

REPOSITIONING PRIMARY MATHEMATICS THROUGH THE USE OF MOTHER TONGUE FOR EFFECTIVE TEACHING AND LEARNING

Rebecca Tope Adesokan

Abstract

Primary Mathematics is taught at the primary level of Education. One of the objectives of primary education is laying of sound basis for scientific and reflective thinking. Mathematics as a subject employs scientific principle and it cannot be disassociated from reflective thinking. The paper identified use of language of the environment as the bridge to understanding of primary mathematics at primary school level. It recommended that teachers should be trained on how to use mother tongue to teach primary mathematics. This bridge should be repaired and reinforced because it was used effectively during the pre-colonial era and post-independence era up till the early 1980s.

Primary education is the education given to pupils between ages six to twelve years, FRN (2004), it is the first six years of the 9 years' basic education program. It is the level of education where pupils are introduced to basic literacy and numeracy skills and they continue to build on it through to the secondary level of education, it is the foundation of all levels of education program. It is a compulsory education that comes between childhood and secondary education. The objective of primary education as stated in the FRN (2004) are as follows:

- the laying of a sound basis for scientific and reflective thinking.
- the inculcation of permanent literacy and numeracy skill and the ability to communicate effectively.
- character and moral training and the development of sound environment.
- citizenship education as a basis for effective participation in and contribution to the life of the society.
- developing in the child the ability to adapt to his changing environment.
- giving the child opportunities for developing manipulative skills that will enable him to function. effectively in the society within the limit of his capacity and
- providing basic tools for further educational advancement including preparation for trade and crafts of the locality.

The Concept of Primary Mathematics

Mathematics is a unique and an important subject, it is one of the subjects that are studied at all levels of education, it is compulsory for students at all levels and without a credit pass in it no student will be given admission into higher institution. Mathematics is the science that deals with the logic of shapes, quantity and arrangement. Mathematics is all around us, in everything we do. it is the

building block for everything in our daily lives, including mobile devices, architecture (ancient and modern), art, money, engineering and sports. Aminu (2011) defined mathematics as a method or technique of acquiring knowledge and skills to solve practical problems. Ahmad (2011) as stated in Adesokan (2018) sees mathematics as the science of process and structure. According to Usman (2002), Awodeyi (2004), Odogwu (2004) the prosperity of a country depends on the volume and quality of Mathematics offered in its school system and is one of the most powerful and adaptable mental tool which the intelligence of man has made for his own use. Mathematics is an important part of learning for all children in the early years and receiving a good ground in it is an essential life skill.

Primary mathematics is the mathematics taught in primary schools, that is mathematics for pupils between ages 6 to 12 years. It comprises of the study of numbers, addition, subtraction, multiplication and division and also the use of numbers in mensuration and management. The objectives of primary mathematics according to Ibude (1993) as stated in Onwuka (2009) are as follows:

- to provide the child with necessary basic skills in numerals.
- to expose the child to ways of applying these skills to his or her problem.
- to provide the child with the basic skills in logical thinking.
- to introduce the child to basic manipulative skills useful in ordinary life and
- to introduce the child to the basis of record keeping and all aspects of accounting.

Looking at these objectives one will see that the role of primary mathematics is inevitable in the achievement of the objectives of primary education. It is at this level of education that pupils are introduced to the basic operations and ingredients of mathematics and their application to day to day activities. It is a fundamental stage as far as the study of mathematics is concerned and if pupils are not properly taught, they may not find it easy in secondary school. One major way of having an effective teaching and learning of mathematics in primary school is by the use of the child's first language at lower classes.

Role of Language in Mathematics Teaching and Learning

Language is a system of conventional spoken manual or written symbols by means of which human beings as members of social group and participants in its culture express themselves. It is the medium of human communication, either spoken or written. Language is our primary source of communication, it is the method through which we share our ideas and thoughts with others. It is the most important instrument which human beings utilize to communicate with one another and for the mediation of learning in the classroom Mbekwa (2008). Language is an important aspect of the curriculum, they are both means to an end and an end in itself. It plays a key role in teaching, learning, understanding and communication in mathematics.

