The conceptual analysis of determinants of stimulus variation that facilitate attention are intensity speaking styles, writing styles, contrast time variation, sensors, integrations,, attractive speaking, softness, hardness, stimulation, recognition, color, movement, eye movement scene change and isolation. Stimulus variation is normally a variation and application of systematic techniques in three main areas.

1. Personal teaching styles
2. Media and materials of instruction.
3. Teacher student interaction (Fathim & Saravanakeimar, 2012)

The main objectives of stimulus variation are to make teaching skills more professional and demanding. The impact of stimulus variation is concerned basically with:

- Arousing students attention and further sustain it
- Motivating learning through new exploration and investigation.
- Building positive feelings towards teacher and school.
- Catering for individual sensory preferences and facilitating learning.
- Promoting learning by involving students
- Promoting educational entertainment (Fathim & Saravanakumar,2012p.37).

However, stimulus variation will not only focus, sustain and promote educational attainment as viewed by Fathim and Saravanakumar (2012), but will also assist student-teacher to effectively and appropriately apply the planed/designed learning experience during teaching practice exercise. A study conducted by Wyckoff (2015), using forty eight students randomly

selected from the micro-teaching clinic at the University of Massachusetts to participate in the study. The result of the study shows that increase in the frequency on the use of skill of stimulus variation on the part of the secondary school teachers resulted in improving the student performance.

In summary, stimulus variation skill is another vital tool needed for effective dissemination of knowledge to the pupils. The attention of pupils could be highly captivated at the beginning of the teaching learning process; this must be sustained so that pupils could be carried along through the period of learning. Therefore, stimulus variation is a versatile process needed by the teacher towards ensuring effective dissemination as well as acquisition of designed learning experience.

- The Skill of Questioning

The skill of questioning is no doubt as old as learning itself. It still remains as an instrument which the teacher employs in justifying the extent of learners level of comprehension in teaching and learning process. The idea of viewing teaching as a group of skills was first taken up in the teacher training programme at the Stanford University. A teaching skill has been defined as a group of teaching acts/ behaviours intended to facilitate pupils learning directly or indirectly. Micro-teaching being skill based training; teaching skills have to be identified and selected. The sources of teaching skills are effective teaching behaviour emerging from research on teacher effectiveness, analysis of the task of teaching, observation of teaching, and the psychology of learning and instruction. Based on above sources several sets of teaching skills have been identified by different institutions and individual researches across the countries.

Ike (2003) argued that questioning is one of the most effective teaching techniques which teacher can effectively use in order to succeed in the teaching business. It is used to draw out

ideas from students. The greatest effect of the question is the way and extent to which it causes pupils to think. He then outlined four categories of questioning skills, these are:

1. Probing questions
2. Lower order cognitive
3. Higher order cognitive
4. Divergent question (Ike,2003p.76)

Questioning as an aspect of assessment helps to determine how best the needed changes can be made through effective, implementation actions,(Alan,2008). Questioning is so valuable that instructors are now being urged to “program” their lessons with frequent questions. They are offered equipment to make it easier to obtain record information on trainee responses.

Diagnostic approach to knowing the effects of handling different teaching problems, appraisal of general effectiveness as a teacher through evaluative process learning is so valuable that teachers are now being urged to “programme” their lessons with frequent questions, (Stella, 2010; Yang,2011; Thwral,2011). It is obvious that adequate assessment of learners help to a large extent in re-awakening them toward classroom activities which can lead to the achievement of the designed objectives. Pollard (2000), Gardner (2005) recommended that statutory assessment of students’ behavior have continued to be tightened in a drive to improved reliability so that performance of pupils and schools can be monitored.

Questioning is playing a significant role in teaching/ learning process. Due to its vital role, Verma and Sharma,(2003) prescribed some characteristics of an effective questioning, some of which are; grammatically correct question, it must be precise, it must be relevant, it must be specific and not vague.

Similarly, it is apt to conclude that questioning learners in teaching and learning process is vital for proper assessment of their understanding regarding the subject matter. Nevertheless, a wrongly constructed grammatically question would no doubt create confusions in the minds

of learners as to what aspect of the lesson the teacher assesses through the questionnaire. A very long question when posed before the learner results into similar experience.

Moreover, the student-teacher on teaching practice is by all means expected to always ask learners questions before assigning them to answer for effective achievement of the designed objective. A study conducted by Taylor, Peterson, Pearson and Rodriguez (2005) has shown a more consistent relationship between higher-level questioning and student growth in reading and writing.

The skill of questioning is an important teaching skill that a teacher must learn. Harichandan (2010) identifies some of the aspects of this skill; are simple questions, fluency of questioning and probing questions. It is felt that the skill of probing questioning can be practiced by a teacher only after he/she acquires the skill of simple and fluency questioning. The concern is majorly on in-service teachers, it is obvious that they have some sort of exposure to simple questioning and fluency questioning (refers to rate of meaningful questions put per unit). Probing questioning involves going deep into the pupil responses by asking a number of questions about what they already know and to lead them to the correct response or to remove any ambiguity or hindrance in their understanding which led to incorrect response. Even if the response is correct you may help the pupils to view it from a broader perspective. In all such cases you are said to resort to probing by asking a number of questions about the response given to the first question.

The teacher uses a number of questions to promote thinking, to probe children's knowledge, to allow children's expression of feeling and for gaining attention to his task. His purpose may be to give everyone a chance to answer, to draw in shyer pupils, to review, revise and recall the recently learnt point to promote understanding of ideas, phenomenon, procedures and values. Putting questions, getting desired response and leading pupils to a broader perspective from a correct response can thus have a profound effect on the whole tone of the

lesson and on the rapport which is developed between the teacher and pupils. Thus, the skill of probing questioning involves going deep into pupil's response which may be correct by asking a series of subsequent questions.

Harichandan (2010), identify the following Components of the Skill of Probing Questioning;

- i. **Prompting Technique:** This involves the teacher to give clues or hints to the pupil and ask leading questions. Here the teacher neither supplies answer to the pupil nor does he redirect the question to some other pupils, but helps the pupil to answer the question himself. This technique allows the teacher to probe by promoting the pupil, even though at first instance it appears that the pupil cannot answer the question. This technique is used by a teacher when the pupil gives: (a) 'I don't know or I am not sure' response and (b) Very weak or wrong response. Sometimes it can also be used when the response is partially correct or incomplete.
- ii. **Seeking Further Information Technique:** If the initial response of a pupil is either incomplete or partially correct, then the teacher helps the pupil to clarify, elaborate or explain his initial response. Here the teacher elicits more information and meaning or seeks further clarification from the pupil by asking questions. Seeking further information consists of asking the pupil to supply additional information to bring initial response to the criterion level or the expected level.
- iii. **Refocusing Technique:** This technique is generally used when the pupil gives a correct response. The teacher relates the present answer with the topic already covered in the class. This technique consists of enabling the pupil to view his response in relation to other similar situations. It requires the pupil to relate a completely acceptable answer to other topics already studied by him. Here the teacher wants that the pupil should consider the implications of a given response in more complex and novel situations.

- iv. **Redirection Technique:** This technique involves putting or directing the same question to several pupils for response. This can be used for many purposes. The most important among them are for the purposes of probing and for increasing pupil participation. Even after using prompting technique when there is no response, you may redirect the same question to other pupils.
- v. **Increasing Critical Awareness Technique:** This technique mainly involves asking 'how' and 'why'¹ of a completely correct or expected response. The purpose is to seek increased critical awareness in the pupil. The teacher asks the pupil to justify his response rationally. Therefore, this technique elicits a rationale for his initial response.

Skill of Stimulus Variation

Although, it is necessary to ask probing questions and illustrating them with examples, so also it is important to draw and sustain the attention of the pupils. For this purpose the teacher uses hand gestures, head and body movements, to make certain verbal statements like "look carefully", 'listen' "watch what's happening", and so forth. Many a times he supplements verbal statements with gestures, and body movements in order to make it more effective. All these behaviours are related to the skill of stimulus variation. This skill is essential for the teacher in drawing the attention of the pupil in the class room discussion. The problem of in-attention is a challenge to the teacher. Unless he is in a position to secure and sustain pupil's attention to what he is discussing in the classroom, his teaching does not become effective. One of the significant ways to secure and sustain pupils attention is to introduce the element of variation in teaching, lest the teaching becomes monotonous and ineffective (Harichandan, 2010; Audu & Agbo, 2010).

Components of the Skill of Stimulus Variation

- i. **Movements:** It refers to moving from one place to another which seem to encourage useful shifts for attention (e.g., Movement towards chalk board to discuss the diagram

drawn on it). Every movement should have some purpose-may be to check what pupils at the back are doing or to write something on the board. Hence, in order to secure and sustain attention in pupils you have to move about in the class. This movement should be within the limits so that pupils attention level is maintained high.

- ii. Gestures: The various gestures that can be used in the class to draw pupils attention are head, hand and body movements. Using such gestures the teacher becomes more expressive and dynamic in presentation in the class. The oral message is less effective in conveying meaning than an oral message combined with gestural ones. Gestures can be made by movements of the parts of the body to direct attention, to emphasize importance, to explain emotions, or to indicate shapes, sizes movements, and so forth.
- iii. Change in Speech Pattern: It refers to sudden or radical changes in tone, volume, or speed of the teacher's speech. While expressing emotions or feelings, you can modulate your voice. This sudden variation in this stimulus will attract attention of pupils. Sometimes, while reading a lesson, a teacher has to read certain sentences, emphasizing anger. Then he can increase the volume of his voice, and suddenly slow down. These sudden changes in the pitch of the voice will make pupils attend to the idea being told to them.
- iv. Focusing: Here, the teacher uses such behaviours that direct or focus pupils attention to a particular point which the pupils have to notice or observe. Such behaviours can include certain verbal statements (verbal focusing) or gestures or movements (gestural focusing) and both verbal statements and gestures (verbal and gestural focusing). The simultaneous use of verbal and gestural focusing is found by experience to be more effective than either of them singly used.
- v. Change in Interaction Style: When two or more persons programme with each other orally there is said to be oral interaction between them. In a classroom there

can be three styles of interaction among pupils and teacher (a) teacher-pupils or teacher-groups interaction, (b) teacher-pupil interaction, and (c) Pupil-pupil interaction. When the teacher conveys something to the whole class and the whole class responds back then teacher-group interaction goes on in the classroom. When you direct a statement or question to individual pupil, it is teacher-pupil interaction. In pupil-pupil interaction the teacher asks a question and without commenting redirect the question by pointing to another pupil. This way teacher can involve many pupils in a dialogue without doing direct discussion.

- vi. **Pausing:** Pausing means introducing silence during talk. It means short deliberate intervals of silence use while conveying information, lecturing, explaining, etc. In the classroom, if the teacher is continuously talking or asking questions without giving time to pupils to respond, pupils lose their attention in the lesson. Hence, in order to sustain pupils attention in the classroom, the teacher introduces certain pauses during teaching and before and after asking a question sometimes teacher uses silence to secure pupil's attention.
- vii. **Oral-Visual Switching:** Change in the medium-oral, visual, or oral-visual through which information is conveyed to pupils indicate a change if there is any of the following changes in the media (Sana, 2007; Audu, 2010; Adebayo, 2012).

Thus, it can be deduced from the above exposition that possession of the skills of questioning is a key factor needed for proper assessment of pupils at the end of a learning process; questioning skill serves as a technique/instrument which provides the teacher with a basis for identifying the strength and weaknesses of the learner level of comprehension. This could enable the teacher to assess his ability so that he could adjust appropriately in future endeavors.

2.10 Micro-Teaching Skills for Effective Teacher Training Programme

There are lots of skills of teaching that can be used by a student-teacher during micro-teaching sessions toward ensuring efficiency before the commencement of teaching-practice program. Verma (2008) identified the following skills: The skill of questioning, The skill of reinforcement, The skill of probing, The skill of explaining, The skill of explaining, The skill of stimulus variation, The skill of introducing a lesson, The skill of using black board, The skill of silence and non-verbal cues (SNVC), The skill of using audio-visual aids (UAVA), and the skill of Recognizing Attending Behaviour (RAB).

Similarly, Sana,(2007); Warre,(2007);Adebayo, 2012),identified the following skills: Set induction, Organization of presentation, Class control, Fluency in asking questions,Probing questions, Higher order questions, Divergent repetition,Planned repetition, Command of language, Retention of interest, Use of instructional materials, Explanation, Motivation, Teacher liveliness, Closure, Setting a model, Control of participation, Silence and non verbal cues, Transition between activities, Manner-posies, composure, Completeness of communication, Leading discussion, Lecturing, Recognizing attending behaviour, Reinforcement, Stimulus variation, Chalkboard usage, Use of demonstration, Illustration and use of examples, Clarity of presentation and so forth.

The skill of questioning: Generally, classroom teachers usually use questions which are of various forms. A teacher's success in teaching is mostly attributed on how efficient the skill of questions are used. Questioning are usually verbal utterances that require respondents from persons to whom are directed, (Ughamadu, in Audu 2010). It is one of the most effective ways of stimulating students to higher level of thought.

Therefore, questioning is a skill of teaching, a statement which require respond from both the teacher and the learner. It can be used as an instrument for assessing the learners' level of comprehension in the teaching learning process.

Reinforcement:- is defined as a set of responses which increases the likelihood that the particular behavior will re-occur,(Audu & Agbo,2010).

Reinforcement constitutes one of the essential condors of learning. The stimuli that provide or contribute to the pleasant experience are called positive reinforcers; while the stimuli providing; unpleasant expenses can be termed as negative reinforcement, (Verma & Sharma,2003; Warre,2007; Wikipedia, 2015).

