

Innovative Methods and Strategies for Effective Teaching and Learning

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Abstract

Teaching is an enabling job, a noble activity and a profession that involves a lot of activities to facilitate the process. Learning, which is a positive permanent change in behaviour occurs through an effective teaching process. Effective teaching and learning centre on the teacher who is both the fulcrum on which education revolves and the key that unlocks this door of education. Teachers in the third world nations should be fully equipped for this duty. The paper examines the innovative teaching methods for effective teaching and learning. Specifically the paper discusses: concept of effective teaching and learning, impediment to effective teaching and learning, enhancement factors, innovative teaching methods and conclusion. Recommendations include empowering teachers through quality workshops on application of the four innovative teaching methods viz: information transition and reception, cognitive strategies development methods, attitude development methods and cognitive and motor skills development methods.

Keywords : *Innovation, teaching methods, teaching strategies, teaching techniques, teaching trends and innovative teaching method.*

Introduction

Education has long been accepted as a veritable instrument for effecting positive change in behavior of citizens as well as raising intellectuals for national sustainable development. Federal Republic of Nigeria-FRN (2004) emphasizes the goals of education in Nigeria to include inculcation of the right type of values, attitudes, communication skills as well as life-long skills. These goals are attainable through effective classroom interaction. This interaction occurs between the teacher and the learner through the process of teaching and learning. Teaching, which is the primary function of a teacher, entails giving instruction, imparting knowledge, facts, skills, attitudes, interests and aptitude. It is the teacher that imparts on the learner through the process of teaching. Modebelu (2007) sees teaching as an activity, consisting of a body of actions and programmes planned and directed towards inducing learning through conscious and deliberate efforts of a teacher to learner. A teacher in this situation is expected to be a professional, who should consciously and deliberately utilize his or her wealth of experience, training skills, competencies right attitudes, interests, content master with the help of instructional materials, methods and skills to facilitate the less experienced individuals learners. The product of teaching is learning.

Learning as a concept has varied definitions due to various theories of learning that defines it in different perspectives. Anyachebelu (2005) defines learning as change in behaviour that is permanent which excludes change due to illness, fatigue, maturation and use of intoxicants.

Learning therefore is a manifestation of evidence of receiving good teaching. It is the positive permanent change in behavior due to experience and practice gained that enables the learner face later situations differently. Since learning entails the holistic process of development of life-long skills etc. it then becomes exigent for educators, administrators, managers and planners to identify factors that hinders effective teaching and learning as well as factors that could enhance teaching and learning.

The problem of this paper is that performances of students in external examinations such as national examination council (NECO), senior secondary certificate examination (SSCE) and other degree examinations in the three education levels in Nigeria appear inadequate. Consequently the goals of education seem not to be achieved hence there abounds half-baked graduates output of these three education levels, unemployable as well as non self reliance.

The paper examines the following: Effective teaching and learning, teaching methods, teaching technique, teaching strategy, trends in teaching method, innovative teaching method/applicability, conclusions and recommendations. The main function of a teacher is teaching which entails helping to organize learning experiences, managing and promoting learning. Teachers are entrusted with the responsibility of guaranteeing learning programmes and are held responsible if students learning do not occur adequately.

Effective Teaching

Obi (2003) describes effective teaching as a process related to the teachers actively conscious of the individuality of each of the child, including his needs, strengths, weaknesses, growth patterns and background of experiences. This implies that effective teaching is the process by which an effective teacher creates an atmosphere for a wholesome teaching and learning. Anyachebelu (2005) defines effective teaching as a situation whereby the teacher is vast in attainment, knowledge and skills as well as possession of certain pre-requisites and acceptable practices within the codes of ethics of teaching profession Anyachebelu also asserts that effective teaching must be an embodiment of conceptual skills associated with knowledge and relevant to the teaching. Effective teaching is therefore the process of achieving the objective of teaching as well as goals of education through an effective teaching.

Components of Effective Teaching

Obi (2003) identifies five components of effective teaching to include:

- a. knowledge of the subject matter
- b. ability to help students with their works
- c. Presenting subject matter appropriately.
- d. Motivating students to excel and
- e. Firmness/fairness in preparing marking guides and grading of examination.

