

THE INFLUENCE OF TEACHERS' ATTITUDE ON STUDENTS' LEARNING OF MATHEMATICS IN NIGERIAN SECONDARY SCHOOLS

Onoshakpokaiye E. Odiri

Institution of Education

Delta State University, Abraka, Delta State, Nigeria

E-mail: onos68@yahoo.ca

ABSTRACT

It is very clear that teachers' way of thinking and beliefs guide his/her behaviour in decision making both inside and outside the classroom. In order to carryout the teaching task effectively and efficiently teachers are guided by certain principles of teaching and learning which have great implications for teachings. Teachers are a vital force in educational effectiveness of the classroom instructional level. This review work therefore was preoccupied with assessing the influence of teachers' attitude on students' learning of mathematics in Nigerian secondary schools. It was revealed that students draw from their teachers' disposition to form their own attitude which eventually influence their learning outcomes; attitude of teachers towards their students must be positive so as to carry them along. Consequently, it was recommended that seminars/workshops on positive teachers' disposition while teaching should be addressed by education stakeholders as important and urgent.

Keywords: *Learning, Attitude, Teachers, Mathematics*

INTRODUCTION

Most teachers fail to realize that they are very vital in educational effectiveness at the classroom instructional level. How they teach, behave and interact with students in the classroom or during teaching are more vital than what they teach. It is very clear that teacher's way of thinking and attitude determines his/her behaviour and decision inside and outside the classroom. The teachers have various roles to play in the process of teaching/learning most especially in teaching of mathematics. They need to be competent in their own area of specialization and also be able to apply different methods of teaching and strategy and understand the learning processes of students. Ololube (2009) stated that "Teacher expertise and teacher knowledge of subject matter differ from ordinary scholarly knowledge and pedagogy. The teachers have to be able to fuse the subject matter knowledge and pedagogical knowledge into pedagogical content knowledge in their everyday action in the classroom" According to him pedagogical content knowledge includes of what motivates students, attitude of students towards different subjects, the cognitive development and reasoning abilities of student's etc. He also stated that, for a successful teaching the teacher must have the ideas about man and conception

of knowledge and learning and that teachers' ideas of man create the basis for understanding different kinds of learners.

THE PHILOSOPHY OF MATHEMATICS AND TEACHING

Mathematics is one of the important subjects taught in all schools throughout the world due to its relevance to other subject most especially in the development of science and technology. It is an integral part of life because it is needed by everyone for successful living. Mathematics is an indispensable tool in the study of sciences, humanities and technology. Its usefulness to man activities cannot be overemphasized. Man uses it directly or indirectly in everyday life or activities. It is a human invention, borne out of human in attempt to solve human problems (Kolawole and Oluwatayo, 2005). They also stated that the history of Mathematics reveals that Mathematical concepts such as counting, measuring, fractions, probability and others had their origin in problems faced by the scientists and Mathematicians of the past.

Oxford Advanced Learners Dictionary (2000) described Mathematics as the science of numbers and shapes, the process of calculating and using numbers. It can be defined as the science of numbers and shapes. Oyedeggi (2000) described Mathematics as a creative language, a tool and a process. According to Onoshakpokaiye (2006), Mathematics is an expression or graphical representation of what resides in the sub-conscious and also a mental activity. Mathematics is a branch of science that deals with shapes and numbers, Ezenweani (2006) described Mathematics as "the branch of knowledge that seeks to improve on human perception of himself and his immediate environment by using clear, logical precise and exact thinking processes". He also stated that Mathematics is autonomous science that springs up on define basis and develop in any direction based on the unfolding of knowledge. Lappan and Schman (1998), also sees Mathematics as a way of thinking and organizing ones expression. Agwagah (2005) stated that Mathematics involves thinking, modeling, conjecturing and describing all aspects of reasoning about situations.

The concept of teaching is better described than define because of different definitions. Various authors have defined teaching according to their own points of view, because of this; it has been very difficult to accept one as being the best. Teaching was originally the work of parents, elders and religious leaders. The duty of these people is to teach children how to be well-behaved and have respect, what to believe and how they can think positively to live a successful life. The Adults share their ideas and what they experience with the children who gradually acquired the knowledge. As a result of knowledge acquired by these young ones through traditional ways, they in turn carried out teaching. In our present day, teaching is no longer the responsibility of parents, elders and religious leaders as it used to be. It has becomes more sophisticated and is now the responsibility of trained or professional teachers.