It is clear from the above exposition; that reinforcement refers to the act of encouragement offered to the learner towards expecting reoccurrence of the positive behavior.

Skill of probing; The term probing refers to going deep in the matter in hand. Consequently; the skill of probing questions may be defined as the art of responds management. The skill probing question comprises of the following component behaviours or technique; prompting; seeking further information; refocusing; redirection or increasing critical awareness (Harichandan,2010).

The skill of explanation:- This is an important skill of teaching which help towards providing detail information for immediate understanding of an issue in the teaching or learning situation. Also is defined as a set of interrelated statements elaborating a concept being taught or learnt (Sana,2007).

Explaining is an atrocity which shows the relationship among various concept; ideas events or phenomenon during teaching in a classroom.

The Skill of Stimulus Variation:

This has to do with a deliberate change in attention drawing behaviour of the teacher in order to secure and sustain students attention to what is being taught. Attention tends to shift from one stimulus to another stimulus very quickly. There are a number of factors which have bearing on students' attention of such as, movement, teacher personal behaviour striving or unusual quality among others, (Sana,2007; Adebayo,2012).

Set-induction (introduction):-This is simply the introductory step or beginning step of a lesson. It is a teacher's duty to open the room of knowledge the practical aspect of set induction can be illustrated by "our eve toy appendences",(Eze, 2003). Therefore, in order to ensure effective inducement by teaches for effective teaching and learning, teachers should provide mutilating experience that arouse the interest and enthusiasm in the learner

The skill of chalkboard:-Chalkboard is a real asset that is used in class for teaching as it serves to make direct appeal to a child's sense and strengthens the retention. The way of using blackboard or chalk board is called skill of using blackboard (Trop, 2008; Holmes, 2010; Agina-Obu, 2015). The component of the skill of using different letters which are large enough to be read by pupils,

- a. Neatness
- b. appropriateness of written work in respect of meaning, simplicity and continuity and in the point being presented
- c. underlying important words and so forth (Pannearselvam & Santhanam,2006).

Skill of non-verbal communication/Silence: Non-verbal communication is a communication/science gesture without spoken words. It is a situation in which the teaching behaviours are manifested through facial expression or motion, arm hand finger motion and direct arm – hand finger motion among others (Ughamadu in Audu (2010). In reality, communication is performing a vital role in transferring effective learning experience to learners, instructions of non verbal communication which facilitate communication process for effective knowledge acquisition.

- The Skill of using Audio-Visual aids (UAVA): This refers to the use of two sense organs that is sense of hearing and seeing. These are instruments which appeal to the sense of hearing and seeing in the teaching -learning, and hasincludes television, projector, computer, among others. These aids help to a large extent in transforming

the theoretical aspect of the lesson into practical towards effective knowledge acquisition.

- Organization of presentation: This is the logical arrangement of steps which allows the teacher to effectively deliver his teaching towards achieving the designed objectives. It is therefore important to always plan a lesson adequately before the commencement of the lesson for efficiency.
- Fluency in asking questions: This is a process of applying good command of language towards asking questions for an immediate and effective response by the person whom the question is directed at. The questions should be clear and precise and unambiguous etc.
- Probing questions: The teacher could use proving questions to try to help think more deeply and express himself more clearly. Probing questions are supplementary question based on students reply to an initial question.
- Higher order questions: These are questions which require learners to think, to reason, to analyze, to produce new analyzes, synthesize and evaluate.
- Lower order questions: These are questions that are limited to memory level of thinking merely deal with mode of expression. Similarly, they stimulate recal and recognition.
- Planned repetition: This is a situation where a teacher repeats an aspect of the lesson towards the attainment of the designed objectives. According to Ughamadu in Audu (2010), planned repetition is a situation where attempts are made to deal with the concepts repeatedly.

Command of language: This is a situation where fluency and efficiency are employed by the teacher in using the formal language of communication. This is to ensure adequate acquisition of the designed knowledge.

Retention of interest: This a process in which the need as well as learners' enthusiasm are highly maintained for effective and qualitative teaching and learning to take place. This could be ensured via adequate introduction, use of relevant instructional materials as well as motivation among others.

Motivation: Is defined as an internal derive that directs behavior towards some end. In the teaching and learning process, there should be something that protects their mind or dangles in front to make them more vibrant in classroom teaching. The major task is to mix students' curiosity as a motivation for learning (Connie,2010).

Teacher liveliness: It refers to the ability of the teachers to use the verbal reinforces such as "good", "Fine", "variety of questions", toward ensuring learners participate in the lesson.

Setting a Model: Is considered as a process in which many ideas are brought together toward promoting students responsibility. These could be setting a numeral teaching model, cooperative group teaching change in teacher's classroom practices, and so forth, (Thomson & Ward,2002). Therefore it is an avenue where the teacher employs versatile means to ensure a successful attainment of set goal.

Control of participation: This is a process of teaching in which the teacher arranges and managed the number of recipients (students) involved during teaching and learning process. This will help greatly in ensuring easy and effective transmission of skills knowledge and others values.

Closure: It is a process of identifying a major point which led to the accomplishment of the designed objective. The major idea of closure is to help organize students learning activities toward accomplishment.

Recognizing attending behaviour: In the classroom situation, the teacher should be able to observe the behavior or attitude of the learner while the lesson is going on. If the teacher becomes sensitive of the classroom behaviour of students, that will enable him to know what

step to take next. There are certain ways which enable a teacher to notice the behaviour of a learners in the class; e g, directing his eyes to the learners, hissing, the tilt of the head, yawning, feet shuffling and so forth.

Illustration and use of examples: Illustration/explanation skill is complex in nature. To explain is to give understanding to another person. It starts from the known to unknown. It bridges gap between a persons' knowledge and experience to a new phenomena. For an explanation to be effective, it should be clear, simple, concise, and interesting. In general, it should not be long or dull.

Lecturing: lecturing is a skill; of teaching in which the teacher dominate the activities of teaching, while the learners remain passive listeners. Generally, it is considered as a teacher centered method. This skill is mostly used in tertiary institutions of learning.

Leading discussion: This is a situation where by a teacher leads a conversation between students in the class room. It could be in form of debate. The conversation can lead to knowledge acquisition as well as sharing an idea.

Clarity of presentation: This is a process of transferring knowledge and skill in a more clearly transparent form to the target audience (learners). The skill, if effectively maintained will no doubt assist in the attainment of the stated objective.

These and many others constitute the skills of teaching that a student teacher is expected to choose from among and use during micro-teaching session to ensure perfection.

2.11 Micro-Teaching Clinic for Student-Teachers Activities for Effective Skills Acquisition

Ideally, the micro-teaching environment is supposed to be equipped with closed circuit television (CCTV) system that have camcorders staged at different angles to pick different behaviors of the trainees and the learners. On the alternative, a simple video camera with television monitor could equally serve for the recording, especially because of the economic requirement of the ideal situation. Teacher-based education format, like the

Stanford Teacher Competency Appraisal Guide, and Flanders Interaction Analysis System, have been found adaptable and useful in scoring performance. All the devices are beneficial because of the comprehensive audio-visual coverage they provide from all angles of the clinic, the trainee and the learners behaviours. Modifications in micro-teaching have been made in the basic training protocol which tends to affect from the effectiveness of micro-teaching training, especially when constraint of resources and other factors that could lead to the use classrooms are on the ground.

- Micro-Teaching Recording Equipment

Micro-teaching equipments are devices used by a student-teacher in order to make teaching useful. The use of audio, visual, audio-visual, artificial, natural, evaluative, fixing devices, etc makes the learner to learn the context in an interesting and worthwhile manner

There are two major types of audio-visual equipment for recording. These are:-

1. The close circuit television system
 2. The video-tape recording system (Akinmoyewain Akin-Mosorun 20009).
- The Closed Circuit Television System

A television has the capability to show movements or actions and sound or speeches that accompany such movements. It is the most potentially powerful of all known educational broadcasting Medias. Television programme could be divided into two major types; open broadcast and closed-circuit type.

The closed circuit television system has all the necessary items for a television broadcast but all signals are passed by cable. Furthermore, there is closed reception, in that, the audience and the utilization are controlled. The open broadcast television system is without cable.

To set up a closed television studio, the following items are needed:

1. Camera(s)

2. Vision mixer
3. Recorder or playback machine
4. Monitors
5. Microphones (Akinmoyewa in Akin-Monsorun 2009).

Closed-Circuit Items

A camera is one of the key items in any television. It is the main object that picks the action and by simple technology converts the images of the actions caught into electrical energy. The electrical energy then passes through the camera cable to the mixers (vision and sound). Television cameras have lens by means of which pictures or actions are caught. These could be wide-angle lens which are mostly 40-25 degrees, narrow angle lens or 300mm lens. Wide angle lens are recommended because of the potential advantages of being able to focus properly even in a tight studio and they are very useful when movement of the camera is necessary. There are many brands of television cameras. Modern cameras are portable and are equipped with microphones. They are powerful and very effective.

The vision and sound mixers are the machines that control vision and sound transmitted by the cameras and microphones respectively. In a television studio where there are three cameras, there will be a monitor for each of these cameras. By means of the vision mixer, the camera transmitting the most needed picture of an action is tuned to. The sound mixer controls the audio aspect. The machine makes the audio output to be controlled. After exercising all types of controls by the machine to make a good television program, the programme is finally passed through a recorder and the terminal point is the viewing monitor.

- Video Tape Recording (VTR) System

The video tape recording system has three major components. These are:

- The camera
- The video recorder

- The television monitor

Video tape system is much simpler than the closed circuit television system in that the three items are connected directly; that is, a cable connects the camera to the video recorder, and another cable connects the video recorder of the television monitor.

A television is sometimes used to achieve educational aims. One of such achievements is in the area of effective micro-teaching. The two systems (closed circuit and video tape) are very useful during micro-teaching. By means of any of the two, micro-teaching presentations are recorded for different micro-teaching groups or micro-teachers. The recorded cassettes are played back for the participants during critique session. It is worthy of note that the camera is only useful when the micro-teaching session is going on. After recording, the video recorder/player does other jobs especially when it is time to view the recorded teaching.

- Good Quality Recording

For micro-teaching to be effective, there must be a good recording of all the teachings. Good quality recording requires proper planning, good environment, good equipment and effective resource people(Akinmoyewa in Aggarwal 2009; Hixon, 2009)

2.12 Challenges Facing Micro-teaching in a Teacher Education Programme

Micro-teaching being one of the cardinal pillars which provides the NCE students with adequate learning experience interns of theory and practice of teaching skills, is facing some obstacles which would lead to serious deficiency in the production of competent teachers for effective implementation of curriculum for an individual and societal development. In the words of Adepaju (2008), the programmes are deficient in the preparation of teachers for the modern day realities. Institutions offering teacher education programme often lay too much emphasis on theory at the expense of practice, particular by micro-teaching. Falayajo,(2004);and Ajayi, (2007) summarized the deficient nature of the

present teacher training in Nigerian college of education and other teacher-training institutions. Their summary show that the big problem really is that teachers are no longer well trained, most especially in the acquisition of teaching skills towards preparing them to discharge their duties as expected. This has been observed to be as a result of limited time and duration attached to the teacher-training programmes. According to Ajayi (2007), the duration of Nigerian's teacher-education programme has to be increased if teaching is to really be recognized along side with other professions. Presently, the teacher-education programmes has the least period and perhaps, the worst type of training among all professional groups. it also has the worst internship programme (Ajayi, 2007).

In reality, lawyers spent at least 5 years, pharmacists and accountants have to spend 5 years in their training program secluding one year of practical; but in Education, the degree students spend four (4) years including the internship or the teaching practice period while the NCE students spend three years including TP. Therefore, the new NUC Benchmarks in Minimum Academic Standard which suggests five (5) years teacher education-program including one full year of teaching practice needs to be implemented so as to ensure efficiency in teaching as a profession. The entry requirement (Admission Policy) in teacher-education programs in Nigerian ridiculous and too low to write home about. The NCE programme requires five (5) passes of which three (3) must be at credit level at one sitting or four (4) at two sittings. In some universities, the faculty of education gives consideration to candidate who have three SSCE credits and two NCW merits. According to Okebukola (2007), this consideration should be scrapped, most students admitted to the teacher education program are for sandwich/part-time program; he therefore recommended that in order to improve quality, the number of such candidates should be reduced drastically. In prescribing admission criteria for a program of teacher-education, it should be borne in mind that the job of teaching is very delicate and sensitive (Falyajo in Okebukola 2007). For sure, if teachers are not adequately

trained in the course of their studies, they would at the end of the day mislead their subjects (Learners), and invariably dent the status of teaching as a profession. Okebukola (2007) too reported a study which identified a number of weaknesses among education graduates. These weaknesses identified include:-

1. Lack of practiced skills in teaching
2. Shallow subject-matter knowledge;
3. Poor computer and communication skills and
4. Lack of entrepreneur skills.

In another development, Sanusi (2009) argued that “the average Nigerian graduate today has great difficulty in expression, whether in writing or orally”. He thinks that the situation has become so bad because of overstretched physical infrastructure and “misalignment” of curriculum and development needs. Kayode (2009) too feels that “a gap exists between what is taught in schools and the skills required to perform on a job”, this gap is responsible for a high percentage of young graduate unemployment.

One of the reasons for half-baked graduates has also been attributed by Akinmusuru (2009) too much emphasis placed on research for promotion in most universities; little attention is given to teaching effectiveness. According to him, when “institutional policies are not geared to making students learning a priority, knowledge is not effectively imparted to students, and those that graduated from these programmes soon go into the workforce inadequately prepared to help society”.