Elements of effective teaching according to Kanno (1997) comprises of purposeful teaching, planned-teaching, content-mastery teaching ,conceptual-skills display, instructionally-aided teaching, teaching skills adapted teaching, creativity-skill teaching interest sustaining teaching and goal attainment teaching. Bello (1981) also identifies the following as necessary elements of teachers' effectiveness: Creativity, Curiosity, Confidence, Endurance, Perseverance, Tolerance, Objectivity, Honesty, Industry, Diligence, Friendliness, Modeling, Rapport with colleagues, and

Responsiveness. There cannot be effective teaching without teacher effectiveness. Teacher's effectiveness demands for teacher's improved relationship with their work in terms of job satisfaction, productivity for efficient and effective achievement of the schools objectives and educational goals.

Qualities of expected of an effective teacher include:

- a. Having a clear voice
- b. Speaking at a moderate rate
- c. Using of strong voice
- d. Varying of tone of voice
- e. Using languages/terminologies easily understood
- f. Using of conventional delivery pattern
- g. Using facial expression and gestures
- h. Boldness and friendliness
- i. Close observation/supervision of the students
- j. Being a model
- k. Being dynamic, enthusiastic, creative and innovative
- l. Seeking knowledge for up-dating (Anyachebelu 2005)

Teaching Methods

In as much as there are various factors that could influence positively teaching and learning, the paper sees teaching methods as very didactic. Mkpa (2009) sees teaching method as the totality of all the means, strategies, techniques and ways a teacher employs to maximize and facilitate classroom interaction. It is also a means of conveyance of facts, decoding messages that eventually result in the realization of the stated educational objectives. Teaching method is therefore a way of doing teaching business, the procedure, orderliness, in planning and execution of teaching proper with an appropriate integration of instructional materials to achieve the objectives at the classroom level. Some of the teaching methods available for effective teaching and learning include:

1. Lecture method
2. Activity method
3. Project method
4. Discussion method
5. Discovery method
6. demonstration method
7. Role playing method
8. experimentation method
9. Individual method
10. Peer teaching method
11. Team Teaching method
12. Play-way method
13. Excursion method/Field Trip (Kanno, 1997)

These methods have been in existence and in practice while the problems of poor student's performance, half baked graduate production and non-attainment of education goals continue to abound. There is an urgent need for a better practice and utilization of the above mentioned methods for qualitative student' learning facilitation.

Enhancement Factors

Innovation is the ability to introduce something new. The existing teaching methods require some level of innovativeness to make teaching and learning an interesting and worthwhile activity. Teaching methods are supposed to serve as arousers and sustainers of learners' interest throughout the lesson. Concept of teaching technique, teaching strategy and teaching approach are supposed to supplement teaching methods and add to their effectiveness. They are also to elucidate the trends in the teaching methods and basis for choice of innovation methods.

Teaching Techniques

This is an entire body of procedures and methods of science, art, skill and craft in the procedures and methods used in achieving the goals of instruction at the school and out of the school to bring about change in behaviour in the desired direction. Gage (2006) describes teaching techniques as a set of unique activities that a teacher adds and utilizes to implement a particular method for effectiveness. This implies that a lecture method may employ one or a combination of upto five techniques to make innovation. Brown (1972) recommends a combination of four of teaching techniques or method to make an innovative lecture teaching method. The teacher may choose the classical techniques, the thesis technique, the problem centered technique or the sequential technique.

Teaching Strategy

This is the science and art of using teaching as a tool in achieving the purpose of the teaching-learning process in and outside the classroom setting. The forms of teaching strategy are based on the subject-content to be taught. This is illustrated with Chinese conclusion on teaching and strategy, saying

I hear	-	I forget
I see	-	I remember
I do	-	I understand

The above illustration agrees with Mkpa (2009) observing that people generally remember.

- 10% of what they read
- 20% of what they hear
- 30% of what they see
- 50% of what they hear and see
- 70% of what they say
- 90% of what they say as they do a thing

The point being made is that innovativeness in teaching methods requires strategies plus effective use and integration of instructional materials. This unequivocally helps the teacher impartation of adequate knowledge that brings about desirable changes in behaviour in the learner(s) in the process of teaching and learning situation.

Teaching Approach

This approach is generally a theoretical view on how instruction should be carried out based on a particular principle of learning. Mastery learning approach is therefore based on a variety of educational principles among which are;

- (i) Individual differences in learners to accomplish learning tasks at different rates
- (ii) When a learner has not learnt that the teacher has not taught.
- (iii) Given equal opportunities, that every learner is a potential achiever, i.e. capable of accomplishing the learning tasks.

