

The Gap between Teaching and Research in Secondary Education

By

ETUK E. ISIP

*Department of Arts Education,
University of Nigeria, Nsukka,*

and

JOSEPH IBANGA UDO

*Department of Plant Science and Biotechnology,
University of Port Harcourt.
Rivers State.*

Abstract

Teaching is an activity or a process taken by a teacher to enhance learning. Teaching is provided to a learner or learners to achieve some instructional objectives. The gap was considered as needs or difference between teaching and research. This study discussed the concepts of teaching and learning, research, as it relates to teachers activities, Secondary Education with a particular attention to Universal Basic Education (Upper Basic). The study also distinguished teaching from research. Though the study has Nigeria as the Population, Akwa Ibom State was used for more specific discussions. It was concluded with suggestions for improvement.

The gap between teaching and research in Secondary Education is one of the perspectives towards reflective Nigerian Society. Teaching, in a simple term, is referred to as either an occupation or profession of a group known as teachers or an activity or activities of a group under taken to help an individual to learn or acquire some knowledge, skills, attitudes or interests (Mangal & Mangal 2010).

According to Edmund Amidon (1967), teaching is defined as an interactive process, primarily involving classroom talk which takes place between teachers and pupils and occur during certain definable activities. Teaching refers to activities that are designed and performed to produce change in student (pupil) behaviour.

Teaching and learning; this is the activity par-excellence for enhancement and establishment of a predetermined objective (s).

Teaching as a whole, is aimed to bring changes in the behaviour of pupils. These changes may occur through (i) Teaching them how to do or perform a task or act to a situation or stimuli, and (ii) Teaching them those things that may contribute towards enriching their knowledge and formation of a system of beliefs.

Concept of Research

Man from time immemorial has been continuously struggling with his environmental forces and trying to search for ways and means for quality living on earth. In other words, he has been engaged in continuous experimentation and research for bringing improvement in his ways of life. Research at each stage, has opened a potent weapon in his hand and a short cut to progress and ultimately to success. While, in general, the history of research and invention is quite old, the need for research work in education has not been felt in so much degree as it had been in other fields. But now with a change in the aims and the structure of the teaching – learning process, this need has begun to be felt intensely. Teachers are now supposed to play a leading role in carrying out research in Education.

Generally, research could be seen as a systematic enquiry. Being systematic, it adheres to a particular pattern, often referred to as the research process. Research process is implied in numerous human activities such as when one begins to:

- Take keen interest in observing certain situations in life - the vegetation within your vicinity, enrollment in school, pattern of achievement in examinations in some courses/ subjects, the degree of Air and Water Pollution in Niger Delta region of Nigeria etc.
- Raised some questions about the observed phenomenon and attempt to ascertain if or why things or situations are really what they are, and if they could not be improved.
- Make necessary efforts to collect relevant information (data) related to the situation or problem and critically analyzed them prior to applying such information to modify certain behaviours or situations (Anaekwe 2007).

Education Research

When research activities are geared towards unraveling educational problems or bringing about improvement in teaching and learning activities, educational research is implied.

The Gap between Teaching and Research in Secondary Education

Research is one of the most valid ways to obtain authentic knowledge. Simply, research is one of the sources of valid knowledge.

Concept of Secondary Education

Secondary Education is a level of education provided or received in the post primary institution; for instance secondary schools. The Secondary Education provides to students general education. Secondary Education Programme of study is divided into two parts, the Junior Secondary (JS) School and the Senior Secondary (SS) School. Junior Secondary School (JS) is an extension of Universal Basic Education from Primary six (6) lower basic to upper basic of JS3. This is an educational innovation for education for all, one the millennium development goals.

In Nigeria, this development has led to introducing new subject into secondary school curriculum; for example, Basic Science and Technology. This subject is structured to consist of:

- i. Integrated Science (Basic Science)
- ii. Introductory Technology (Basic Technology)
- iii. Physical Education
- iv. Information and Communication Technology (I.C.T)

Implementation of Basic Science and Technology.

It is observed in Akwa Ibom State, that the teachers teaching Basic Science and Technology are either those who studied Basic Science or those who studied Basic Technology in their institution of higher learning.

These teachers in order not to lose their jobs manage to teach only the topics in the area of their efficiency or competency and leave the rest. This abrupt implementation of Junior Secondary Education subject innovation resulted in the following:

- i. An unsatisfactory state of affairs
- ii. An imbalance in the school system
- iii. A missing link
- iv. An un-answered questions

An unsatisfactory state of affairs.

An abrupt implementation of the new curriculum of secondary education indicates an un-satisfactory state of affairs in that some vital concepts and skills are lacking in the teaching learning situation. Such a situation in education amounts to a problem.

An Imbalance in the School System

An imbalance in the school system this is a state where by government give order for implementation of the education programmed and subject innovation without

proper training and orientation of teachers and other assistants for efficient execution of the vision, this imbalance share of authority and concern, projects instability because all systems are more stable at equilibrium state.

A Missing Link

A link denotes connection, when there is no proper link among topics and concepts taught in school, the knowledge which suppose to be cumulative will not follow the trend rather there shall be missing link this may result to some students hating some subjects in the senior classes because of inconsistency in topics and subjects matter lesson delivery. This sometimes may be because of non-availability of adequate instructional resources and skills on how to used them. This may lead students to choose their subjects arbitrarily without the aid of a guidance counselor and effective counseling. A case like this is traceable to missing link.