Recent studies have, however, shown that most of the graduates from colleges and faculties of education in the country are incompetent in the knowledge of subject matter content as well as in teaching, including communication skills (Ajejalemi in Okebulola, 2007). The courses they offered for the teacher-education programme emphasized more of theory rather than practice. The teaching of skills acquisition through micro-teaching is also

generally poorly handled, thereby making teaching-practice ineffective. The finding of Okebulola (2004p.2) also highlighted the general weakness of education graduates after graduation to include among others:

1. Inadequate exposure to teaching-practice (lack of practical skills)
2. Shallow subject-matter knowledge
3. Inability to communicate effectively in English
4. Inability to provide conducive environment for practical aspect
5. Lack of commitment to teaching as a profession.

It has been observed that most of administrators do not often provide enough support to micro-teaching programme in terms of material, financial and moral support e.t.c. which tend to cripple the smooth implementation of national curriculum.

2.13 Empirical Studies

The study review works on the effect of micro-teaching on student-teachers performance in a teacher education programme. However, the researcher shall focus on the relevant findings of scholars regarding micro-teaching as an aspect of teacher education programme.

Dagnew, (2011) Studied the reflective effects of microteaching and field experience in pre-service teachers. The researcher investigated the notes of improving the pre-service teachers competence and productivity the investigation was carried out using descriptive survey.

The study highlighted the efficacy of micro teaching on facilitating effective teachers preparation. A total of 500 respondents were randomly selected using simple random sampling across five (5) institutions in Ethiopia ninety (90) students teachers and ten (10) lecturers were used per institutions. This amounted to one hundred (100) per institution. The data analysis was a combination of qualitative and quantitative methods. The study revealed

that micro teaching content, resources and materials need to be reviewed for optimum result.

The instrument titled 'reflective effects of micro teaching and field experience (REMFE) designed by the researcher was used for data collection. The reliability of the instrument was established by the use of spilt half method with a coefficient 0.75. The coefficient was considered high enough for a study of this nature. Frequency counts and simple percentage was used for the data analysis. The study revealed that micro teaching content, resources and materials need to be reviewed for optimum result.

Dagnew (2011) shares some similarities with the present study owing in the fact that both of them are looking on the influence of micro teaching on teaching practice experiences in pre-service teachers. The two studies differ in research methodology and location. The Dagnew study was descriptive while the present study will make use of ex-post factor research design. Dagnew conducted the research in Ethiopia while the present would take place in Nigeria.

Cavin(2007), conducted a research on Developing Technological Pedagogical Content Knowledge in Pre-service Teacher Through Micro-teaching Lesson Study. The research was conducted to explore the development of technological and pedagogical content knowledge (TPCK) in pre-service teachers as they participated in micro-teaching lesson study (MLS). Participants were six pre-service teachers enrolled in the required technology course for mathematics and science teacher education at a small rural college. The researcher was also the instructor for the course. Data were collected qualitatively via audio and video recording, observations, interviews and course documents. Data analysis was conducted using the TPCK framework in conjunction with various state and national standards related to the three component of TPCK. The finding indicated that the pre-service teachers developed an awareness of the nuances of teaching with technology in a student-centred learning environment, recognizing that traditional "methods" of teaching such as sequencing, pacing

and written directions took on special characteristics when technology was involved. One fringe benefit recognized by the pre-service teacher was the experience of working with their peers in fine-tuning a lesson to maximize students learning, gaining practical experience applicable to future school based instruction. The study sought to confirm whether the use of different technological pedagogy could lead to efficiency and effectiveness in lesson delivery. The present study is out to ascertain the impact of micro teaching skills on NCE student teachers performance during teaching practice exercise in Nigeria

Peker (2009) too conducted a research on the use of expanded micro-teaching for reducing pre-service teachers teaching anxiety about Mathematics. The purpose of the study was to investigate the effects of expanded micro-teaching on the pre-service Mathematics teachers' anxiety in teaching practicum course. 43 pre-service Mathematics teachers divided into 2 groups experimental and control were involved in the study. Mathematics Teaching Anxiety Scale (Maths), which was developed by Peker (2006), was used. In his finding (result before and after) expanded micro-teaching applications were calculated. ANCOVA was used to pre-test difference and compared post test results. The findings of the study showed that the mean scores gained on the pretest of the pre-service Mathematics teachers in experimental and control groups were 41.667 and 40.717 respectively. Result of the ANCOVA showed that there was a statistically significant difference regarding teaching anxiety between the control and experimental groups. That study dealt with pre-service teacher anxiety and skills acquisition in teaching Mathematics as a teaching subject. The present study differs because it generalizes skills acquisition and students' performance irrespective of their area of specialization during teaching practise.

Abdurrahman (2010) in a study conducted to investigate the effects of Learner-Centred Microteaching (LCMT) on the development of teacher candidate teaching behavior on subject area, planning, teaching process, classroom management ,communication and

evaluation have been pre and post tested, and the effectiveness of learner-centred microteaching has been determined based on the differences in the result of pre and post-tests. The pre-test post-test design was used without a control group. Teacher candidates teaching behaviors before they entered the experiment were determined by pre-tests and at the end of the treatment, the teacher candidates were given post-test. The experimentation was constructed based on LCMT Model. Results based on the scores in pre and post-test showed that LCMT Model had a progress in teacher candidates teaching behavior on subject area, planning teaching process, classroom management, communication, and evaluation. This dwelled on the effect of learner-centred Microteaching on teacher candidate teaching behavior. The present study focus on the effect of Micro-teaching skills on NCE student teachers during teaching practice, using ex-post facto research design.

In another development, Liang and Xiaojong (2010) conducted a study of application of micro-teaching to badminton and an elective course at the university in China. The main focus of the study included student skills, teaching ability and theoretical knowledge for the first 32 class hours (for 8 weeks), Traditional teaching methods were used for both group A and B, and for the next 32 class hours (next 8 weeks), Micro-teaching was used for group A and traditional teaching method was used for group B; a test was conducted for the students in both groups on their badminton skills, teaching ability and theoretical knowledge about badminton at the end of the 8 weeks and 16 weeks respectively. Pre-experimental comparison between group A and group B ; and pre-experiment and post experiment comparison of group B were used as comparative method. Computer Statistical Soft ware(SPSS 13.0) was used for statistical analysis of all data. Their findings revealed that, micro-teaching can significantly improve students' skills, teaching ability, and theoretical knowledge learning. The study suggested that, in order to ensure the needed constant improvement by the student-teacher on practical aspect and theoretical knowledge, micro-teaching must be student-led; and that

stake holders should be made to understand that, with the use of multimedia aids constantly, students' level of intelligence would be developed so as to achieve improvement on skills of teaching sport and as an elective course to the student. The present study investigated the effect of micro-teaching generally on teacher-training being a core course in the programme with wider scope of north west geo-political zone using a targeted large population.

A study was conducted by Chatzidimou (2011) on micro-teaching, a "Middle-Aged" Educational innovation: still in fashion? The research aimed at investigating the contributions of micro-teaching as a vehicle of teacher training and teacher professionalization. The study was conducted using descriptive survey design. 332 undergraduate students randomly selected from the Department of Primary Education, Democritus University of Thrace. They were all students who have participated in micro-teaching. The questionnaire that consisted 29 close questions was used to declare the level of the respondents agreement or disagreement (five level of Likert scale of strongly disagree, disagreed, neither agree nor disagree, agree and strongly disagreed). The reliability of the questionnaire was established using Cronbach Alpha which showed the reliability value of 0.95. A split half reliability of 0.94 was also established. Therefore, it can be concluded that the subjects of the sample had a clearly positive attitude towards microteaching efficacy. They found it highly effective in the practice of various skills, especially mainly the use of audio-visual aids in teaching, the techniques of introducing and ending lesson among others. The findings of the empirical survey indicated the fact that micro-teaching can play a significant role in teacher education and can contribute to a great extent to the better understanding of teaching and its complexities as an element of the improvement of teacher education. The study dealt with undergraduate students at the university level towards teaching skills acquisition and the use of audio-visual aids. The present study deals with student teachers at NCE level in the North West geo political zone of Nigeria.

Chuanjan and Chunmei (2011) conducted a study on “Exploring Authenticity of Micro-teaching in Pre-service Teacher Education Program”. This study examined the perspective of a cohort of 60 Chinese EFL pre-service teachers with regards to micro-teaching. The arrangement of the methodology course was intended to integrate theories and practice to prepare the students for their teaching practicum at the start of the fourth academic year, and their future career as in English teachers in junior and senior high schools in China. A time limit of eight weeks was allocated for micro teaching and the student number was (30 students in each classes), extra time was provided to ensure that each had one opportunity to engage in the Micro-Teaching Practice. A maximum of 25 minutes was allowed for each session. In their findings, microteaching was felt to be a beneficial learning experience for the student-teachers. The 25 minutes teaching practice was even as appropriate and long enough to reveal problems of the teaching within the observers’ concentration span. The student-teachers felt they had an opportunity to apply what they had learned from the teaching methodology course in their micro-teaching with the help of the multi-media technology. They obtained a sense of achievement because it helped them develop their pedagogical experience and competence, and gain more confidence. According to one of the student, success of the Micro-Teaching include. The support of peers, which can be of provision of teacher and peer feedback which was felt to be highly beneficial to the student-teachers. The next facilitating factor was the team work commonly exercised during the micro-teaching, which was perceived to promote collaboration and professionalism.

The pros and cons of micro-teaching were examined in that study, A series of positive impacts show that micro-teaching was a useful tool for pre-service teachers professional development. The study dealt with exploring the authority of micro-teaching skills and methodology in china while the present study deals with students’ acquisition skills in Nigeria and their performance during teaching-practice using a large number of learners at

both primary and post primary schools.

Shaoan, and Qiang (2011), conducted a study on learning to teach through a practicum based micro-teaching model. They developed a model based on Grosman et al's "approximations of practice. "The study introduced the model and examined how it created opportunities for pre-service teachers to learn to teach in a meaningful learning context. Sixteen secondary pre-service teachers participated in the study. Results indicated that the model provided pre-service teachers with opportunities for interactive learning practices for rehearsal, revision and retrieval. It also offer "manageable chunks" of professional practices and has potential to align the methods course with pre-service teachers' field experiences from a less complete and authentic situation switching to a more complete and authentic situation. The study deals with a particular concept of model as based study. The present study is concern with skills acquisition by student teachers in colleges of education north geo-political zone.

The participants consisted of eight males and eight females. The study was conducted in an urban teacher education programame at a large university in the southwestern united state. Data was collected through micro teaching reflection paper, a survey and a focus group interview. The results reveal that the practicum based microteaching model provided pre-service teachers with opportunities for interactive learning practices, for rehearsal, revision and retrieval and for manageable chunking of professional practice moreover, this study also found that pre-service teaches well accepted the learning task such as planning and teaching a micro lesson as manageable chunks of professional practices in teacher education. Although, the two studies that is Shaoan & Qiang and the present study examined the impact of micro teaching on student teachers performance but majority the present study focus its attention on the NCE student teachers performance on the use of acquired skills during teaching practice exercise in Nigeria.

In another research conducted by Abdulwahab (2011) in order to investigate the views of sixty-one female teacher trainees from the English language education programme in Faculty of Education in the United Arab Emirates University (UAEU) regarding the microteaching component offered in two courses of English Language training methods, a combination of questionnaire and a focus group interview were used as the main tools for data collection. Overall analysis of the findings indicated that prospective teachers described a variety of benefits they gained from microteaching experiences. The experience ranges from classroom competency, well structured lesson plan, improved instructional strategies, modified methodologies and effective method of evaluation (Abdulwahab, 2011). The study is concerned with the view of only female student teachers from English department in the University regarding the effect of microteaching, while the present study deals with pre service teachers at NCE level in the North-West Geo-political Zone of Nigeria.

Shah & Masur (2011) conducted a research on the impact of micro teaching skills learned through different in service training programs on the performance of the elementary school teachers. The sample of the study consisted 210 elementary teachers (105 with in-service training and 105 without in-service training). The performance of the teachers was observed by the researcher and research assistants through observation scheduled. The observation scheduled comprised eight teaching skills. Male and female primary school teachers were equally ensured in the sample with their equal distribution in urban and rural areas. The sample was drawn from four districts of NWFP i.e. from two literacy wise top districts and two literacy wise lowest districts. 105 schools from all districts were included in the sample. The results of the study indicated that the performance of the in service trained primary school teachers (PIT) was comparatively better than pre service trained male teachers (NIT) in all the seven teaching skills, “ Set Induction, “Questioning”, “Listening”, “Reinforcement”, “Teacher’s Liveliness”, “Closing lesson” and “Re Planning”. The reason is that these micro

teaching skills were properly practiced by them during their different in service teachers training programmes. By applying these skills in their daily teaching and by observing the students involvement and well comprehension of the lesson taught, the teachers continued to apply them in their teaching irrespective to science or arts subject at primary level. As a whole findings of the study indicate positive result of in-service teacher training programs especially in teaching methodology. The study investigated the performance of pre-service and in-service male and female primary school teachers using seven microteaching skills in an Open University Islamabad, while the present study is designed to look at the Impact of Microteaching skills on Nigerian Colleges of Education students performance in teaching practice in the north-west Geo-political Zone, Nigeria.