In support of the above, Mansaray (1987) emphasizes that teaching approach is more general than that of method in the sense that it incorporates a number of methods.

Trends in Teaching Methods: Research reports and observation reveal two major or categories of teaching methods. The most popular and commonly used are described as the

- (a) Traditional Method (Teacher Centered Method (TCM) or Teacher- Talk Chalk (TTC) and
- (b) Innovative Teaching Method (ITM) or Learner- Centered Method- (LCM) or Pupil-Activity- oriented Learning Method (PALM).

Teacher- Centered Method (TCM)

The teacher is the focus in this model of classroom teaching. The teacher is at the centre of all the classroom activities. He does the talking, writes on the chalks or white board, demonstrates, and performs the experiments (such as demonstration of fountain experiment in chemistry). He draws, labels and identifies specimens. The teacher also does all the explanations in the name of teaching. The learner remains passive listener and a member of the teaching-learning process. Mkpa (2009) observes that even the subject matter, teaching methods, as well as the instructional materials are designed in favour of the teacher ie teacher-centered method (TCM). The issue is that this approach has been in use and seems to have failed the system. The approach rarely involves the learner in the development of high cognitive levels of learning analysis, synthesis and evaluation of issues. It does not readily equip the learners with the desired psychomotor and affective skills for the learner to fully appreciate his environment, adapt, benefit and contribute meaningfully to his or her nation. Mkpa (2009) remarks "that is not to say that one cannot learn anything from the pages of newspapers, watching television programmes, but there is more interpretation going on than a mere transfer of information from one brain to another". There is a call for de-emphasis on this traditional method of teaching captioned teacher-centered-methods based on the following five reasons viz:

The approach does not

- (i) encourage necessary interactions in the teaching and learning situation;
- (ii) allow the learners participate actively in the classroom activities;
- (iii) promote development of desirable skills, attitudes and values in the learners.

- (iv) encourage the learner to use their initiatives and develop self-confidence but encourages rote learning.

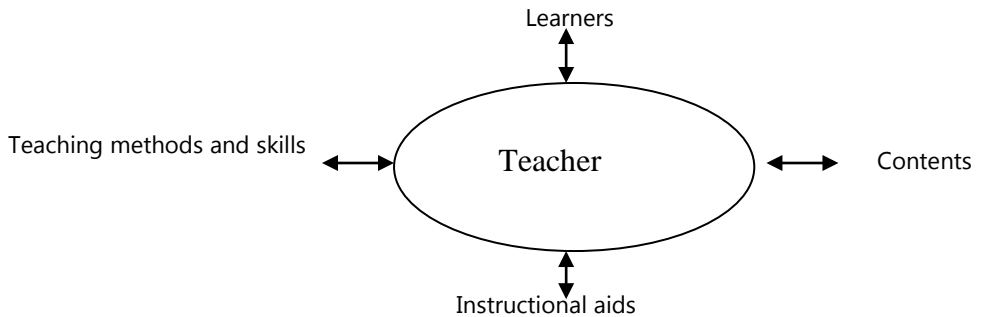


Figure 1: Teacher- Centered- Method (TCM)

Learner Centered- Method (LCM)

The ills of TCM have called for a shift to LCM. This is completely a converse focus in the teaching-learning process. Learners occupy prominent position and become the fulcrum upon which teaching and learning revolves.

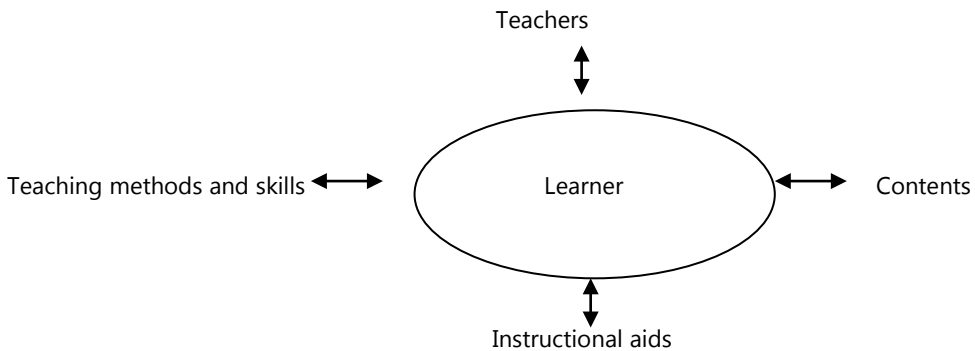


Figure 2 Learner –Centred- Methods (LCM)

