

Tools and System Technologies as Strategies for Enhancing Effective Classroom Communication in Nigerian Secondary Schools

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Abstract: - Communication is the heart beat of teaching and learning, without which no meaningful progress will be achieved in whatever level of education in Nigeria. This paper therefore, examines the place of tools and system approaches for effective classroom communication. Tools technology describes the straight forward presentation of concepts in educational technology while system approach to instruction emphasis the step by step application of ideas, resources, people, materials and equipment to the solution of educational problem. Attempts are made to highlight the conceptual definition of the key terms, examine significance of communication as well as factors affecting communication in the classroom situation. It also deals with how to make communication effective and strategies for becoming an effective communicator in the classroom. The paper recommends among other thing that for effective teaching and learning in secondary schools, teachers should focus their attention in the application and utilization of tools and system approaches in the classroom communication.

Key Words: Communication, Tools and System Technologies

I. INTRODUCTION

The 21st Century is a new era where technology is advancing in the world at an unprecedented rate including daily life problems. Some researchers have seen this development as very important thereby suggested that to face the challenges arising from technology, there is need to foster and encourage effective utilization of technology in classroom communication. Nigeria, the world over is striving toward the improvement of their educational systems, having realized that, education is a major key for national development. In Nigeria, the development in education has taken a turn for better with the introduction of many reforms. One of the most significant step taken toward comprehensive reform was passing into law the compulsory free Universal Basic Education, Act 2004(Federal Ministry of Education 2008). This calls for the existing curricula for primary and junior secondary school to have been renewed, re-structured and re-aligned to fit into a 9-year Basic Education Programme. The new curricula reflect depth, appropriateness and inter-relatedness of the curriculum contents. Moreover, emerging issues which covered value reorientation, peace and dialogue as well as new methods, strategies and techniques of handling

the new contents were incorporated into the relevant contents of the new curriculum (NERDC 2007).

Information Communication Technology is as vital as the “air we breathe”. Indeed, it is the major revolution of our time, (Adewoyin, 2007). Information Communication Technology involves any process that facilitates the passage of information from one person to another. He further maintains that, ICT concerned with processing, storing, retrieving and communicating data to the users at any point in time.

Teaching is an act of communication. Teaching is a complex act of a person or group of persons trying to influence the behavior of another person or group of persons. It is the act of transmitting knowledge of some facts, ideas, information, skills and even capabilities through the use of some techniques (Lawal, 2009).

II. TOOL APPROACH TO INSTRUCTION

Ema, (2011) holds that, Tool Approach to Instruction refers to the introduction or application of both the electronic and non-electronic equipment to the teaching and learning concept. The idea of using tools to support teaching and learning is very ancient. Examples of non-electronic tools used by teachers under the conventional system are text books, charts, maps, chalk, chalkboard etc. Since conventional system was discovered to be inadequate enough to solve the problems of teaching and learning, new additional methods and tools are required and this brought to light the introduction of electrically related tools to the concept of teaching. Research has shown that tools such as Radio, Television, overhead projectors, satellites, and computers have a very effective impact on education.

Radio, for example, can teach a large group at the same time and spread over a large distance. TV and Overhead projectors also have similar impacts on teaching and learning. The electronic technolog/tool can have impact on education only when the two (2) aspects of it are applied appropriately and scientifically (hardware and software). The hardware aspect of this technology involves the actual machine (radio, TV, Overhead projector etc) while the software aspect involves the programmes of these hardware. The softwares are developed

and produced according to the function of the hardware which is the (machine) Examples of software in this regard are cassettes, Tapes, diskettes etc.

The problems of the tool technology most especially in the third world countries includes: -

- i. Inadequacy of the materials
- ii. Lack of conducive environment
- iii. Reliability of equipment
- iv. Lack of fund.

These are the problems that made the teachers to entertain fear about the introduction of technology into Education. They were also the same problems that led to the emergence of another option (system approach to instruction).

III. SYSTEM APPROACH TO INSTRUCTION

A system is technically a set of interrelated parts all of which work together toward a defined goal. The parts of the system depend on each other for input and output, and the entire system uses feedback to determine if its desired goal has been reached. If it has not, then the system is modified until it does reach the goal.

According to Yusuf (2013), learning is a systematic process in which every component is crucial to successful learning. Components such as the instructor, learners, materials, instructional activities, delivery system and learning, in addition to conducive environment interact with each other and work together to bring about the desired learning outcomes. Changes in one component can affect other components and eventual learning outcomes; failure to account adequately for conditions present within a single component can doom the entire instructional process.