In another research conducted by Aslihan (2012) designed to examine microteaching practices on the teacher qualifications programme. According to pre-service teachers' views based on their teaching experiences, it was investigated if there is any difference about pre-service teachers' view of microteaching practices. The participants of the study were ten undergraduate students who are in the Department of Computer and Instructional Technology Education in the 2011-2012 education years. Ten students made a presentation using microteaching methods at the secondary school. At the end of the practice, semi-structured interview form and survey were used to learn the views of pre-service teachers about teaching in the classroom. The results of the interviews showed that the pre-service believed that the microteaching method gives a chance to evaluate their strong and weak aspects in teaching. At the same time, the results showed that pre-service teachers have developed timing, planning, asking questions, management of class, using different materials and examples and physical appearance during the teaching process (Aslihan,2012). The study examined the micro teaching practices on the contribution of teacher education programme using the

undergraduate student as his respondent, while the present studies is designed to find out the impact of microteaching skills on NCE student-teachers on teaching practice in Nigeria.

Wang (2013) conducted a study on micro teaching, a powerful tool to embedding the English teachers certificate testing in the development of English Teaching methodologies. The participants of the research consist of the 76 pre service student teachers who have taken English methodology course at Jiazing university. The study was conducted using pretest post test experimental research design without control group. Questioning as a research method was used.

In summary, micro teaching provides a powerful and constructive setting for the development of such specific teaching skills, which are acquired in the teacher certification testing. The researcher recommended that much need to be done toward educating pre-service English teachers through this method, similarly, universities using it should add its findings to the general knowledge. This study concentrate more towards investigating the effect of micro teaching on pre-service teachers who have taken English methodology course at the university in Jiazing university while the present study deals with the impact of those teaching skills acquired at colleges of education by NCE student during teaching practice exercise in Nigeria.

Rosita, Igwe and Saheed (2013) conducted research on reflective effect of micro-teaching and field experiences on pre-service teachers in Nigeria. The purpose of the study was to investigate the modes of improving the pre-service teacher competence and productivity based on the constructive reflection of student teaching, with a focus on micro-teaching which is adjudged as an avenue for acquiring pre-service pedagogical knowledge and field experiences. The study sought to highlight the efficacy of micro-teaching in facilitating effective teacher preparation. It employed a combination of quantitative and qualitative research methods. In its quantitative dimension, the study featured a descriptive

survey design with research questionnaire administered to 500 respondents randomly sampled across five institutions. On its qualitative dimension, the study employed inductive and deductive research methods and data were collected and analysed based on existing framework and emerging themes on reflective effect of micro-teaching and field experiences, as decided in advance by the researchers. The study revealed that micro-teaching content resources and materials need to be reviewed for optimum result. Multi-channel viewing and other forms of Information Communication Technology (ICT) gadgets need to be introduced as a matter of urgency. The differences between the two studies that is the present and the former; is on the area of scope; while the former studied the reflective skills acquisition in Nigeria, the present deals with skills acquisition by prospective teachers in Nigeria colleges of education and how the skill are effectively apply during teaching practice exercise.

The study aims to investigate the effect of micro teaching technique on teacher candidates' beliefs regarding teaching mathematics and on their views regarding classroom instruction.

The study was undertaken during the fall semester of 2011-2012

educational year with 40 primary school pre-service mathematics teachers enrolled in "Special Teaching Methods II" course. Teacher candidates presented lessons by using the micro teaching technique during the course. The implementation lasted for 10 weeks. The presentations that were recorded were later watched to criticize teacher candidates and discuss more effective lesson presentations. Findings show that teacher candidates like micro teaching implementations with the help of which they acquire information regarding teaching skills. Self confidence levels and teaching skills of teacher candidates were observed to increase as well.

Another study conducted in the field of micro-teaching was by Aarsal (2015) who studied the effect of micro-teaching on the critical thinking dispositions of pre-service teachers. The purpose of the study was to examine the effect of micro-teaching on pre-service

teachers' critical thinking dispositions. The participants of the study consisted to pre-service teachers (64.3% females while 35.7% males) in the Turkish Language Teachers Education Programme at a public university, the North Turkey. An experimental and a control group as well as a pretest-posttest quasi experimental design were used to determine the impact of micro-teaching on the critical thinking disposition of the pre-service teachers in the teachers education programme

The result of the study revealed that, the pre-service teachers in the experimental group showed a statistically significant and greater progress in terms of critical thinking dispositions than those in the control group. The studied then recommended that teacher educators in teachers education programme should plan and implement micro-teaching in the pedagogical course to improve pre-service teachers' critical thinking dispositions. The findings further showed that the critical thinking dispositions of the pre-service teachers in the experimental group increased to a statistically significant higher degree than that of the pre-service teachers in the control group. This study emphasized on the effect of micro teaching on the critical thinking dispositions of pre service teachers in the Turkish language at a public university North turkey, while the present study is out or designed to look at the impact of micro teaching skills on Nigerian college of education student performance during teaching practice.

2.14 Summary

This chapter has reviewed issues related to the study. The conceptual framework is built on models of micro-teaching developed by different authorities. The models concentrated mostly on behaviour modification and effectiveness based on the scheduled objectives. The review highlighted the concept, relevance of microteaching in teacher training programme and curriculum development, the position of the National Commission for Colleges of Education (NCCE) on micro-teaching, micro-teaching skills, objectives of

micro-teaching for successful teacher-training programme as well as the challenges facing micro-teaching programme. Empirical studies reviewed categorically revealed that, micro-teaching provides an essential service for the transformation and development of student-teachers as well as in-service teachers for the challenges ahead of them. Generally, all the reviewed empirical studies dwelled on the effect or contribution of micro teaching to the pre-service teacher in ensuring quality and effective teacher education programme globally. But the present study was designed to determine whether the acquired skills contribute towards effective performance of NCE student teacher during teaching practice exercise in primary and post-primary schools in Nigeria.

CHAPTER THREE RESEARCH METHODOLOGY

3.1 Introduction

This chapter focused attention on the methodology used in the study. It examined research design, population of the study, sample and sampling techniques, instrumentation, validity of research instruments, pilot study, reliability of the instrument, procedure for data collection and procedure for data analysis.

3.2 Research Design

In this study, the ex-post facto research design was used. The ex-post factor research study is concerned with the aftermath of a phenomenon with regard to its effects (Korhari, 2012). The ex-post factor research design allows for the extensive study of a phenomenon that has already taken place. According to Piccano,(2004), another name for this type of research is retrospective casual – comparative research since both the cause and the effect have already occurred and must be studied in retrospect. This design permits a researcher to obtain data related to the study without conditioning or subjecting the subject to undue screening.

3.3 Population of the Study

The target population for this study comprised of all the NCE three (3) (2015/16) session students of Colleges of Education in the study area who were posted to the field for practical experience (teaching practice). The total population for the study was 35,618.

The population of this study is presented in the table 1;

Table 1: Population of the Study

Institution	Figure
1. FCE Kano	2567
2. FCE Katsina	2080
3. FCE Bichi (Tech)	5185
4. FCE (T)Gusau	3308
5. Shehu Shagari COE, Sokoto	4269
6. FCE Zaria	2744
7. KSCOE G/waya	2326
8. Kebbi State COE Argungu	NIL
9. Sa'adatu rimi COE,Kano	8491
10. Isa Kaita COE Dutsimma	1587
11. Jigawa State COE Gumel	3061
Total	35,618

Source: NCCE 2016

3.4 Sample and Sampling Techniques

The sample for this study was 2744 NCE III students of Federal College of Education Zaria, and the Federal College of Education Kano which had 2567 students, that were on teaching practice, using purposive sampling technique. The basis for such a decision was the fact that the two institutions were strictly observing the micro-teaching theory as well as practicum which formed a major aspect of teacher-education curriculum. However, 10% of the target population was used towards ensuring effective conduct of the research work. Jen in Garba (2017) stated that sampling is drawn on the basis of phenomenon spread over a wide area for the purpose of getting clearer understanding. He further added that 10% or less could be adequately used to represent a group if it covered the characteristics intended to be investigated. The details of the sample for the study is presented in table 3.1

Table 2 : Sample Size of the Target Group

Institution	Sample frame	Sample size
FCE, Zaria	2744	274
FCE Kano	2567	257
Total	5311	531

Source: NCCE 2016

3.5 Instrumentation

The researcher used a Modified Student Teacher Assessment Form (MSTAF) which was modified by the researcher from the original Micro-teaching practicum Assessment Guide (MITPAG) approved by National Commission for Colleges of Education (NCCE) and a questionnaire designed by the researcher and vetted by experts, in assessing the performance of student-teachers during teaching-practice exercise. The Modified Student Teacher Assessment Form (MSTAF) and questionnaire were used in assessing the NCE 3 students while the interview questions were used to interview student-teachers' lecturers of the two institutions (See appendix B,C&D)

3.5.1 Validity of the Instruments

Content validity of the items of the research instruments were made as advised by the supervisors. Gay and Kerlinger (1973) cited by Sambo (2008) hold the view that, validation of the context of a research instrument by experts is an important and acceptable technique. The context, structure and construction of the instrument (MSTAF) were validated by specialists in the field of Measurement and Evaluation as well as the researcher's supervisors. This helped to a large extent in ensuring an effective research exercise.

3.5.2 Pilot Study

Pilot study was conducted in order to identify the perfection of the instrument in measuring what was expected to measure without the intended population having knowledge

of the instrument. Therefore, pilot study was conducted in Sa'adatu Rimi College of Education, Kano, using MSTAF instrument. This was done in order to determine both the face and content validity of the instrument as well as the reliability level. Similarly, it was conducted to ascertain the strengths and weaknesses of the research instrument. The study was conducted using 40 respondents who were not part of the main study. A four weeks period was used for the study.

3.5.3. Reliability of the Instrument

The MSTAF was administered twice, that is, after an interval of two weeks during the pilot study. This was to ensure reliability of the instrument to be used. According to Olayiwola (2010), an instrument is considered reliable if it lies between 0.05 and 1.00. The reliability level of the instrument for the study was found to be 0.80 using Pearson Product Moment Correlation (PPMC). This shows that the instrument was very reliable.

3.5.4 Procedure for Data Collection

The data for the study was collected through the administration of MSTAF, Questionnaire and Interview Questions instruments in assessing the performance of students-teachers in Colleges of Education. The instrument was administered to the sampled groups during teaching-practice session. The sample groups consisted of the NCE III students that had been exposed to micro-teaching theory and practicum. The student-teachers were be examined in their various practicing schools by the researcher and two (2) research assistants from the two institutions who were senior lecturers in the Department of Curriculum and Instruction. They were trained on how to administer the instrument to respondents. The participating schools in Zaria and Kano Area are captured in (Appendix E).

3.6 Procedure for Data Analysis

Data collected was analyzed using appropriate tools in Statistical Packages for Social Sciences (SPSS) Version 20 and Strata version 13. The data collected was analyzed using the

descriptive tool where results were reported in frequencies and percentage table alongside mean and standard deviation. Also, regression analysis was used to test the statistical significance of the observed impact of the teaching skills on the experimental respondents. However, regression analysis was an appropriate tool used in testing significant impact, influence, and effect. The stated hypotheses were tested at 5% level of significant i.e. 0.05 alpha level of probability. The probability level is considered a threshold to either accept or reject the null hypothesis. However, probability value below 0.05 implies rejecting the null hypothesis while above implies accepting the null hypothesis.

CHAPTER FOUR

DATA PRESENTATION AND DISCUSSIONS

4.1 Introduction

The statistical analysis of the data collected from the respondents on the “Impact of Micro-Teaching skills on Nigerian Colleges of Education students’ performance in Teaching Practice” are presented in this chapter. The chapter contains an analysis of the demographic characteristics of the respondents and their opinion on the variables which were analyzed along the study’s objectives and research questions. In the analysis of the objectives and research questions frequencies and percentage scores were used. The research hypotheses were tested along with a discussion of the findings.

4.2 Presentation of Respondents’ Bio-data

A total of 531 sampled respondents provided the required information in the questionnaire administered and therefore constituted the respondents used for the study. The instrument was administered by the researcher with the help of a research assistant. The bio-data analyzed were age, sex and Institution of learners. Table 3, provides the frequencies and percentages.

Table 3: Bio-data of respondents

Age bracket	Frequency	Percentage
18-24 yrs	123	23.2
25-35 yrs	304	57.3
35 yrs and above	104	19.6
Total	531	100.0

Table 3 shows that, respondents between the age bracket of 25-35 years constituted the majority with 57.3%, a significant count of 23.2% account for the respondents between 18-24 years, while 19.6% account for those who were 35 years and above.

Table 4: Distribution of respondents by gender

Gender of respondents	Frequency	Percentage
Male	283	53.3
Female	248	46.7
Total	531	100.0

As reported in table 4, majority of the sampled respondents were males, who made up 53.3% of the respondent , while the female respondents covered 46.7%.

Table 5: Distribution of respondents according to institution of learning

Institute of learners	Frequency	Percentage
FCE Zaria	274	51.6
FCE Kano	257	48.4
Total	531	100.0

Considering the institutions of learners, 274 covering 51.6% respondents were from FCE Zaria and 257 covering 48.4% from FCE Kano.

4.4 Response to Research Questions

In order to respond to the research questions raised for the study, a mean score of 2.5 was used for the decision for and against. A mean score of 2.5 and above meant agreement while mean score lower than the 2.5 midpoint would implied disagreement.

Research Question One: What is the impact of skill of instructional materials on the ability of student teachers in the North-West Geo-Political Zone, Nigeria to make use of instructional materials during teaching practice?