LCM is currently being emphasised because of its ability to

- i. encourage active participation of the learners in the teaching and learning process.
- ii. encourage active participation and interaction among learners, the teacher and other components of the teaching and learning process
- iii. encourage and promote the development of skills.
- iv. encourage the learner to develop and use their own initiatives
- v. discourage rote learning and passivity in the classroom on the part of the learner

Innovative Teaching Methods

The innovative existing teaching methods demand that no one teaching method is adequate for effective teaching and learning of a concept or subject-matter. A cluster of teaching methods could serve as a teaching method to ensure effective teaching and learning. Based on this, teaching methods already in use are grouped into four. These are seen as four improved as well as innovative methods of teaching and learning. They are as follow :

- (a) The information Transmission and Reception Methods (ITRM)
- (b) The Cognitive Strategies Development Methods (CSDM)
- (c) The Attitudes Development Methods (ADM)
- (d) The Cognitive and Motor Skills Development Methods (CMSDM)

Information Transmission and Reception Method (ITRM)

This method involves the use of lecture, recitation, assignment and text-book to elicit and transmit information and knowledge.

Lecture method: This is the major teaching method that is adopted by (ITRM). It is the oldest method of teaching, originally traced to the middle ages of highly prized Jewish teachers which they used in imparting learning. The Jewish learners through this method memorized everything the teacher said by heart, to repeat, reproduce and regurgitate them almost verbatim at time of need. Lecture method is purely the act of giving a long talk to a group of people on a subject matter within a specific time. It is very popular in secondary school and tertiary institutions. It is a typical of teacher-centered method. It may entail reading the note. Kanno (1997) sees the method as a process by which teachers send information to students, projecting one-way channel of communication model. Costin (2002) reports that this method becomes innovative when the following conditions are applicable; when

- a. Basic purpose of instruction is to disseminate information and receive same.
- b. The materials are needed to be memorized and remembered for a short time.
- c. The material must be organized and presented in a specific way for a particular group of learners.
- d. It is necessary to provide an introduction to an area or directions for learning activities to be achieved through other teaching methods.

The teaching intends to train, develop and employ intensive listening skills in training learners in the skill of accuracy and speed especially in the skill of writing fast with accuracy. Lecture method should not be used when the

- 1. objectives are other than information skill acquisition.
- 2. higher cognitive objective are desired
- 3. participation of learners is very essential.
- 4. the materials to be taught is abstract complex or detailed.
- 5. long term retention is sought.
- 6. student ability is average or below average.

Cognitive Strategies Development Method (CSDM)

This method does not only help the learner to collect information but also assists him/her develop some cognitive strategies in learning concepts, facts etcetera. Examples are learning of concept

formation, interpretation of data, applying rules like in quizzes, form relationships and connections. The method support the idea that knowledge lies at the beck and call of the learner and thus should be awoken to grab it. Under this method of teaching and learning are discussion and activity methods.

- i. **Discussion method:** This employs more of class interaction and expression of opinion as its major strategy of instructional delivery. Each learner is given ample opportunities to contribute to the topic focused upon. The classroom has a democratic atmosphere, which elicits effective participation from the students. The teacher acts as moderator of the discussion. All forms of questioning techniques are employed to elicit responses from students. Learners are actively involved, they see classroom and learning tasks as challenging, conductive, stimulating and interesting. Target group for the discussion should range from 3-12. Aim is to come up with a solution.
- ii. **Activity Method:** This suggests the capacity of being active and readiness to do activities by the learners in the classroom situation. Activity makes teaching and learning real. This agrees with Chinese teaching strategy for effective learning – when I see and do, I learn better and remember better.
- iii. **Project Method:** Project method is a systematic planned undertaking of a set of tasks by the learners in which a given period of time is allocated and learners are taught with special reference to the project or sites. This encourages independent learning, creativity and originality. It is used to supplement formal classroom teachings. This method is very apt in achieving self-reliance and life-long skills. It is an agreement with the educational idea of one of the great educationist of America – John Dewey, who believes that education should fit the child rightly into his/her present society rather than preparing the learner for the future which is unknown. Bello (1981) is of the opinion that a well planned and carefully executed project will greatly develop learners by bringing him into actual contact with the lives and activities of their neighborhood. It provides new process skills for problem-solving.