Many institutions have been opened to train people on how to teach. Ezenweani (2002) defined "teaching as the ability to guide one to gain knowledge in a classroom setting, the teacher does the work of guiding the learner through social interactions (student - teacher, student - student) to gain experiences that are worthwhile for social living in the larger society". Frazer (1990), defines teaching as an activity which is aimed at presenting certain learning content by giving instruction to someone to enable that person learns something from it. He also viewed teaching as an activity whereby the person being taught desires to benefit from it and wishes to acquire particular learning content. According to Inomiesa (2010), teaching should be a process of probing by the teacher and discovery by the students. According to him, it should not be a process of regurgitating all the facts to the students rather it should be a process whereby the teacher guides the student in searching for a new facts and truths. Ebenezar (2009) stated that teaching strategies that one uses will undoubtedly affect one's philosophy of teaching. He went further stating that Education is a cooperative enterprise that works well if the students are permitted to contribute to it when teacher listen and respond. The teacher should show interest to what they are teaching and do some explanations; the teacher should also show respect and concern for students and their learning.

Okpala (2006) stated that "one of the important median of realizing the educational objectives is the appropriate teaching method." According to him, the method adopted by the teacher either promote or hinder learning, it may increase mental activities which are the basis of social power. According to Popoola (2006) when competent and qualified teachers are given the right training, then there will be quality and when one is self-motivated and responsible as teacher, most disciplinary problems are solved as he stimulates learning through cognitive and affective methods. Behind every successful lesson is a good teacher. Effective teaching implies productive, purposeful, result oriented, qualitative, meaningful and realistic teaching (Kolawole and Oluwatayo, 2005). The essence of being an effective teacher lies on what to do to foster student learning.

THE PHILOSOPHY OF LEARNING AND ATTITUDE

According to Ebenezar (2009), learning can be defined as acquiring a repertoire of cognitive, Meta cognitive structure. It is also linking new information to prior knowledge and it is goal oriented. Bruner (1963), states that learning involves three aspects namely: acquisition of new knowledge; during learning new knowledge is acquired by the learner; transformation which is the process of manipulating or making use of the knowledge acquired to make it fit new task and evaluation. This involve checking whether the way the information was manipulated is adequate to the task. In learning process, there is what we know as learning strategies.

Ebenazar (2009) stated that "learning is strategic when model learners are aware of and control their efforts to use particular skills and strategies". According to him, awareness refers to knowledge of specific cognitive strategies and how to use the knowledge when they should be used. He also defined control as the capability to monitor and direct the success of the task at hand whether comprehension has failed through predetermined strategies and by checking an obtained answer against estimation.

Learning is acquiring new knowledge, behaviours, skills, values, preferences or understanding and may involve synthesizing different types of information (Wikipedia 2010). Human possessed the ability to learn and this may occur as result of education, personal development or training. It may be goal - oriented and may be aided by motivation. Learning may occur as a result of habituation or as a result of more complex activities. It can also occur consciously or without conscious awareness. Anyamele (2004) cited in Ololube (2009) provided a useful framework for the discussing of process of learning. They defined learning as the "transformation of internal representation". Learning is said to have occurred if the mental processes by which one represents reality and internal understandings have been changed in ending ways that are adaptive or advantageous to the individual (Ololube 2009). They argue that any learning situation involves an interaction of three factors which are (1) a task to be accomplished, a method of learning it and a learner. Wilson (1981), stated that learning can be assessed from what the students have achieved, the time they spent on the task and the relative efficiency of different treatment. Learning can be determined through performance on external test.

The word attitude is defined within the framework of social psychology as a subjective or mental preparation for action. According to Souza Barros and Marcos (2010), attitude defines outward and visible postures of human beliefs. Attitude determines what each individual will see, hear, think and do. According to them, attitude means individuals prevailing tendency to respond either favourably or unfavourably to an object (person or group of people, institutions or events). It can either be positive or negative. Nyenwe (2009) stated that "Education is the principal means of nation building and the primary tool for the survival of any society. Attitude is concerned with an individual way of thinking and behaving and this has serious implications for learner, the teacher, the immediate social group with which individual learning relates and the school system as a whole (Yara, 2009). According to Sinclair in BBC English Dictionary (1992), attitude is the way someone thinks and feels about something. It also the way someone behave and the position someone hold his body. Attitude can be formed as a result of some opinion or by following the examples of someone like parents, teachers, peer group and friends. Attitude can either be negative or positive.