Un-answered Questions

No one ever feels comfortable when asked a question without getting a reply. This shows that something is wrong. These questions in the fields of education that remain un-answered are better referred to as problems. For instance, why do very few students register for science and technology subjects in senior school certificate examination (SSCE)? Another question could be to what extent is the availability of trained teachers in secondary schools? To what extent is the availability of functional basic science laboratory and basic technology.

How many workshops in Akwa Ibom Sate secondary schools to sustain a functional free and compulsory education? How many tertiary institutions in Akwa Ibom State mount Basic Science and Technology as a discipline or programmed for training qualified human resources in this area of great need? Or what concern do training institutions show towards this shortfall between available and what is expected? What evaluation strategy is employed by the government to ascertain the standard of Universal Basic Education implementation?

In view of the stated gaps research is recommended for secondary education. Specifically the Upper Basic (Junior Secondary Education JSS).

Purpose of secondary education research includes:

- i. Provision of training in problem solving
- ii. Research in general is of immense importance in all human endeavurers. Since research involves problem solving, and life itself is full of problems, then knowledge of research provides training in problem solving. This could be done through establishing some cause-effect relationship, predicting future outcomes or offering explanations to observed phenomena with some degree of reliability.
- iii. Research provides valid and dependable information-which is very useful in advancing the course of educational theories and practices. For instance, by

The Gap between Teaching and Research in Secondary Education

exposing students to different instructional technique, one would be better guided in concluding that one technique tended to be superior to the other and as such is recommended for teaching a particular topic, unit of work or subjects.

- iv. Research enables us to evaluate educational programmers, activities, practices, resources and methods of teaching, for example, by evaluating the Universal Basic Education (UBE)

Programmed, one could be guided more appropriately in concluding that the intended objectives for which the programme was introduced, is being realized or otherwise. Such conclusion would enable the educational policy makers to adjust or modify the programme, where necessary.

Difference between Teaching and Research

The difference between teaching and research can be summarized in the table below:

Teaching	Research
Teaching refers to activities that are designed and performed to produce change in student (pupil) behaviour	Research is a process of finding out solution to a problem or problems.
Teaching is the task of a teacher which is performed for the development of a child.	Research implies the following: a empirical investigation into problem
Terms, like conditioning, training, instruction and indoctrination are used to denote various kind of teaching	A systematic process of problem solving
Teaching as a whole is aimed to bring changes in the behaviour of pupils/	A search for new knowledge A process of creating new ideas or knowledge
Teaching is a task of a teacher	A logical system of investigating problems. (Uzoagu, 1998) research is a task of a researcher.
Educational objectives are achieved through teaching	Research is guided by the statement of problem the scope and the researcher questions.
Teaching is guided by the specific objectives.	Research is carried out by the aid of data resources.

Conclusions

The gap between teaching and research is seen to mean the difference between teaching and research. Effectiveness of teaching is seen in change of behaviour. The success or failure of academic programme is investigated with research.

While teaching is geared towards effecting a change, research is geared towards providing solution to problem, answering questions, improvement and development.

Action research is seen as a useful type of research that enables teacher and an education administrator to evaluate themselves and effect modification where necessary.

Recommendations

(1) Some instructional innovative strategies such as concept mapping, co-operative teaching and learning, team teaching, mixed ability grouping, among others could yield remarkable improvement and sustainable teacher knowledge in the implementation of Basic Science and Technology Education in Secondary Schools.

(2) Innovative and technological changes, the tendency for under developed nations to catch up with their counterparts in the developed world has necessitated some changes which are novel compared to the status quo. This has given rise to educational innovations and changes in instructional materials and procedure including the application of technical devices and equipment, therefore the training of some technical assistants is necessary.

(3) A special type of research known as action research is also recommended for evaluation of Universal Basic Education Programme.

(4) Action research is concerned with the immediate problem faced by the teachers and administrators. It helps them make judgment and engage in better practices on their respective jobs. Therefore, it is no exaggeration to say that action research is the research by the practitioner (Teacher or Administrator), of the practitioner, and for the practitioner.

(5) Professional in a particular field, educationist, researchers, may be consulted to guide in identifying problem areas.

References

Amidon, E. J. and J. Hough (1967). *Analysis: Theory, Research and Application*, Readings, Massachusetts California. Addis on Wesley.

Anaekwe, M. C (2007). *Basic Research Methods and statistic in Education and Social Sciences*. Onitsha, Sofie Publicity and Printry Ltd.

Kingsley, H. L. & R. Garry, (1957:12). *The Nature and Conditions of Learning*.(2nd ed. New York. Practice Hall Inc.)

The Gap between Teaching and Research in Secondary Education

Mangal, S. K. & Mangal, U. (2010). *Essentials of Educational Technology*. New Delhi
PHI Learning Private Ltd.

Murphy, Gardner (1968:205). *An Introduction to Psychology*. 2nd Indian Reprint. New
Delhi. Oxford & I B H.

Uzoagu, A. E. (1998), *Practical Guide to Writing Research Project Reports in Tertiary
Institutions*.