

INFORMATION AND COMMUNICATION TECHNOLOGY [ICT]: PANACEA FOR EFFECTIVE MICRO-TEACHING PROCESSES AND SKILLS

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Abstract

Micro-teaching, a scaled down teaching in-terms of time, number of students, concept taught and methodology with in-built opportunities for inquiry and immediate feedback through the process of modeling to a re-critiquing phase. It is established that direct relationship exist between microteaching at school level and teaching-practice. The paper therefore focused its attention on micro-teaching processes and skills in relation to Information and Communication Technology [ICT knowledge. An ICT compliant micro-teaching laboratories aid professional competencies where teachers only act as facilitator rather than dispenser of knowledge. The paper highlighted challenges inhibiting the use of ICT in teacher- training institutions such as inadequate funding and epileptic power supply ,it therefore recommend that only academic staff and instructors in the department of Curriculum and Instructions should handle micro-teaching programme as contained in NCCE minimum standard blue-print .

Teaching is one of the most challenging and crucial professions in the world. It is well recognized that education is a necessary condition for individual, social and economic development. It is an established fact that education remains the only bedrock without which social well-being , politics and sound economics cannot be optimally utilized for nation building and development (Omolewa, 2008). What however links education to development is learning, and teacher is central and crucial to teaching-learning process.

Teachers till date still continued to be crucial and critical in facilitating learning , however, to do that effectively, teachers need to be well grounded in knowledge of academics and current development, proficient in pedagogical (Teaching) skills, human and organizational skills, committed to their students and capable of dealing with a wide range of individual learners with diversified cultural, ethnic and socio-economic backgrounds.

The act of teaching can be describe as a social function involving action , reaction , and interaction between the teacher and the learner to enable him create a personal understanding of the skill and knowledge to be learn. Teaching can also be described as tripod method involving the teachers, the students, and the subject matter to be learned. The outcome of teaching is, therefore , the result of a complex interaction between the teacher, the students, and the subject matter and many other factors. Teaching can also be viewed as a process of imparting knowledge , skills, and professional attitude in order for people to gain ideals, information , concepts and experiences or a systematic presentation of facts, ideas, skills, and techniques to students. The term teaching is used to cover all activities the teacher does which include stimulation, (arousal of interest), guidance (providing educational advice), direction (leading student to the relevant and right activities) and encouragement

Micro-teaching can be viewed as the procedure in teacher education for preparing teachers at the college level. In the micro-teaching situation, the teacher trainees are usually given the opportunity to practice specific skills within a short teaching encounter. It is a scaled down teaching encounter which is used for teacher training, in fact it is used for the development of new teaching skills and refinement of old ones. Micro teaching technique is the breaking of teaching into discrete skills for the sake of practice and acquisition of the identified skills through intensive laboratory experience and immediate feedback, microteaching forms the first stage of practice followed by the actual teaching where two or more skill are combined.

(Alabi, 2010) conceptualized micro-teaching as a procedure by which a teacher trainee teaches a small class of students, a short lesson with specific objectives and teacher performance criteria, after which the replay (if video –taped) is evaluated by the teacher trainer, the student and the classroom teacher or the expert teacher in a standard school setting. The outcome of the evaluation will determine if there will be need for re-planning, re-teaching, another recording and evaluation of the lesson or if a new lesson and skill display will be carried out. It is clear that the simplest components of microteaching are the teacher (who is doing the actual teaching), the students, (who are usually few), a brief or short lesson of (about 5-10 minutes), and the objectives of the specific microteaching episode . The teaching focuses on specific and identifiable teaching skills, it should be noted that microteaching is a cyclic process , it starts with the preparation of a brief but real lesson and proceeds through evaluation , lesson adjustment if need be, re-teaching and evaluation .After evaluation the teacher can re-plan and re-teach the lesson , but to different group of students

Micro teaching is defined as scaled down sample of actual teaching which generally last ten to thirty minutes and involves five to ten students (Abdulrraham,2012) quoting (Olivere,1970). Micro-teaching can be described in a practical term as a training exercise used in teacher-training institutions in which a student or student-teacher is videotaped during part of presenting his instruction to a class for subsequent analysis, comments, observations and evaluation. A micro-teaching lesson is an opportunity to present a sample of what one would teach and how he/she would teach it, the student teacher also gets an instant feedback from his audience of how his lesson was received.

The microteaching process is flexible and hence can be repeated as often as necessary to develop and demonstrate skill acquisition and improvement. In the micro-teaching exercise, video-equipment such as, video camera, video-tape, video recorder, and television are used for recording and playback for viewing on television . This makes it possible for the teacher trainee whose teaching has been recorded to view his teaching and do self- evaluation or critiques. The recorded episode could also be kept for subsequent critique at a most convenient time , and once a good display is recorded , it can be kept and display to other teacher –trainee.