THE INFLUENCE OF TEACHERS' ATTITUDES ON STUDENTS' LEARNING OF MATHEMATICS

The teacher is the driving force of the education system. According to her, to achieve this, the teachers must be given the required tool that will equip them to make teaching/learning to be effective. It is very unfortunate that many teachers fail to realize their importance to the education system. Some of them refuse to realize that the way they teach, behave and interact with students can be more permanent than what they teach. Teachers are seen by students as an authority, role model and the only source of all knowledge and information in the formal classroom setting. Students will learn and trained if the teachers use good methods and having positive attitude towards his/her teaching. Students draw from their teachers' disposition to form their own attitude which may eventually affect their learning outcomes. Attitude of teachers towards their students must be positive so as to carry them along.

According to Bandura (1977), behaviours are acquired by watching another persons or model performing a particular tasks or activities. The model displays it while the learner or student observes and tries to imitate. The teachers are seen by students as role models whose behaviours are easily copied by students. What teachers like or dislike, appreciate and their feeling about learning can have an impact on the students (Yara, 2009). It has been observed that most teachers teach Mathematics in a way that only enables them to memorize the concepts and calculation without really understanding it and applying what they have been taught. This happens as a result of the teachers negative attitude towards the teaching and learning of mathematics. This teacher's negative attitude has caused a lot of problem to the teaching and learning of Mathematics. One's attitude towards any subject, job or situation determines the person performance in that particular field of study.

If a teacher develops a positive attitude towards his/her job, it would make the teacher to work harder towards the success of his/her students. When the students noticed that their teachers are hard working and have concern for them, it motivates them and this will result to good performance in Mathematics. Yara (2009) stated in his findings that teachers attitude towards mathematics is a predictor of students achievement in mathematics. Oguniyi (1982) cited in Yara (2009) found out that students positive attitude towards science could be enhance by the teacher related factors such as teachers enthusiasm resourcefulness and helpful behaviour.

The role of teacher in the success of any educational system cannot be overemphasized and that is why the National policy on education (2004) stipulated that no educational system can rise above the quality of its teacher, this shows the importance of teacher in the school. The success of the Mathematics programme depends greatly on the Mathematics teacher since he is the prime mover that will put all that is contain in the curriculum into

action. The teacher's attitude in the classroom is very important in the learning of Mathematics. According to Ololube (2009), teaching is seen as a diverse and complex activity because the goal of any teaching task is achievement. He said that all the interrelated actions of the teacher in any given moment in the classroom must lead to students' academic achievement. Teachers are very important in educational effectiveness, they are charged with the responsibility of implementing the school curricular and pedagogical techniques. The attitude of mathematics teacher in the teaching of Mathematics can lead to effective teaching and learning of the subject. You cannot give what you don't have. For this reason, for mathematics teaching to be effective, the teacher must have a positive attitude towards the teaching of the subject. It is only teacher with positive attitude and interest on the subject that can motivate the students to learn. The teacher is the students' key to success. They play an important role in imparting the knowledge and equipping the students to be useful to themselves and the society.

CONCLUDING REMARK

Teachers' attitude plays a significant role in the teaching and learning of Mathematics in the secondary schools. Mathematics is conceived as the most difficult subjects by both students and teachers due to the way it was handled and presented. There are many factors that are responsible to this general conception. This paper highlighted the role of attitude of teachers to the teaching and learning of Mathematics. The learning of Mathematics depends greatly on the way it is presented to the student. Teachers' attitude towards teaching and learning of Mathematics has a significant impact in shaping the attitude of students towards learning of Mathematics. Students' positive attitude can be enhanced by the teacher positive attitude towards teaching of Mathematics and this can be done through teachers' helpful behaviour, resourcefulness, enthusiasms, good method of presentation, concern for students and teacher knowledge of the subject matter.

It is recommended that teachers should regularly develop positive attitude towards the teaching of Mathematics since they are the role model. The responsibility of the Mathematics teacher ends when he has taught his students to understand the concepts and how to apply these them in a variety of ways in solve daily mathematical problems. Finally, seminars/workshops on positive teachers' disposition while teaching should be addressed by all education stakeholders as important and urgent.

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