To assess the impact of the skills of appropriate use of instructional materials on the ability of student-teachers on teaching practice, the opinions of respondents were collected and analyzed as shown on table 6

Table 6: Mean scores of responses on the skills of use of instructional materials

Item: Acquiring the skill of use of instructional materials helped the students to:		N	Mean	Std. Dev
1	Identifying appropriate instructional material for use during teaching practice.	531	2.4	1.2
2	Encouraged them to select the right instructional material.	531	4.3	1.4
3	Provide the right quantity of instructional material.	531	3.9	1.2
4	Use the materials at the appropriate of the lesson.	531	3.7	1.1
5	Make appropriate application of the instructional material to the lesson.	531	3.4	1.6
6	Use the material to facilitate understanding of the lesson.	531	4.1	1.3
7	Improvise instructional material where they were not available.	531	2.0	1.1
8	Some of the students still failed to use instructional material.	531	3.4	1.5
9	Found it difficult to relate the materials to the lesson they taught.	531	3.1	1.3
10	Some student find it difficult to use electronic instructional materials.	531	2.7	1.5
Aggregate mean			3.5	1.3

Table 6 revealed the aggregate mean score of 3.5 which is higher than the decision mean of 2.5. This shows that, respondents were of the view that skill of the use of instructional material acquired during teaching practice had positive impact on the ability of student teachers in their use of instructional materials. Although the mean scores of item 1 and items 7 on the table are lower than the decision mean, since the aggregate mean (3.5) is higher than the decision mean (2.5), it can be said that the skill of the use of instructional materials acquired during micro-teaching had a positive impact on their ability to utilize instructional materials during teaching practice.

Research Question Two: What is the impact of the skill of the use of classroom control on the ability of the student teacher in the North- West Geo-Political Zone, Nigeria to manage/control the classroom during teaching practice?

In order to answer the above research question, the opinions of respondents on the skill of classroom control were scored in means as they influenced the performance of students' on teaching practice. The result is reported in table 7

Table 7: Response mean scores on the skills of classroom control

Item: Students exposed to skill of classroom control during micro-teaching display the following during teaching practice:	N	Mean	STD
1 Keep the class environment neat.	531	2.05	1.234
2 Arrange the seating to allows for free and easy movement.	531	2.61	1.512
3 Appoint/recognize a class leader through whom passes relevant information to the class.	531	3.09	1.289
4 Establish guiding principles of interaction in the class sets up a channel of communication.	531	3.26	1.145
5 Properly informs the class of his expectation.	531	2.17	1.338
6 Is loud enough when talking as to ensure every member of the class gets the required information.	531	2.19	1.346
7 Reward those who deserve to be rewarded.	531	2.95	1.202
8 Caution/disciplines those who deserve to be discipline.	531	4.24	.871
9 Some of such students are laizze faire.	531	3.47	1.280
10 Some of them are unprepared for their lesson and so promote indiscipline.	531	3.56	1.399
Aggregate mean score		2.9	1.3

In table 7, although the mean scores of items 1,5 and 6 on the table was lower than the decision mean of 2.5, since the aggregate mean (2.9) was higher than the decision mean(2.5), it can be said that the skill of the use of classroom control acquired during micro-teaching had a positive impact on the ability of student-teachers on teaching practice to manage/control classroom during teaching practice.

Research Question Three: What is the impact of the skill of chalkboard management on the ability of student-teachers in the North-West Geo-Political Zone, Nigeria to manage chalkboard during on teaching practices?

To examine whether the skills of appropriate use of chalkboard management had any impact on the performance of student-teachers on teaching practice, the opinions of respondents were sought for, and reported in table 8.

Table 8: Mean scores of respondents' opinion on the skills of chalkboard management

Item: Students-teachers who had acquired micro-teaching skills of chalkboard usage during micro-teaching:	N	Mean	Std. Dev
1. Planned the chalkboard correctly.	531	2.9	1.6
2. Arranged their writing orderly for easy understanding.	531	2.5	1.7
3. Often cleaned up in wanted information from the board.	531	2.8	1.3
4. Placed the board at strategies position where every learner could see in the case of mobile boards.	531	2.4	1.4
5. Made good summary of lesson on the chalk.	531	3.4	1.5
6. Write clearly and boldly on the board.	531	4.3	1.1
7. Find it difficult to be systematic in the use of the chalkboard.	531	3.6	0.9
8. Some write illegibly on the board.	531	4.0	1.4
9. Some of them do not value the central location of the chalkboard.	531	3.8	1.3
10. Some teachers do not clear up their writing on board before leaving the class.	531	3.1	1.3
Aggregate mean		3.3	1.3

Table 8 revealed that item 4 on the table had a mean (2.4) lower than the decision mean (2.5), indicating that students on teaching-practice could not really place chalk board at a strategic place where every learner could see. However, since the aggregate mean score (3.3) was higher than the decision mean (2.5), it can be said that the skill of chalkboard management acquired during micro-teaching had a positive impact on their ability to manage chalkboard during teaching practice.

Research Question Four: What is the impact of the skill of stimulus variation on the ability of student-teachers in the North- West Geo-Political Zone, Nigeria to vary stimulus during teaching practice?

To determine whether the skill of appropriate use of stimulus variation had any impact on the performance of student-teachers on teaching practice, the response mean of respondents was analyzed and reported in table 9

Table 9: Mean scores of respondents' opinion on the skills of stimulus variation

Item: Student teachers exposed to the skill of stimulus variation during micro-teaching are to:	N	Mean	Std. Dev
1. Select appropriate stimuli for use in class.	531	4.2	1.0
2. Organize the stimulus logically.	531	3.4	1.3
3. Vary the stimulus when the need arises.	531	3.7	1.4
4. Provide appropriate stimuli at the appropriate time.	531	2.6	1.4
5. Are unable to decide which stimulus to use and at what time.	531	4.4	1.0
6. Still find it difficult to vary the stimulus to be used.	531	3.3	1.3
7. Are ignorant of other relevant stimuli that can be used.	531	3.4	1.1
8. Students are allowed to key into available stimuli.	531	3.7	1.1
9. Some student teachers don't apply the right stimuli.	531	4.4	0.9
10. Adequate application of skill of stimulus variation improve students teachers performance.	531	3.9	1.2
Aggregate mean		3.7	1.2

Table 9 revealed that the mean scores of all the items on the table are higher than the decision mean and the aggregate mean (3.7) was higher than the decision mean (2.5). As a result, it can be said that the skill of the use of stimulus variation acquired during micro-teaching had a positive impact on their ability to vary stimulus during teaching-practice.

Research Question Five: What is the impact of the skill of Questioning on the ability of the student-teachers in the North-West Geo-Political Zone, Nigeria to ask questions during teaching practice?

To examine whether the skill of appropriate questioning had any impact on the performance of student-teachers on teaching practice, the response mean of the respondents was analyzed and reported in table 10.

Table 10: Mean scores of respondents' opinion on the skills of questioning

Item: Student teacher exposed to the skill of questioning during micro-teaching when on teaching practice are able to:	N	Mean	Std. Dev
1. Determine the type of questions that should be asked in a lesson.	531	3.0	1.6
2. Can effectively stand a lesson using questions.	531	2.5	1.3
3. Are able to raise pose questions to assess the level of understanding of students.	531	3.5	1.5
4. Use questions as a means of capturing the attention of students for a lesson.	531	2.7	1.3
5. Raise summary question to assess the overall understanding of students.	531	4.2	1.0
6. Create room for students to ask good questions.	531	3.6	1.4
7. Respond to students questions appropriately.	531	3.1	1.3
8. Do not allow students to raise question on fray areas.	531	3.4	1.2
9. Are still unable to use questioning technique of teaching.	531	4.0	1.3
10. Some cannot start a lesson using question.	531	4.1	1.0
Aggregate mean		3.4	1.3

The items on table 10 revealed that the mean scores were higher than the decision mean and the aggregate mean of 3.4 was higher than the decision mean (2.5). It can therefore be said that the use of the skill of questioning acquired during micro-teaching had a positive impact on their ability to ask questions during teaching practice.

4.4 Assessment of Micro-Teaching Skills

In order to assess the performance of student-teachers, a mean score of 2.5 was used for the decision. A mean score of 2.5 and above would mean positive impact, while mean score lower than the 2.5 midpoint would imply low. The assessment of micro-teaching skill is done and reported in table 4.8.

Considering the use of instructional materials, majority of the student-teachers covering 42.2% were excellent while a significant count of 41.8% were good, this is confirmed with the mean score of 4.2. The observation made on student-teachers is also in agreement with the findings reported in table 4.4. This is further justified by seven (7) lecturers having three (3) from FCE Kano and four from FCE Zaria. This implies that, the skill of instructional material is effectively used by the student-teachers.

As discovered and reported, student-teachers adequately use the skill of classroom control in directing and securing the learners' attention, this is observed from the count of 58.8% teachers recorded with excellent performance as well as the mean score of 4.18. More so, from the response of 7 lecturers from FCE Zaria and 5 from Kano, it is therefore concluded that, students' teachers apply all the identified skill in table 4.5 in order to have a proper classroom control.

Assessment of the effective application of the skill of chalkboard management depicted that, roughly one third of the student-teachers covering 57.8% were excellent on the skill of adequate application of chalkboard management. Also, the mean score of 4.13 is observed which is relatively higher than the 2.5 decision midpoint. This is justified from the opinion of 6 lecturers from FCE Zaria and 8 from FCE Kano where they are of the view that, chalkboard management is a tool that enhances student-teachers performance. This is in accordance with the findings made in table 4.6. Therefore, student-teachers are believed to apply the skill of chalkboard management when teaching.

More so, stimulus variation is a skill that is widely used by the student-teachers, this is discovered from the count of 30.3% who were recorded very good performance and 24.3% with excellent. However, this is in agreement with the response of lecturers having 6 from FCE Kano and 4 from FCE Zaria where they state that, stimulation variation significantly help the teacher in ensuring credible behaviour. The observation is further justified in table 4.7 having the aggregate mean score of 3.7 where student-teachers are said to apply the skill of stimulus variation.

Regarding the use of the skill of questioning, majority of the observed teachers covering 52.0% were excellent. In addition, the mean of 3.4 is recorded which is higher than the 2.5 decision mean for assessment. In harmony with the response of 5 lecturers from FCE Kano and 7 from FCE Zaria which is also in agreement with the findings disclosed in table 4.8 having the aggregate mean score of 3.4. It can therefore be said that, student-teachers adequately apply the use of questioning skill in order to augment their teaching performance. Thus, the application of the identified skills by students' teachers is believe to be as a result of the effectiveness in endorsing their performance.

4.5 Testing of Hypotheses

The null hypotheses for this study were formulated in line with the objectives and research questions. A multiple regression analysis was employed to examine the impact of the five (5) micro-teaching skills on the performance of student-teachers in teaching practice. The tool was selected because it has the ability to test the linear trend/relation or impact of predictor variable/variables on a dependent variable, (Rawlings, Pantula, and Dickey, 1998). The hypotheses were tested at the probability level of 0.05 i.e. 5% α level of significance. However, the considered p-value was used as the basis to either reject or accept the null hypotheses.

4.5.1 Multiple Regression Analysis

Table 11: Goodness of fit for regression coefficient

Source	SS	Df	MS	Number of obs = 531
Model	42.66323	5	8.532645	F(5, 525) = 56.01
Residual	79.97975	525	0.152342	Prob> F = 0
				R-squared = 0.9479
				Adj R-squared = 0.3417
Total	122.643	530	0.231402	Root MSE = 0.39031

Table 11 shows the analysis of variance table and the parameter estimates. In the former, the ratio of the model mean square to the residual mean square gives an F -test for the hypothesis that all the regression coefficients in the fitted model are zero (except the constant β_0). The resulting F -statistic with (5, 525) degrees of freedom takes the value 56.01 with associated p -value < 0.01 . Consequently, the hypothesis is rejected. The square of the multiple correlation coefficient (R^2) is 0.9479 showing that 94.8% of the variance of procurement strategy is accounted for by the five explanatory variables of interest.

Table 4.10: Coefficient estimate on the impact of micro teaching skills on the performance of student-teachers in teaching practice

Performance	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
Instructional material	0.10792	0.037584	2.87	0.004	0.18176	0.03409
Classroom control	0.506966	0.056082	9.04	0.000	0.396793	0.617139
Chalkboard management	0.255478	0.038132	6.7	0.000	0.180568	0.330387
Stimulus variation	0.127745	0.041374	3.09	0.002	0.046467	0.209023
Questioning	0.1526	0.041893	3.64	0.000	0.23489	0.0703
_cons	1.78873	0.210718	8.49	0.000	1.374777	2.202683

Source: Field Research, 2016

The coefficient for the multiple regression Table above shows the result of the tested hypotheses for this study. In testing hypothesis one which looked at the impact of instructional materials on the performance of the student teacher. Result shows that, the use of instructional materials by the student teacher had significant impact on their performance

during teaching practice, this is observed from the p value of 0.004 which is less than the 0.05 level of significance.

The test conducted on hypothesis two revealed that the skill of classroom control by the student teacher acquired during micro-teaching had significant impact on their ability to manage or control their students. This is seen from $p < 0.001$. The test conducted on hypothesis three which considered the impact of the skill of chalkboard management on the ability of student teachers revealed that $p < 0.001$ which signifies that there was a significant impact of chalkboard management on the ability of student teachers to manage their chalk board during teaching practice.

The test conducted on hypothesis four which looked at the impact of the skill of stimulus variation on the ability of student teachers to vary their stimulus revealed p-value of 0.002 which is relatively lower than the 0.05 level of significance. This shows that, skill of stimulus variation had significant impact on the performance of student teachers during teaching practice.