(Salami, 2009) remarked that Micro-teaching involves programme of teaching skill, and this skills includes skill in gaining attention, explaining, describing , narrating and given direction to pupils, asking and adapting questions, recognizing pupils' difference of understanding , encouraging appropriate pupils responses ,using verbal and non-verbal symbol and the skills of lesson planning .Added to these are the skills in the use of instructional materials , arousing and sustaining pupils interest, skill in the use of reinforcement and showing of feelings and emotions

Teaching practice is a planned educational programme aimed at exposing student in training to a practical act of teaching. It involves direct interaction with the school social, physical and natural environment. (Fashiku,2009) citing (Akinpelu,1999) described teaching practice as a period of educational exposure that afford the teacher in training the opportunity to put into practice his experiences in the classroom. The experience here has to do with his area of specialization, and most importantly skills acquired at the micro-teaching level in terms of methodology and class management.

Peer collaboration is an important component of microteaching. (Northern Illinois University Faculty Development and Instructional Design Center, 2009), identified several suggestions for providing peer feedback: some of the suggestions includes ;

1. Encouraging peers to share an equal amount of positive feedback and constructive criticism.
2. Reminding peers that information they learn about each other should remain confidential.
3. Showing respect for peers, in part, by listening to others as they speak and providing everyone time to share their thoughts.
4. Basing feedback on observations rather than one's interpretations or judgments. For example, sharing that "you did not allow adequate time for learners to respond to your questions" is recommended rather than "you seemed impatient."

Generally speaking there has been a paradigm shift in the act of teaching, the dynamism has to do with the current realities in that objectives of education has become complicated, learners have to be active, learning has to be meaningful and authentic and the

learning environment should be challenging but not stressful. Knowledge is expanding rapidly and much of it is available to teachers and students at the same time. This puts an unavoidable burden on teachers to continue to update their knowledge and to expose themselves to modern channels of information, The social environment in many countries is making it more difficult for teachers to manage classrooms and learning processes, and Information and Communication Technologies(ICT) has brought new possibilities into the education sector, but at the same time have placed more demands on teachers (Wadi,2000). To meet all the challenges mentioned above is to equip pre-service teacher with necessary skills at school level via ICT based micro-teaching processes , as the quality of education can-not be greater than the quality of teachers, and since, we are in ICT- age, the need for the teachers in training to catch-up with the current realities is paramount.

(Ayanwale,2010) quoting (Tinio,2002) defines ICT as a diverse set of technological tools and resources used to communicate, create, disseminate, store and manage information. These technologies includes computers, internet, radio and television. (Ayannuga,2009) defines ICT as the marriage between computer system and communication which can be described as the use of computer based technology and internet to make information and communication services available to a wide range of users. ICT can also be describe as an umbrella term that include any communication device or application, encompassing : radio, television, cellular, computer and network hardware and software, as well as various services and applications associated with them, such as videoconferencing and distance learning. ICT is often spoken of in a particular context, such as ICT in Education, Health care, libraries and other discipline.

(Jekayinoluwa, 2010) citing (Olurundare,2006) conceptualized ICT as communication in whatever form used, accessed relayed, and transmitted to communication or sent and received information. Communication is the exchange of information between two or more individual via speaking, writing, or using a common system of sign or behaviour with the view of bringing about changes in behaviour, norms and values. According to the European Commission, the importance of ICTs lies less in the technology itself than in its ability to create greater access to information and communication in underserved populations. Many countries around the world have established organizations for the promotion of ICTs. In Nigeria for instance, it started implementing its ICT policy in April, 2001 (Agyeman, 2007) after the Federal Executive Council (FEC) approved the establishment of the National Information Technology Development Agency (NITDA). The vision of the agency is to make Nigeria IT compliance state and serve as agent of national growth and development

The Process of Micro-teaching and ICT

In other to give teacher trainee the necessary foundation in the act of teaching in terms of methodology and firm class management , micro teaching technique was introduce. Micro-teaching processes therefore refers to actual or practical way micro-teaching takes place in our teacher training institution, micro teaching processes involves a set of activities which teacher trainee undergo to acquire teaching skill. (Allen, 1967) developed the original micro-teaching process called ‘ Teach-critique-Re-teach cycle, however, (Abdulrraham,2012), adapted sequence of step from the original processes, the adapted sequences are;

- a. Modeling : There is the need for a model to be evaluated by playing back a recorded tape demonstrating clearly a particular skill or a set of skills, the demonstration can also be done by oral explanation and complemented with video tape
- b. Planning teaching, : Planning begins with identifying the teaching skill to be practiced, the planning process should answer the following questions, Who are my learners ?, what do I want them to learn?, what are the behavioral objectives?, what are the method and material needed to achieve the objectives ?, How would the teaching and learning be evaluated against the set objectives ?.
- c. Teach-Re-card stage : Model imitation phase, the process of facing the learners directly for time allotted with the lesson plan
- d. Play back critique stage (feedback) : After the teaching, colleagues who observed your teaching will analyze your teaching based on set objectives and example of model. You will receive a feedback on how you performed and how you can improve your performance under the guidance of a supervisor, if the score is low, the pre-service teacher would re-plan, re-teach and be re-observed by colleagues until performance is improved
- e. Re-Planning to re-teach : this involves re-examining your planned Micro-teaching to correct its defects
- f. Re-teach/ re-recording : The process of re-teaching in the light of suggestion given by supervisor and colleagues and video-taped
- g. Re-observation of teaching : At this phase your colleagues and supervisor re-observe your teaching and give an

immediate feedback on how well or otherwise as regard your performance

For result oriented micro-teaching encounter gadget such as television, tape recorder and player, camera, laptops ,photographic materials and CCTV are necessary devices needed to ensure objective feedback and make the exercise challenging, stimulating and interesting.