The system approach is the step by step plan, to apply ideas, resources, people, materials and equipments to the solution of educational problems. Abdullahi (2013) points out that system approach encompasses the systematic application of people, ideas, materials and equipments to the solution of educational problems. For instruction to be effective, it must be planned and designed in a systematic way. It also implies that learning of school curriculum must be carefully planned, designed, implemented and evaluated to help the learner achieve the desired learning outcomes. Educationists are now moving from traditional mode of communication in classroom to new era of open learning through virtual tools and system approaches for effective classroom communication.

IV. MEANING OF COMMUNICATION

Communication was interpreted by many authorities. By way of illustration the Cambridge Advance Learners Dictionary defined communication as 'state of exchanging information between entities.' According to Lawal (2009), Communication is the process of information exchange between two or more persons or organizations. It is a process through which information, knowledge, ideas, thoughts, feelings or emotions are conveyed or transmitted from one

source to another through speech, signals, writing or behaviour. The general purpose of all communication is to persuade, influence, modify or change the behaviour of others. He also defines Communication as the process of sending (encoding) and receiving (decoding) information or messages. It includes the way and manner through which we can let other people know and share our feelings, thoughts, experiences and knowledge.

Broad Types of Communication

People communicate with each other in a number of ways that depend upon the message and its context in which it is being sent. There are two (2) broad types of communication; namely:-

1. Types of Communication Based on the Communication Channels Used and
2. Types of Communication Based on Purposes and Styles

V. TYPES OF COMMUNICATION BASED ON THE COMMUNICATION CHANNELS USED

Adegbijai (2004) divided this category into three (3) and they are:-

1. Verbal Communication
2. Non-verbal Communication
3. Electronic Communication

Verbal Communication: Verbal Communication refers to the form of communication in which message is transmitted verbally; communication is done by words of mouth. Verbal Communication is the oldest and commonest way of passing information. Communication by words of mouth ensures speedy dissemination of information. News gets around from one place to another and within a limited time such news can spread to a large area. This type of communication is often referred to as grapevine and is so effective in rural communities.

Another name of Verbal Communication is Oral Communication which includes spoken words, public speaking, face-to-face conversation and instructional delivery or teaching. Oral or Verbal Communication is influenced by pitch, volume and clarity of speaking. In Verbal or Oral Communication, one is expected to remember the acronym "KISS" meaning (Keep It Short and Simple).

Non-Verbal Communication: this is the sending or receiving of voiceless messages or information. Lawal, (2009) divided it into two (2) sub-groups. Written Communication and Body Language, and further explains as follows:

Written Communication: Written Word is another common type of communication used in everyday life. It is used in modifying human behaviour. Letter writing, newspapers, magazines, textbooks, journal articles, theses, dissertations etc. convey a lot of information not only from person to

person or from place to place, but from generation to generation.

In Written Communication, messages can also be transmitted via e-mail or text messages. Sometimes an e-mail is sufficient for transferring information; sometimes a written letter is preferable. Message in Written Communication is influenced by vocabulary and grammar used, writing style and precision and clarity of the language used.

Body Language

According to Abolade and Yusuf (2006), “how we speak is just as important as what we actually say”. Body Language refers to impressions drawn from posture, extent of eye contact, facial expression and physical contact such as hand shake, pushing and touching. Actions are said to be more condensed than speech and people rely heavily on body language to convey their feelings and meanings.

According to Certer (2002), for example in our face-to-face communication with other people, the message about feeling and attitudes came only 7% from words, 38% from voice and 55% from body language. Significantly, where body language conflicts with words of mouth, greater emphasis is likely to be placed on non-verbal message.

In our perception and judgment about others, it is important to watch and take careful note of their non-verbal communication.

Electronic Communication: With rapid improvement in the society, people have been able to communicate or send messages through the use of electronic devices. Such devices include the use of telephone, mobile phone, ipad, radio, television, computers and the internet such as e-mail, face book, 2go, twitter etc. It is this method that makes it possible to send messages and receives immediate responses. In the case of telephone or mobile phones, messages can be sent regardless of the distance, and responses collected directly from the receivers. The same way, information can be passed to as many people as possible through the use of videoconference, radio and television.

VI. TYPES OF COMMUNICATION BASED ON PURPOSES AND STYLE

Communication based on Style and purpose has two (2) main categories as given by Lawal,(2009) and these are: Formal Communication and Informal Communication

Formal Communication: In the case of Formal Communication, certain rules, conventions and principles are followed while communicating messages. Formal Communication occurs in formal and official style. Usually professional settings, corporate meetings and conferences undergo in formal setting. Authority lines or hierarchy are needed to be followed in Formal Communication. Therefore, the use of slang and foul language must be avoided and correct pronunciation is required.