Finally, the test conducted on hypothesis five which looks at the impact of the skill of questioning on the ability of teaching practice students to ask question revealed a p-value of 0.000 which is lower than the 0.05 level of significance. This shows that, the skill of questioning acquired during micro-teaching had significance impact on the students ability to ask question during teaching practice.

4.6 Summary of findings

The summary of the major findings from the analysis of the data and test of the study's hypotheses revealed that micro-teaching skills have significant impact on the performance of students-teachers in teaching practice. It specifically found that:

1. the skill of the use of instructional materials acquired during micro-teaching had significant positive impact on the ability of the student teachers in North-West geo-political Zone, Nigeria to make use of instructional materials during teaching practice (p=0.004).
2. the skill of classroom control acquired during micro-teaching had significant positive impact on the ability of student-teachers in the North-West geo-political zone Nigeria to manage/control the classroom during teaching practice(p=0.000).
3. the skill of chalkboard management acquired during micro-teaching had significant positive impact on the ability of student-teachers in the North-West geo-political zone Nigeria to manage the chalkboard during teaching practice (p=0.000).
4. the skill of stimulus-variation acquired during micro-teaching had significant positive impact on the ability of student-teachers in the North-West geo-political zone Nigeria to vary stimulus during teaching-practice (p=0.002).
5. the skill of questioning acquired during micro-teaching had significant positive impact on the ability of student teachers in the North-West geo-political zone Nigeria to ask questions on teaching-practice (p=0.000).

4.7 Discussion of findings

Findings one showed that the skills of the use of instructional materials acquired during the microteaching significantly and positively impacted the students ability to use instructional materials during teaching practice. This is to say that, drilling students in the use

of instructional materials during micro-teaching is very helpful; for students going on teaching practice since it not only give them the knowledge of how to use the instructional materials, but provides them with the know-how on the use of instructional materials. It makes them willing and committed to the right use of instructional materials during teaching practice. This findings is similar to that of Dagneu (2011) research which revealed that micro-teaching program provides the students teacher with positive impacts on the use of teaching and materials needed for use during teaching practice.

Findings two showed that the skills of the use of classroom control acquired during the microteaching significantly and positively impacted the students ability to use classroom control during teaching practice. This is to say that, drilling students in the use of classroom control during micro-teaching is very helpful for students going on teaching practice since it does not only give them the knowledge of how to use the skill of classroom control, but provides them with the know-how on the use of classroom management. It makes them willing and committed to the right use of classroom management during teaching practice. This findings is similar to that of Abdulrahman (2010) which revealed that micro-teaching provide the student teacher with the knowledge of how to use the skill of classroom control as it modified their behavior toward planning teaching process, classroom management, communication and evaluation.

Findings three showed that the skills of the use of chalkboard management acquired during the microteaching significantly and positively impacted the students ability to use chalkboard management during teaching practice. This is to say that, drilling students in the use of chalkboard management during micro-teaching is very helpful for students going on teaching practice since it does not only give them the knowledge of how to use the skill of chalkboard, but provides them with the know-how on the use of chalkboard management. It makes them willing and committed to the right use of chalkboard management during

teaching practice. This finding is similar to that of Liang and Xiaojong (2010) whose study suggested that, in order to ensure the needed constant improvement by the student-teacher on practical aspect and theoretical knowledge, micro-teaching must be student-led; and that stake holders should be made to understand that, with the use of multimedia aids constantly, students' level of intelligence would be developed so as to achieve improvement on skills of teaching

In respect to findings four which showed that the skills of the use of stimulus variation acquired during the microteaching significantly and positively impacted the students ability to use stimulus variation during teaching practice. This is to say that, drilling students in the use of stimulus variation during micro-teaching is very helpful for students going on teaching practice since it does not only give them the knowledge of how to us the skill of stimulus variation, but provides them with the know-how on the use of stimulus variation. It makes them willing and committed to the right use of stimulus variation during teaching practice. This finding is similar to that of Chatzidimou (2011) which found out that micro-teaching is highly effective in empowering the student teacher with various skills, especially the use of audio-visual aids in teaching, the techniques of introducing and ending lesson among others. The findings of the empirical survey indicated the fact that micro-teaching can play a significant role in teacher education and can contribute to a great extent to the better understanding of teaching and its complexities as an element of the improvement of teacher education. In addition, micro-teaching was felt to be a beneficial learning experience for the student-teacher.

Finally, findings five which showed that the skills of the use of questioning acquired during the microteaching significantly and positively impacted the students ability to use questioning during teaching practice. This is to say that, drilling students in the use of questioning during micro-teaching is very helpful for students going on teaching practice

since it does not only give them the knowledge of how to use the skill of questioning, but provides them with the know-how on the use of questioning. It makes them willing and committed to the right use of questioning during teaching practice. This finding is similar to that of Aslihan (2012) which revealed that, the pre-service students believed that the microteaching method gives a chance to evaluate their strong and weak aspects in teaching. At the same time, the results showed that pre-service teachers have developed timing, planning, asking questions, management of class, using different materials and examples and physical appearance during the teaching process.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

This study investigated the Impact of micro-teaching skills on the performance of student teachers in teaching practice, the objectives of the study were drawn in line with the objectives, five research questions were raised and five research hypotheses were postulated. Relevant literatures were reviewed.

To effectively investigate the impact of micro-teaching skills on performance of student-teachers, a structured questionnaire was designed and validated through face validity and then pilot tested for reliability and consistency of items within the instrument. The tested instrument was then administered to a total of 531 respondents selected through the random sampling procedure across the study area. The data collected were analyzed using the Statistical Package for the Social Sciences (IBM version 20) and (Stata version 13). Statistical procedures selected for the analysis included frequencies and percentages, means and standard deviations. The hypotheses were tested using multiple regression analysis. The study revealed that:

1. the skill of the use of instructional materials acquired during micro-teaching had significant impact on the ability of the student teachers in North-West geo-political Zone, Nigeria to make use of instructional materials during teaching practice.
2. the skill of classroom control acquired during micro-teaching had significant impact on the ability of student-teachers in the North-West geo-political zone Nigeria to manage/control the classroom during teaching practice.
3. the skill of chalkboard management acquired during micro-teaching had significant impact on the ability of student-teachers in the North-West geo-political zone Nigeria to manage the chalkboard during practice.

4. the skill of stimulus-variation acquired during micro-teaching had significant impact on the ability of student-teachers in the North-West geo-political zone Nigeria to vary stimulus during teaching-practice.
5. the skill of questioning acquired during micro-teaching had significant impact on the ability of student teachers in the North-West geo-political zone Nigeria to ask questions on teaching-practice.

5.2 Conclusion

Based on the findings made, it was therefore concluded that, micro-teaching is an important tool for the performance of student-teacher during teaching practice. In essence, it provides the student teacher with an opportunity to acquire the basic skills of teaching such as the skill of the use of instructional materials, classroom control, chalkboard management, stimulus variation and questioning skill, in preparation for teaching practice.

5.3 Recommendations

Based on the findings of this study, the researcher made the following recommendations:

1. The use of instructional materials should be taught to student-teachers at NCE programme to enhance their performance during teaching practice.
2. Concerted effort should be intensified by the teacher educators to ensure that the student-teachers comprehend and use the skill of classroom control to enhance performance during teaching practice and thereafter.
3. The Head of unit of micro-teaching practicum should create a special display session to enhance the ability of student teachers in the North-West Geo-political Zone, Nigeria in the use of chalkboard management during teaching practice.

4. Teacher educator should be explicitly proactive in guiding the student teacher's in the North-West Geo-political Zone, Nigeria to use the skill of stimulus-variation to enhance performance during teaching practice.
5. Effort should be intensified by the teacher educators to adequately acquaint the student-teachers in the North-West Geo-political Zone, Nigeria to be brief, precise and clear in using questioning skill in the classroom during teaching practice.

5.4.1 Contribution to Knowledge

This study has established that:

1. Deficiencies in the teaching skills by pre-service teachers and in-service teachers could be addressed by teacher educators of Colleges of Education in Nigeria through effective micro-teaching programmes.
2. Micro-teaching programmes if properly conducted empowers the pre-service teachers with adequate skills and experiences for use during teaching practice and thereafter.
3. The skill of questioning acquired during micro-teaching had significant impact on the ability of student teachers in the North-West geo-political zone Nigeria to ask questions.
4. The instrument used for this study has provided a working tool for assessing the impact of micro-teaching skill on the performance of NCE students during teaching practice.

5.4.2 Suggestion for Further Research

Further research can be carried out in the following areas:

- a. This study was conducted in North West-Geo Political Zone of Nigeria. The study can be replicated in other Geo-Political Zones of the country.

- b. Effect of teaching practice supervision on the performance of student teachers in the use of teaching skills during teaching practice in the North-West Zone, Nigeria
- c. Influence of NCCE as a Regulatory body for effective acquisition of micro-teaching skills by the student-teachers in Colleges of Education North-West Geo-Political Zone, Nigeria
- d. Influence of micro teaching skills on pre-service and in-service teachers for professional development in Nigeria.

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APPENDIX A

3.2.3 Modified Student -Teacher Assessment Form (MSTAF) for Observation

Section (A)

Gender: Male () Female ()

Learners institutions: FCE KANO () FCE ZARIA ()

DEPT:-----

SUBJECT / TOPIC: -----

PROPOSED LEARNER'S LEVEL: NC2 () NC3 ()

Section (B)

Assessment Areas	1	2	3	4	5
1. Appropriate use of Set Induction skill toward preparing the mind of the learners for the task ahead					
2. Effective use of skill of Instructional Materials					
3. Adequate use of skill of Classroom Control in directing and recurring the learners attention					
4. Effective Application of Skill of Chalkboard Management for effective knowledge destination					
5. Efficient use of skill of stimulus variation toward employing various process for effective teaching and learning					
6. Appropriate use of skill of questioning for effective assessment of learners understand					
7. Adequate and appropriate use of dress code which allow the teacher to serve as a model					
8. Suitability of the skill to the assumed learners level which aid the attainment of the designed objectives					
9. Appropriate use of means of communication for effective destination and acquisition of knowledge					
10. Accommodation of other skills / Resources for effective teaching and learning					

Key:-

Poor -1Weak -2Fair -3 Good -4 V. Good -5

Total Score:----- Grade:-----

Researcher'sComments: -----

APPENDIX B

Faculty of Education,
Department of Educational
Foundations and Curriculum.
Ahmadu Bello University, Zaria.
20th-01-2016.

Sir,

LETTER OF INTRODUCTION

I am a Ph.D student of the above mentioned institution, currently undergoing a research on “Impact of Micro-teaching Skills on Nigerian Colleges of Education Students Performance in Teaching Practice.”

In view of the above, I would like you to kindly attend to the questionnaire attached to enable me further my research.

I assure you of confidentiality of your responses as the questionnaire is meant for the research only.

Yours Faithfully,

Lawal Garba Sani.

Ph.D/EDUC/3640/2011-12.

APPENDIX C
QUESTIONNAIRE

SECTION (A)

BIODATA OF THE RESPONDENTS (STUDENTS)

Please tick (✓) in the following boxes to indicate where you belong to:

1. Age : 18 – 24 () 25 – 35 (), 35 and above ()
2. Sex: Male (), Female ()
3. Level of the respondents NCE2 () NCE () NCE () BED ()
4. Institute of learners: FCE Kano () FCE () FCE Zaria ()

SECTION (B)

Instruction: Answer all question by using the following keys to complete the scale.

- Strongly Agree - SA
- Agree - A
- Un-decide - UD
- Disagree - DA
- Strongly Disagree - SDA

SN	Items on the skill of instructional material	SA	A	UD	DA	SDA
1.	Identifying appropriate instructional material for use during teaching practice.					
2.	Encouraged them to select the right instructional material.					
3.	Provide the right quantity of instructional material.					
4.	Use the materials at the appropriate of the lesson.					

- 5 Make appropriate application of the instructional material to the lesson.
- 6 Use the material to facilitate understanding of the lesson.
7. Improvise instructional material where they were not available.
8. Some of the students still failed to use instructional material.
- 9 Found it difficult to relate the materials to the lesson they taught.
10. Some student find it difficult to use electronic instructional materials.

Items on the skill of classroom control

S/N		SA	A	UD	DA	SDA
1.	Keep the class environment neat.					
2.	Arrange the seating to allows for free and easy movement.					
3.	Appoint/recognize a class leader through who passes relevant information to the class.					
4.	Establish guiding principles of interaction in the class sets up a channel of communication.					
5.	Properly informs the class of his expectation.					
6.	Is loud enough when talking as to ensure every member					

of the class gets the required information.

7. Reward those who deserve to be rewarded.
 8. Caution/disciplines those who deserve to be discipline.
 9. Some of such students are laizze faire.
 10. Some of them are unprepared for their lesson and so promote indiscipline.
-

Items on chalkboard use

S/N		SA	A	UD	DA	SDA
1.	Planned the chalkboard correctly.					
2	Arranged their writing orderly for easy understanding.					
3	Often cleaned up in wanted information from the board.					
4	Pleasured the board at strategies position where every learner could see in the case of mobile boards.					
5	Make good summary of lesson on the chalk.					
6.	Write clearly and boldly on the board.					
7.	Find it difficult to be systematic in the use of the chalkboard.					
8.	Some write illegibly on the board.					
9.	Some of them do not value the central location of the chalkboard.					
10.	Some teachers do not clear up their writing on board before leaving the class.					