Attitude Development Methods (ADA)

This category of teaching method assists learners to learn and develop social behaviors that are related to interpersonal behaviors, school work and achievement. Methods under this method are inquiry, role play, dramatization or play-way, modeling and laboratory methods.

- i. **Inquiry method:** This is the method that stimulates learners' interest in seeking information about ideas and concepts by asking questions. It drills learners and enables learners search for knowledge in a systematic and logic way. It promotes independent reasoning and self-reliance while the teacher guides, directs and re-directs without providing the solutions. He only leads the learners to the answers. It is time consuming and expensive but helps learners develop skills of observation, exploration and questioning. It promotes active participation, team work cooperation and tolerance among learner.
- ii. **Role Playing:** This is specially a form of acting. Learners are allowed to pick roles in a human life situation such as family (father, mother and children) and its functions or family problems as the case maybe. The method is good at attitude development, mastery of decision-making skills and improvement of communication skills. There may not be pre-

- preparation or no rehearsals. Roles should not be forced on participants. It is a behaviour modification therapy.
- iii. **Dramatization.** Here learners render vividly plays or act characters in a play. This requires pre-preparation of scripts or distribution of roles. It is common in use in literature in English or theatre acts etc.
 - iv. **Modeling:** This require a three dimensional representation of the real object or miniature of what is required. Examples are human skeleton model, heart, circulatory system etc. The learner acquires the necessary attitude by imitating the model as role model.
 - v. **Laboratory method:** This method emphasizes observation, exploration and experimentation. This is mostly in use in science teaching. Some of these steps are involved: identification of a problem, confrontation with puzzling situations, observation, formulating of hypotheses, verification, experimentation, organization, explanation, reflection, inference and conclusion.

Cognitive and Motor Skills Development Method (CMSDM)

This method is concerned with the development of the learners thinking faculty and decision-making abilities. The teacher's role is to guide the learners' progress by means of commands and cues. This method is adopted from Skinner, Gagne and Ausbel educational ideas. It requires that learning materials, facts, concepts, problems are presented to the learner in steps, systematically in a gradual process – Five teaching methods under this are: demonstration, guided discovery, concept-mapping, games, discussion and questioning skills.

- i. **Demonstration:** This involves displays, exhibitions and use of examples during practical instructional practices. This method emphasizes practical, tangibles, concrete illustrations during lessons. Two senses are involved, sense of hearing and seeing. It guarantees about 50percent learning (Mkpa, 2009) .
- ii. **Guided Discovery:** This involves helping learners to discover certain facts or answers to a given problem. Learners most often depend on their teachers to provide all answers they need.
- iii. **Concept Mapping:** This is a useful way of representing concepts in a map and their relationship in two dimensional structures for the learner to see and connect relationships. It is a very powerful lesson summarizing strategy.
- iv. **Game:** This is social activities that are played by two or more people in a competitive sport like sprint in order to exhibit some positive knowledge, attitudes, values and skills that can led to a winner. This demand for proper planning by the teacher for effectiveness. This makes teaching and learning very natural, real, permanent and easy to recall. It also creates environment for healthy competition.

Conclusion

Effective use of teaching methods in improving teaching and learning in Nigeria school system has been examined. The paper made attempt to high-light basic concepts associated with teaching methods such as teaching, learning, teaching strategy, teaching techniques, teaching approach and teaching methods. Two major trends of teaching methods were highlighted. Already in use teaching methods were grouped and categorized into four innovative teachings methods viz:

Information, transmission and reception method

Cognitive strategies development method
Altitudes development method and
Cognitive and Motor Skills Development

It is of the view of the author, that effective implementation of the methods will immensely align with teaching and learning to modern trends and effectiveness.

Recommendations

These innovative teaching methods should be reflected in teacher education curriculum. This will help to ensure that new graduate teachers will be fully equipped for effective teaching and learning.

Seminars, conferences and workshops should be organized for the practicing or serving teachers and lecturers as a way of up-dating their stalls/ knowledge and in the application of these methods to enhance quality teaching and learning for self-reliance.

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