Informal Communication: Informal Communication on the other hand, is a process of using channels that are in contrast with formal communication channels. It is just a casual talk established for societal affiliations of members in an organization and face-to-face discussions. It happens among family and friends. Usually Informal Communication is done using gesture and body language. Unlike formal communication, Informal Communication does not follow authority lines or hierarchy. In an organization, it helps in finding out staff grievances as people express more when talking informally. It helps in building relationship. Therefore, the use of slang and foul expressions are not restricted in Informal Communication.

VII. COMMUNICATION IN THE INSTRUCTIONAL PROCESS

For effective teaching and learning process to take place, it demands effective communication. Teaching and communication are two-side of the same coin. That is why, Sokan (2002), argues that instructional communication involves the process of sharing ideas, knowledge, skills and attitudes between the teacher and the learner in the classroom situation. The way and manner the teacher is able to pass across the ideas, skills and knowledge goes a long way in helping learners. If instructional communication is defective, learning can be adversely affected. Similarly, if communication is effective, learning can be enhanced. The importance of communication cannot therefore be over-emphasized in achieving instructional objectives. However, in classroom situation, communication is the process by which the teacher and the learners interact. It may be transmission of information from teacher to learner(s) at the time of instruction or teaching, learner to learner(s) as happens in group discussion and making clarification by a fellow learner to his/her colleagues as directed by the teacher, or learner to teacher as happens while asking and answering questions. Communication in the classroom occurs in three (3) stages as highlighted above. the source or sender can be the class teacher talking to a learner, a learner talking to a fellow learner or learner talking to the teacher at the time of teaching. Communication may not necessarily be talking, but could be making a signal or gesture.

VIII. COMPONENTS OF COMMUNICATION

Abimbade (1999) identifies five elements, or components of communication: Sender, Message, Medium, Receiver, and Feedback.

1. *The Message:* This refers to what the sender intends to pass or send to the receiver. It could be a concept, thought, skill or problem. The message is transmitted into a language the receiver can understand. Such a language could be verbal or non-verbal (gesture). Message in any form of communication is important for the following reasons:
 - It makes the receiver to be aware of something; and
 - It makes the receiver focus upon a given thing.

When we relate this to the classroom situation, message is usually derived from the lesson topic. Therefore, message in the classroom must have the following characteristics:

- It must be understandable
 - It must be relevant to pupils' needs; and
 - It must be useful.
2. *Sender*: The sender is the source or the originator of the message. He is also referred to as the speaker or initiator to communication. In this situation, the sender who creates the message determines the topic of the conversation while the receiver interprets the message. When we relate this to the classroom situation, the teacher who is the sender here determines the topic of communication while the pupil who is the receiver interprets and determines how the communication will proceed. It should be noted here that the message sent in by the teacher is affected by factors, like the level of knowledge, experience, attitude, values and emotional disposition of both the sender and the receiver.
 3. *Medium*: This is referred to as the channel, symbol, language, gestures, etc. through which the message is sent. Whichever medium the teacher chooses to use must be understandable to the students.
 4. *Receiver*: This is the destination. The receiver receives the message from the sender, decodes the message and interprets what the message contains. The sender needs a feedback from the receiver to confirm that the message sent was received and understood. The receiver here is the student in the classroom.
 5. *Feedback*: This is referred to as the response given by the receiver. In the classroom, it is the response pupils make to the teacher about the topic taught. The teacher can stimulate feedback through questions, assignments, etc. to confirm that learning has taken place.

At the time of teaching in the classroom situation, the source or sender of the message or information is the class teacher, the message is the content, and the channel is the way through which the lesson is delivered, it could be verbally or non-verbal through demonstration while the receivers are the learners.

IX. NATURE OF COMMUNICATION

Communication possesses the following characteristics:

1. Communication is transactional. This means that it involves acting, reacting to and emitting stimuli and receiving responses or feedback on a mutual frame and consideration.
2. Communication is instrumental. It is engaged in by social animals in order to achieve significant objectives and goals.
3. Communication is consummating i.e. through communication, the people involved reach a high level of completeness.

4. Communication dynamic. This involves the sender and the receiver in constant action of encoding and decoding of meaning.
5. Communication is a process with a direct movement from the sender to the receiver and vice versa.

X. SIGNIFICANCE OF COMMUNICATION

Since language is the medium in which thinking takes place, effective communication aids thinking and understanding in the classroom. Communication directs the learners' attention to the learning materials.