Items on the skill of stimulus variation

S/N		SA	A	UD	DA	SDA
1	Select appropriate stimuli for use in class.					
2	Organize the stimulus logically.					
3	Vary the stimulus when the need arises.					
4	Provide appropriate stimuli at the appropriate time.					
5	Are unable to decide which stimulus to use and at what time.					
6.	Still find it difficult to vary the stimulus to be used.					
7	Are ignorant of other relevant stimuli that can be used.					
8.	Students are allowed to key into available stimuli.					
9.	Some student teachers.					
10.	Appropriate application of skill of stimulus variation in teaching and learning saves time and energy of the teacher.					

Items on the skill of questioning

S/N		SA	A	UD	DA	SDA
1	Determine the type of questions that should be asked in a lesson.					
2	Can effectively stand a lesson using questions.					
3	Are able to raise pose questions to assess the level of understanding of students.					
4	Use questions as a means of capturing the attention of students for a lesson.					
5	Raise summary question to assess the overall understanding of students.					
6.	Create room for students to ask good questions.					

7. Respond to students questions appropriately.
 8. Good questioning help in determining the effectiveness of the design curriculum.
 9. Do not allow students to raise question on fray areas.
 - 10 Are still unable to use questioning technique of teaching.
-

APPENDIX D

INTERVIEW QUESTIONS FOR LECTURERS

Please tick (✓) in the following boxes to indicate where you belong to

1. Age: 22 – 26 (), 27 - 30 () 30 and above ()
2. Sex: Male () Female ()
3. Grade level: Grade level 7-10 (), 12 – 13 (), 14 and above ()
4. Qualification: NCE (), B.ed () B.SC.ed (), B.A Ed () Masters and Above ()

SECTION B

I. (Instructional materials)

- 2.15 Do you think that the student teachers ability to use instructional materials facilitate in covering the syllabus?
- 2.16 Does the student teacher's appropriate use of instructional materials skills help to convey much and better knowledge and skills?
.....
- 2.17 Would the effective use of instructional material help in improving the student level of understanding?
- 2.18 Does the application of instructional material allow the student teacher to monitor assimilation of information?.....
- 2.19 Does the use of instructional materials allow the teacher to cover the syllabus as prescribed by the examination bodies?
- 2.20 Does good demonstration of instructional material at the beginning of lesson help in dissemination?
- 2.21 Do effective use of instructional material at the middle of the lesson makes it more attractive?
- 2.22 Would the use of instructional materials at the end of the lesson enables the teacher to evaluate the lesson?
- 2.23 Does appropriate application of instructional materials aids in transforming the theoretical aspect of the lesson into practical?
- 2.24 Would effective use of instructional materials supplement the effort of the teacher during teaching?

II. (Classroom control)

1. Do you think that classroom management is the heart of meaningful classroom interaction?.....
2. Does purposeful classroom management enable student teacher to attain the lesson objectives?
3. Does non use of motivational skill reduce the interest of student teacher during teaching and learning?
4. Would appropriate and relevant use teaching aids during teaching motivates and enhance the performance of student teacher?
5. Does the use of skill of reinforcement by the teachers during classroom presentation decrease attention of the learners?
6. Does effective use of daily classroom routine skill by the student teacher enhances high level of classroom control?
7. Proper arrangement of pupils in the classroom is not really required for effective classroom control?
8. Effective application of rules and regulations by the student teacher help in ensuring effective monitoring of students behavior?
9. Would appropriate appearance of the teacher accorded him respect and enhances classroom control?.....
10. Does adequate use of teachers voice while teaching help in ensuring good classroom control?

III. (Chalkboard usage)

- e. Does the effective application of the acquired skill of chalkboard lead to success in teaching and learning?
- f. Will the appropriate note written on the chalkboard lead to the summary of the lesson?.....
- g. Does poor application of the acquired skill of management of chalkboard hinder the attainment of teaching objectives?
- h. Would writing important note on the chalkboard lead to summary of the lesson?
- i. Does chalkboard serve as the most widely use learning resources in class work activities?
- j. Does adequate use of acquired chalkboard usage makes direct appeal to a child sense of vision and strengthens his retention?

- k. Would writing clearly and boldly on the chalkboard lead to effective teaching?
.....
- l. Does poor lightening in the classroom hinder effective chalkboard management?
.....
- m. Does retaining relevant information on the board lead to effective teaching and learning?
.....
- n. Would fixing chalkboard at the middle of the wall constitute effective chalkboard management?

IV. (Stimulus Variation skill)

- 1. Will adequate use of skill of non-verbal communication by the student teacher lead to attention during lesson presentation?
.....
- 2. Does the skill of stimulus variation require proper preparation by the student teacher before its usage?
- 3. Would effective use of skill of stimulus variation form a major teacher personality?
.....
- 4. Does stimulus variation skill reduce students and teachers interaction during teaching and learning process?
- 5. Does the main objective of stimulus variation is to make teaching more professional and more demanding?
- 6. Does effective use of teacher – students relationship enhances skill of stimulus variation skill in teaching and learning?
- 7. Does the mode of teachers dressing help in ensuring effective skill of stimulus variation?
.....
- 8. Does effective co-ordination of teaching material by the student teachers in the classroom form an aspect of stimulus variation?
- 9. Does conducive environment of teaching and learning help in ensuring effective stimulus variation skill?
- 10. Does appropriate application of stimulus variation saves time and energy of the student teacher?

V. (Skill of Questioning)

- 1. Do you think that the skill of questioning will assist to determine how best pupils think?
.....

2. Does the questioning skill serve as a basis for identifying the strength and weakness of the lesson?.....
3. Does effective demonstration of skill of questioning help in determining learners thinking?
4. Does the student ability to ask brief and precise questions form a major characteristic of questioning?
.....
5. Does questioning serve as a means of identifying the strength and the weakness of the lesson?
6. Would it be appropriate to ask the learners question before assigning them to answer?
.....
7. Does the use of questioning skill help the student teacher to evaluate the lesson?.....
8. Would questioning help in determining the effectiveness of the designed curriculum?
.....
9. Does asking the learners question at the beginning of the lesson enable them to concentrate very well?
10. Does student teachers appropriately use questioning skill to assess the strength and weaknesses of the lesson objective?
.....

APPENDIX E

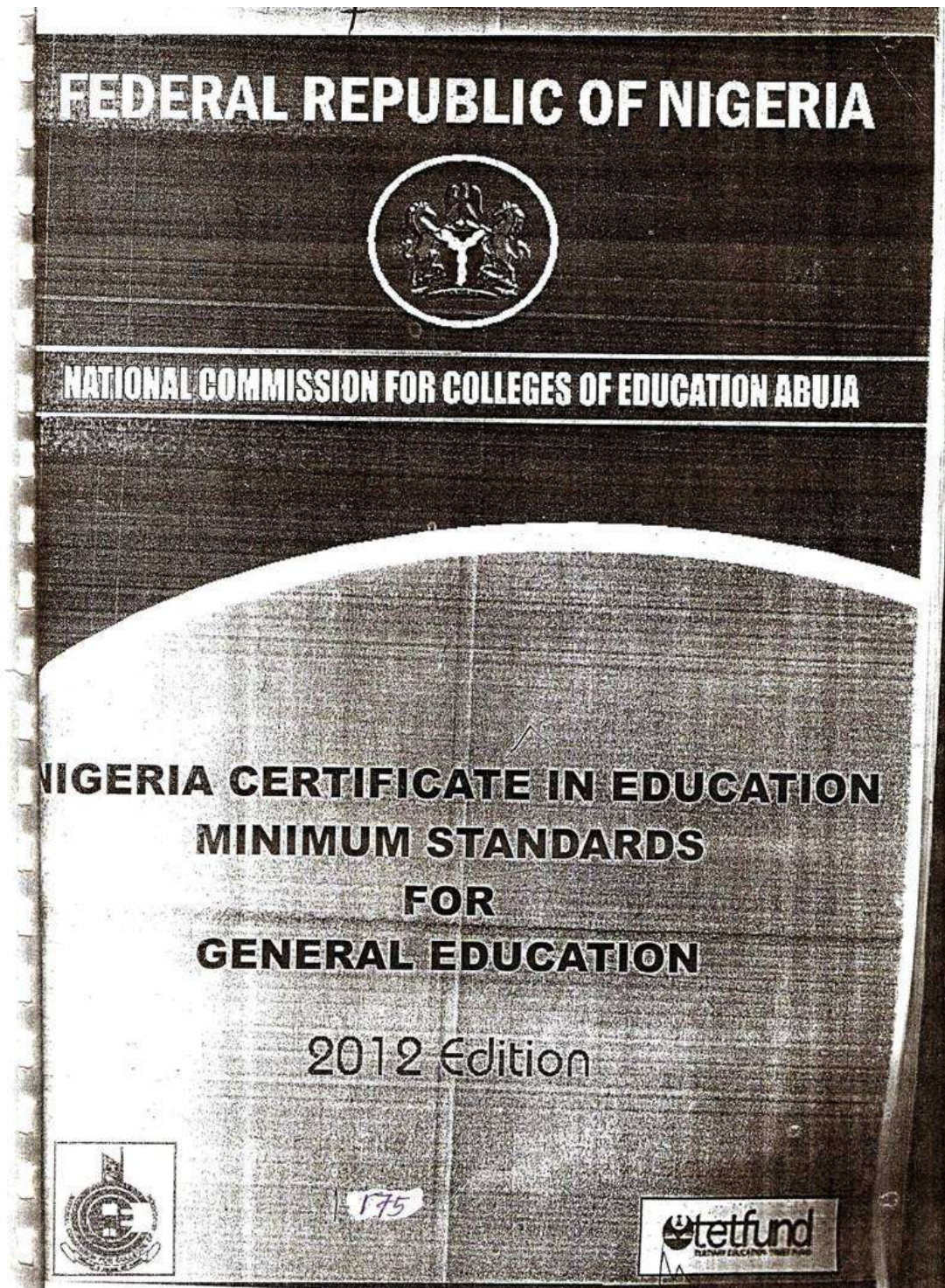
Participating schools in Zaria.

1. Gaskiya central school, Nursery, Primary and secondary, Gaskiya layout Zaria.
2. Tsoho Abdullahi LGEA Tukur Tukur Zaria.
3. Dr. Shehu Idris LGEA Bubbandodo, Zaria city
4. Alhuda-huda College J.SS and S.SS Zaria city
5. Sarki Sambo Science LGEA, primary school Pada, Zaria city
6. Bello Adamu LGEA, primary school Kofar Doka Zaria
7. Baba Ahmed LGEA, Model primary school Tudun Wada Zaria

Participating schools in Kano.

1. Gobirawa special primary schools Kurna LGEA
2. Gogwarwa primary school LGEA Bridget Kano
3. Gidan Makama LGEA Primary school
4. Kofar Kabuga, Special primary school
5. Shekar Barde LGEA primary school
6. Special primary school LGEA Charanchi
7. Model primary school LGEA, Nasarawa Kano

APPENDIX F



- xi) Individualized Instruction (e.g. programmed instruction, computer-assisted instruction/learning, integrated day/open day/workday) and or any other professionally recognized teaching procedure.

8. **GRADUATION REQUIREMENTS**

Duration:- 3 years minimum

Internship:- 1 year with pay – followed by registration and full certification.

Candidates for the award of NCE certificates are required, among others, to earn at least 30 credits in General Education courses, 6 credits in Teaching Practice and 18 credits in General Studies Education (totaling 54 credits in the Education component of the NCE programme) to qualify for graduation, viz:

General Education	30 Credits
TP	06
GSE	18
	<u>54</u>

9. **TEACHING PRACTICE**

Teaching Practice – 6 credits, should be a separate unit, but must be co-ordinated by School of Education, specifically the co-ordination to be housed in the Department of Curriculum and Instruction, under the supervision of a committee with the Dean of Education as Chairman.

Teaching Practice is compulsory for all NCE students. It has to be done in the candidate's teaching subject(s), and has to be passed for the candidate to earn the 6 credits required for graduation in this course area. Bearing in mind the demands of the UBE, institutions are advised to assign their students to Nursery (Early Childhood care) institutions, Primary Schools, Junior Secondary Schools or Adult/Non-formal settings for the Teaching Practice to give them appropriate exposure at that level and context. Whatever subject is observed for Teaching Practice, the score should be recorded under its own separate heading in the School of Education. Teaching Practice should last for a full semester duration which should run at a stretch from the beginning of NCE III 1st Semester to the end.

During Teaching Practice a minimum of ten supervisions should be made on a student before the final computations of such student's TP score is made. Only students who pass EDU 213 – Micro-Teaching Theory would qualify to offer EDU 223 – Micro Teaching Practicum and only students who pass EDU 223 would qualify to go on Teaching Practice.

10. **PROJECT**

Every candidate for the NCE irrespective of any other departmental project is expected to pass EDU 323. There should be a Project Coordinating Committee for EDU 323, made up of a representative from each school and headed by the representative from the School of Education. Regardless of the Department where the research project is done, the score should be sent to the School of Education for recording and computation of students'

Students' projects should be written individually or in groups of not more than five (5) candidates.

11. SUBJECT COMBINATION

In order to qualify for the Nigeria Certificate in Education, candidates are expected to combine studies in Education with courses in one or two teaching subjects in the Junior Secondary School Curricula. (See Curriculum Implementation Framework Handbook on the recommended subject combinations for each of the **Specialist Programmes** for further guide.