All the process of micro-teaching mentioned above have direct relationship with information and communication technology knowledge. The more the teachers in- training, the supervisor (expert) and colleagues of the student possesses ICT knowledge, the more teaching-learning process would be enhanced.

ICT Knowledge and Teaching Expertise in Micro-Teaching Process

Skill in micro teaching has to do with the process of breaking complex and interrelated component of teaching into smaller and manageable unit, the smaller unit are refers to as teaching skill, the skill are better acquire using micro-teaching technique, (Abdurrahman,2012). Essentially classroom teaching skills that can be practiced at micro- teaching level in relation to ICT are ;

a) Set induction : (Adenokun,2002) technically defined set induction as any device used by the teacher that is capable of attracting attention of learners and stimulating them towards making them mentally and physically ready to accomplished any tasks . A proper use of set induction either at the beginning of a unit of lesson or at a start of a fractional part of a syllabus, the learner would be eager to complete the instruction, Visual instructional aides falls within this realm, and at the end of the day teaching and learning would be enhanced

b) Planned repetition : Planned repetition is the professional repetition of facts , ideals, knowledge and concepts in the teaching and learning process to ensure proper assimilation , planned repetition involves presentation of ideas the same way via voice modulation , recording, body movement and through various different medial channel, an ICT compliant teachers-in- training can stimulate concentration via proper use of necessary gadget

c) Illustration and examples: Concreteness into an abstract concept can be taught professionally through illustration and examples, graphic illustrations films, maps and photograph via net can be used to teach concepts in social –studies for instance

d) Closure : Closure has to do with the end of a period of time or an activity, however in teaching and learning process. Closure occurs when major purposes and principle of the lesson are perceived to have been heard. Closure could be done through board summary or provision of an outcome on major point as a way of concluding lesson, power-point presentation knowledge would facilitate its usage

e) Non- verbal communication : it is described as an action by the teacher that gives learners the signs to say do! Or not to do! Something, technically, non-verbal communication consist of three aspect , namely; silence, visual –media and non-verbal cues or gestures, and some aspect of non-verbal communication includes; [Use of visual medias, silence, eye contact and movement, facial expression , body posture, head movement, arms and finger movement, mouth and throat signals]

- f) Stimulus variation : (Salami,2009) described stimulus variation as the provision of various activities that cause differential reactions from pupils through various sensory appeals that can pave way for shifting of sensory channels in the process of communication to avoid boredom in lesson presentation. The stimulus is an agent or factors that provokes interest, enthusiasm or excitement, presenting gadget during instruction if properly handled would aid retention of facts and figures.
- g) Questioning: Questioning techniques involves verbal utterances or written inscription that require response from the person to whom it is directed.

Other micro-teaching skills are Reinforcement, Explaining, and Effective use of white-board.

From the above, it is clear that micro-teaching is cyclic and a flexible process, therefore, the application of ICT would equip teachers-in-training with necessary skills and expertise which would in-turn enhance teaching and learning at the school level (Teaching Practice), thus aiding school effectiveness holistically.

Conclusion

ICTs knowledge by the teachers in training and properly developed multi-media materials enhances simulations of learners, capturing and analyzing practice-teaching objectively through the supervisors [expert] and professional colleagues, bringing into the training institution world experience, familiarizing trainees with sources of materials and support, and training potential teachers in the use of technologies for teaching-learning process.

Despite the benefit derivable in applying ICT knowledge in the process micro-teaching,

some factors slow down its application in our school laboratory called Micro-teaching clinic ; (Gbadamosi,2006) noted that the major challenges in integrating and utilization of ICT are; inadequate funding, teacher's factors, epileptic power supply, inadequate supply of connectivity gadget and low teledensity

Recommendations

- i. The NUC/NCCE in collaboration with curriculum planners should provides a short IT foundation course that would focus on ICT, the course should centre on application of IT skills, to achieve pedagogical objectives, rather than teaching IT skills in isolation.
- ii. At school level in conjunction with major stakeholder in teacher education sector , more advanced IT courses be introduced as electives for students who need or want to develop more advanced IT-based pedagogical skills
- iii. As a matter of policy, the government should Integrates IT components into all subject areas, even at primary school level and at the same time provide enabling environment
- iv. The curriculum designers should design an IT-integrated courses in such a way that students would have an opportunity to produce IT-based instructional materials themselves and share outcomes of the courses with others as obtainable in developed countries.

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