XI. FACTORS WHICH AFFECT COMMUNICATION

There are factors within the learners and the environment which can affect communication either positively or negatively. Among such factors are:

1. The language of instruction. If the language is one with which the learners are familiar, communication is enhanced and learners can participate actively in the learning process. On the other hand, if the language is strange to the learners, learning may be adversely affected.
2. Another factor is the psychological climate in the classroom. If the climate is conducive to learning communication is enhanced while communication could be adversely affected if the psychological atmosphere in the classroom is not conducive to learning. Threats, punishment, ridicule, etc. can adversely affect communication.
3. "Noise" could also adversely affect communication. This is anything that distracts the attention of the learner from the main focus or topic of discussion.
4. The intellectual ability of the learners is also an essential factor in communication. The teacher should therefore be aware of the intellectual ability of his pupils (NETC, 2001)

XII. HOW COMMUNICATION WORKS IN THE CLASSROOM

Teaching learning activities involve the process of sharing of meanings, values, thoughts and experiences. If teaching learning is to be meaningful both the teacher and the learner must be involved in the process of sharing. This means that the process must be interactive in nature. It can be seen from the above that the process of communication in teaching-learning is a two-way traffic involving the teacher and the pupil. To this end, the teacher and the learner must be actively involved in the process of sharing. This may involve sharing of concepts, ideas, reasons, problems, events, skills, interests and actions. As a teacher, one must understand how communication works (Yusuf, 2006).

XIII. CRITERIA FOR EFFECTIVE COMMUNICATION

For a classroom teacher to promote effective communication in the class, he/she should ensure the following as pointed out by Venkataiah, (2004):

- The information or message should be credible.
- The speed of the communication should not be too fast or too slow.
- The media to be used should be familiar to the learners.
- The teaching environment should be noise-free.
- Individual differences should be considered in term of age, mental ability, socio-economic background.
- ensure that they are audible enough during lesson delivery i.e. they should be heard from every part of the classroom;
- ensure that they are lively and articulate during lesson delivery; and
- Use gestures, animation and eye contact where necessary (teaching aids such as improvised resources, still pictures, motion pictures and other graphic materials should be used as appropriate).

Teachers should therefore ensure that measures are taken to enhance the ease of teaching and learning by using appropriate communication strategies i.e. a teacher may use as many techniques considered suitable in order to take care of all the differences. In addition, the materials used for teaching should be within the range of the students' experience and ability. Teachers should also consider the learners' entry behaviour.

XIV. IMPORTANCE OF TOOLS AND SYSTEM APPROACHES TO INSTRUCTION

With the advent of this theory, system approach to instruction, the application of technology in instruction have been made possible in making teaching / learning more effective and efficient process. Teachers and learners have learnt how to state their objectives in specific and measurable terms. Teachers have acquired several techniques of solving the same problem and produce effective assessment of themselves and teaching modes and skills. It has make teaching to become purposeful, meaningful and more easily quantifiable. Above all, it has help to reduce the workload of teachers, who were one time referred to reservoir of knowledge and skills, thereby overworking them. Now, system approach, teachers are regarded as facilitators, guides, advisers, supervisors, counselors etc (Lawal, 2009).

XV. CONCLUSION

For proper and effective classroom communication in our secondary schools tools and system approaches must be carefully planned, designed, implemented and evaluated to help learners obtain adequate knowledge of curriculum through current means of communication of nowadays. Teachers who use tools and system approaches can become effective communicators thereby, helping their students to learn content of the school curriculum very fast in a simple manner. If teaching and learning process is organized in the form of lessons taught and learnt systematically. Vocal communication is mostly used. Gestures and materials

described as instructional media are used to enhance students understanding. Adewoyin, (2007) holds that, the place of educational technology in communication and teaching /learning process includes system planning and designing of instructional programmes, production of relevant instructional materials, making teaching – learning interesting, providing teachers with useful experience, effective transfer of knowledge, skills, attitudes etc and application of the knowledge of tools and systems approach to solving instructional, personal and social problems in and outside classroom environment.

XVI. RECOMMENDATION

The paper suggested that:

- Teachers should ensure that they are audible enough during lesson delivery i.e. they should be heard from every part of the classroom;
- They are expected presents themselves lively and very well-articulated during lesson delivery (the teacher can also move around the classroom during lesson delivery) bearing in mind that the distance between the teacher and the class influences rapport between them; and
- use gestures, animation and eye contact where necessary (instructional media such as chalkboard, textbooks, still pictures, motion pictures and other graphic materials should be appropriately used by the teachers). Thus tools technology.
- Information about in-service training and the definite application of tools and system technology in education should be given wide publicity by the government, curriculum planners and school administrators through workshops and seminars.
- A part from empowering the teachers to be able to use tools and system technologies in teaching the students, the school administrators in conjunction with government should create a conducive school climate that would encourage the culture of maintaining the technological facilities.

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