12. EDUCATION: CURRICULUM TABLE/STRUCTURE FOR JUNIOR SECONDARY EDUCATION (WITH SUMMARY)

YEAR ONE, FIRST SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 111	History of Education in Nigeria	1	Compulsory
EDU 112	Educational Psychology (Child Development)	2	Compulsory
EDU 113	Principles and Methods of Teaching at Junior Secondary Level	2	Compulsory
		5	

YEAR ONE, SECOND SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 121	Sociology of Education	1	Compulsory
EDU 122	Introduction to Teacher Education	1	Compulsory
EDU 123	Philosophy of Education	1	Compulsory
EDU 124	Theory and Practice of Child Friendly Schools	2	Compulsory
EDU 125	Educational Psychology II (Human Learning)	2	Compulsory
		7	

YEAR TWO, FIRST SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 211	Practicum in Classroom Management and Organisation	1	Compulsory
EDU 212	Educational Technology: Theory and Practice	2	Compulsory
EDU 213	Micro-Teaching: Theory	1	Compulsory
EDU 214	Introduction to Research Methods	1	Compulsory
EDU 215	Education of Special Target Groups	1	Elective
		6	

YEAR TWO, SECOND SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 221	Curriculum Studies I	1	Compulsory
EDU 222	Measurement and Evaluation	2	Compulsory
EDU 223	Micro-Teaching Practicum	1	Compulsory
EDU 224	Educational Administration, Planning and Supervision	2	Compulsory
EDU 225	Introduction to Special Education	1	Compulsory
		7	

YEAR THREE, FIRST SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 311	Teaching Practice	6	Compulsory

YEAR THREE, SECOND SEMESTER

COURSE CODE	COURSE TITLE	CREDIT(S)	STATUS
EDU 321	Curriculum Studies II	1	Compulsory
EDU 322	Adolescent Psychology	1	Compulsory
EDU 323	Research Project	2	Compulsory
EDU 324	Introduction to Theory and Practice of Guidance and Counseling.	1	Compulsory
EDU 325	Introduction to Adult and Non-Formal Education	1	Elective
		6	

SUMMARY

Total number of credits	=	36
Compulsory credits	=	30 (Elective inclusive)
Minimum number of units required for graduation	=	36 (Teaching Practice Inclusive)

Note: Students must earn 30 credit units before graduation. Except for students who are undergoing special education, Adult and Non-formal Education and Primary Education Study who must register and pass the recommended educational courses identify for their programmes.

Safety Devices

- Fire Extinguishers
- Sand buckets

Personnel

- A Co-ordinator who is an Educational Technologist
- Other Educational Technologies
- Secretary
- Computer Operators
- Graphic Artists
- Projectionists
- Video Cameramen
- Computer Technicians
- Store Officer
- Photographers
- Clerk
- Messenger
- Cleaners

Sections

- Graphic section
- Photographic section
- Media access and retrieval section
- Reprographic section
- Equipment repairs/maintenance section

EDU 213 MICRO-TEACHING - THEORY

(1 CREDIT) C

- The concept and process of Micro-Teaching
- Relevance of Micro-Teaching to Teacher Education
- Micro-Teaching Practicum with emphasis on teach/re-teach cycles
- Set Induction
- Stimulus Variation
- Planned Repetition
- Reinforcement
- Non-Verbal communication
- Questioning
- Closure
- Evaluation
- Merits and Demerits of Micro-Teaching

EDU 214 INTRODUCTION TO RESEARCH METHODS

(1 CREDIT) C

- The Nature and Meaning of Research
- Types of Research
- Typology based on use
 - Pure Research
 - Action or Applied Research

YEAR TWO - SECOND SEMESTER

EDU 221

CURRICULUM STUDIES I

(1 CREDIT) C

- Meaning and scope of Curriculum
- Basic Curriculum concepts, the Curriculum as a teaching plan
- Types of Curriculum
- Typology based on design
 - Broad fields/integrated curriculum
 - Core curriculum
 - Single Subjects/Discrete Subject Curriculum
- Typology based on official recognition
 - Official or formal curriculum
 - Informal/Hidden curriculum
- Typology based on Teacher-Learner Perspectives
 - Teacher-centred curriculum
 - Student-centred or Pupil-centred curriculum or Activity curriculum etc.
- Other Common Classifications or types
- History of Junior Secondary Curriculum Development in Nigeria
- Agencies of Junior Secondary Curriculum Development
- Junior Secondary Curriculum Agencies: Agencies of curriculum planning/innovation in Nigeria
- (Federal/State Ministries of Education and Curriculum Development Centres; WAEC, NECO, NERDC, NUC, NCCE, NBTE, CON, STAN, etc.

EDU 222

MEASUREMENT AND EVALUATION

(2 CREDITS) C

- Meaning and Scope of Measurement and Evaluation
- Function of Measurement and Evaluation for Teachers
- Demographic data collection and analysis
- Uses of tests, common dimension for classifying tests at Junior Secondary Level
- Teacher-Made Tests, standardized tests, validation of evaluation instruments,
- Basic statistics, measures of central tendency, spread, dispersion or variability, census and vital registration in Junior Secondary Education.
- Continuous Assessment in Junior Secondary Education: meaning, scope, principles, prospects and problems
- Construction, use and interpretation of Norm-Referenced Tests and Criterion-Referenced Tests for the Junior Secondary Level.
- Examination Ethics
- Assessment of the non-cognitive domains at the Junior Secondary Level
- a) Observation techniques, checklists and rating scale
- b) Self-reporting techniques (interview, questionnaires, inventory)
- c) Socio-metric techniques
- d) Projective techniques

EDU 223

MICROTEACHING PRACTICUM

(1 CREDIT) C

This should be handled in the Department of Curriculum and Instruction of School of Education. Every academic staff in the college should be involved. (This is the practical component of EDU 213)

YEAR THREE - FIRST SEMESTER

EDU 311 TEACHING PRACTICE (6 CREDITS) C

This course is compulsory for all students registered for the NCE programme. It is one Semester duration to be run at a stretch from the beginning of the First Semester Year Three to the end. The important areas of emphasis include:

- Instructional planning and studies in teaching methods;
- Instructional technology;
- Micro-teaching mentoring (Model Teaching, Assessment, Feedback Reports etc)
- A minimum of ten supervisors per student before final computation of each student's TP score;
- Posting of students to schools where they can practice their major courses of study.

Note: Please study **Handbook on the Management of Teaching Practice** in NCE awarding Institutions for guide.

YEAR THREE - SECOND SEMESTER

EDU 321 CURRICULUM STUDIES II (1 CREDIT) C

- The Curriculum Process
- Planning
- Development
- Implementation
- Evaluation
- Curriculum development strategies for Junior Secondary Education
- Curriculum Research
- Curriculum Innovation

EDU 322 ADOLESCENT PSYCHOLOGY (1 CREDIT) C

- Meaning and Scope of Adolescent Psychology
- Theories of Adolescence
- Growth and Development during Adolescence:
 - Physical
 - Moral
 - Social
 - Intellectual
 - Emotional
- Educational implications of early and late maturation
- Development tasks of the Adolescent

APPENDIX G

TEACHING PRACTICE ASSESSMENT FORM

NAME OF STUDENT:

MATRIC NO: SUBJECT:

TOPIC:

CLASS TAUGHT: TIME: DATE:

TEACHING PRACTICE SCHOOL:

		MAXIMUM	MARK AWARDED	COMMENT
1	PREPARATION (12 Marks) (a) Statement of objectives: Stated in behavioral terms (b) Content: Logical, properly sequenced... (c) Adequacy (as reflecting facts/knowledge, values/attitude & skills). (d) Conformity of topic with scheme of work/Weekly Diary	5 2 3 2		
2	PRESENTATION (52 Marks) (a) Introduction (Relevance) to the topic (b) Development of Lesson (c) Mastery of subject matter (d) Skillful use of chalkboard (e) Time Management skills (f) Questioning Skills (g) Competence in use of instructional materials: - Relevance (2) Appropriate timing (2) - Adequacy (2) Variety (2) (h) Competence in Enhancing Class participation (i) Capacity for Effective Conclusion.	5 5 10 3 3 5 8 8 5		
3	SKILLS OF CLASS MANAGEMENT (9 Marks) (a) Class Control (b) Class Arrangement (c) Reaction of pupils reinforcement of pupils' responses	5 2 2		
4	COMMUNICATION SKILLS (7 Marks) (a) Clarity of Voice/Audibility (b) Appropriate use of language (Gestures, sketches etc. As reflective of specialized subject professional skills)	2 5		
5	EVALUATION SKILLS (10 Marks) (a) Suitability of assessment (b) Attainment of stated objectives.	5 5		
6	TEACHER'S PERSONALITY/PROFESSIONAL ATTITUDE AND VALUES (10 Marks) (a) Neatness & Appropriate Dressing (b) Readiness/Diligence/Adaptability (c) Learner-friendliness (d) Comportment	3 2 2 3		
TOTAL SCORE		100		

ADDITIONAL COMMENTS:

NAME AND SIGNATURE OF SUPERVISOR

DATE

APPENDIX H

TEACHING PRACTICE MONITORING FORM A

(Institutional Monitoring)

1. Name of Institution:
2. State:
3. Programme:
4. Session:
5. Duration of Teaching Practice:
6. a. Availability of Teaching Practice Committee:
- b. Structure of Teaching Practice Committee:
7. Availability of Code of Conduct for Student-Teachers:
8. Organisation of Orientation/Induction Workshop for Supervisors:
9. Organisation of Orientation/Induction Workshop for Student-Teachers:
10. No. of Supervisors per student:
11. Average No. of Visits per student:
12. Documentation of Cooperating Schools and Teachers
13. Ratio of Assessment by College and Cooperating Schools
14. Particulars of External Moderators
 - i. Name:
 - ii. Address:
 - iii. Qualification:
 - iv. Rank:
15. Adequacy of Funds:
 - i. Provision of Transport Allowance
 - ii. Provision of Night Allowance
 - iii. Honourarium
 - iv. Provision of Teaching Practice Materials
16. Availability of a vehicle for Teaching Practice

17. i. Availability of Teaching Practice Office

ii. Adequacy of furnishing of Teaching Practice Office

18. Compliance with the pre-requisites for students to participate in Teaching Practice.

19. Availability of Internal Monitoring Mechanism:

20. Organisation of Post-Teaching Practice Seminar for students and supervisors:

21. General Comments of Monitoring Team:

22. Specific Recommendations

Name of Monitoring Officer

Signature/Date

APPENDIX I

**TEACHING PRACTICE MONITORING FORM B
(COOPERATING SCHOOL MONITORING)**

1. Name of Cooperating School:
2. Location:
3. Date of Visit:
4. Date of Commencement of Teaching Practice:
5. No of Student/Teachers & Subject Areas:
6. No of Supervision and Dates:
7. Duration of Teaching Practice:
8. Minimum Workload of Student-Teachers:
9. Evidence of Feedback to Student-Teachers:
10. Adequacy of Cooperating Schools:
11. Availability of confidential report on Student Teachers from cooperative School:
12. Comments of Student-Teachers in Cooperating School
13. Comments on Students' Attitude to the Exercise:
14. General Comments:
15. Specific Recommendations:

APPENDIX J

GUIDELINES FOR TEACHING PRACTICE ORIENTATION/INDUCTION WORKSHOP

ASPECT
A. TEACHING PROCEDURE
1. Clarity/feasibility of lesson objective <ul style="list-style-type: none"> • Stated in simple and clear language. • Stated in terms of what learners are expected to achieve. • Achievable within stipulated time
2. APPROPRIATENESS OF LESSON IN TERMS OF:
i) Introduction <ul style="list-style-type: none"> • Helping the learners to focus on content of the lesson. • Stimulating. • Making reference to previous lesson, everyday experience
ii) Content <ul style="list-style-type: none"> • Related to learners' previous experience • Geared to level of learners • Stimulus variation (use of variety of techniques) apparent in handling of content. • Teacher well versed in content.
iii) Gender <ul style="list-style-type: none"> • Examples free of gender bias • Questions distributed evenly • Motivational cues and distribution of tasks during activities free of gender bias
iv) Language Used <ul style="list-style-type: none"> • Explained concepts clearly in appropriate simple and clear language. • Enthusiastic, maintained eye contact and appropriate gestures
3. Emphasis on Main concept <ul style="list-style-type: none"> • Explanation and elaboration of main concept. • Use of appropriate and familiar examples to illustrate main concept. • Provision of activities and opportunities that help develop higher order thinking skills.
4. Lesson consolidation/summary <ul style="list-style-type: none"> • Guided learners to consolidate the main points of the lesson through carefully structured questions. • Reference to main concept. • Sufficient time for learners to ask questions, seek clarification.
5. Achievement of set objectives in terms of <ul style="list-style-type: none"> • Activities. • Teacher's questions. • Pupils' answers. • Level of enthusiasm.
B. FUNDAMENTAL TECHNIQUES/METHODOLOGY
1. Pupils' participation in teaching and learning activities <ul style="list-style-type: none"> • Pupils encouraged to ask and answer questions. • Encouraged individual participation in both group and class discussions. • Pupils meaningfully engaged in learning activities. • The activities planned to arouse and sustain interest.
Appropriateness of demonstration, teaching aids and improvised teaching materials <ul style="list-style-type: none"> • Materials and demonstrations are appropriate for the purpose. • Evidence of improvisation and economy in use of materials. • Appropriate and orderly use of chalkboard.
Appropriateness of teachers attitude and expression <ul style="list-style-type: none"> • The teacher appears to be enjoying the teaching. • The teacher is sympathetic to the needs and problems of the learners. • The teacher exercises patience with the learners