Mother tongue is a language that a person has been exposed to from birth. In some country mother tongue is seen as the language of one's ethnic group rather than one's first language. It is the inborn language which a baby is familiar with right from the mother's womb. The Cambridge dictionary defined mother tongue as the language that you learn when you are a baby rather than a language you learned at school or as an adult. Oluwole (2008) defined mother tongue as the language used by a group of people considered being inhabitants of an area and is acquired in the early years.

Repositioning Primary Mathematics Through The Use Of Mother Tongue for Effective Teaching and Learning

Many Nigerian pupils face a lot of difficulties in learning and one of these difficulties is that they begin introduced to learning in the language they do not know. They do not understand the language of instruction being used in the classroom. Many students become discouraged and drop out because of this. Fakeye (2011), revealed that a medium of instruction is the language used in imparting knowledge and inculcating cultural values, practices and norms of the society in the young ones in the formal school system. Learners should begin their education in the language they understand.

The use of mother tongue as a medium of instruction is globally recommended for pupils in lower primary UNESCO (2003). In FRN (2013), it was also recommended that the language of instruction in primary school should be the language of the environment. Pupils who have learned to read and write in their mother tongue learn to speak, read and write in a second language more quickly than those who are taught in the second language. The use of mother tongue in teaching at primary school enables the young learners to immediately comprehend, construct and explain without fear of making mistakes, articulate their thought and add new concepts to that which they already knew (Jovem, 2014), and this in turn will help the teacher to identify their weaknesses. There are three languages in a mathematics class, the language of the teacher, the language of the learner and the language of mathematics, in Nigeria the language of the teacher is English, the language of the learner is the learner's first language(mother tongue) and the language of mathematics are the signs, symbols, lemma, abbreviation, methods, axioms, formulae and units, when the language of the teacher coincide with that of the learner this will help in simplifying the teaching and learning process, the teacher will be able to explain the symbols, signs etc in the language that the learner understands, but unfortunately the use of mother tongue in teaching mathematics has not been given adequate attention in Nigeria. Private schools even complicated the whole thing, they refer to a child's language as vernacular meaning language spoken by barbarians Jannian& Mark (2004). The use of mother tongue can make mathematics teaching more effective and classroom discourse more relevant to pupils' need specifically through encouraging active involvement in the learning of mathematics. Teachers play an important role in facilitating understanding through the use of language since students use language to communicate ideas among themselves and to illustrate to the teacher their level of understanding. For many primary school pupils, mathematics is seen as foreign, the symbols and expressions form a barrier to understanding, it is the duty of the teacher to bring it closer to them by explaining to them in their language. The use of mother tongue as a medium of instruction strengthens learning and also improve pupils' performance in the classroom. Fafunwa (1977), as stated in Umar (2018) recorded that children comprehend well when they receive instruction in their mother tongue than in foreign language. The researcher once taught a class the topic 'Quadratic equation, using completing the square method', after explaining to them twice the steps involved in solving it, She gave an example, they solved the example together, they didn't get it, she explained the second time still half of the class did not get it, as she was standing thinking of what next to do, because she could not speak the language of the environment, one of the students stood up, collected the chalk and explained to them in the language of the environment, after the explanation all of them were happy, and when they were giving class work, they were able to solve it and the teacher was also happy.

Learners find it easier to read and acquire other academic skills when they are taught in their home language. Pupils in developing countries like Nigeria were introduced to education in a language they do not speak or understand (a language that is foreign to them) at nursery and primary

school, but in developed countries education is given to children in lower primary school in their first language, which is their mother tongue, why won't they develop? Mathematics taught in a mother tongue has a lot of advantages, it promotes inclusion in education and improves the knowledge and experience of both learner and teacher. In a classroom where mother tongue is being used to teach, pupils are able to express themselves, contribute to discussion and also develop their intellects. The use of mother tongue in teaching is an essential foundation for all learning and should be given the attention it needed in our primary schools.

Conclusion

Primary school is considered the most important years of a child's school career. It is at this level that pupils acquire the knowledge that they will use as the foundation for the rest of their education, this gives reasons why pupils should be given a solid foundation at this level. Primary education should provide the learner with the opportunity to enjoy learning and develop desire to continue learning, learners can only enjoy learning when the language of instruction is not strange to them, when can express themselves in their own language.

Recommendations

This paper hereby recommend as follows:

1. Teachers should be encouraged to use mother tongue when teaching mathematics at lower classes especially in private school where a child's language is seen as an abomination in the school.
2. Locally made materials should be used as instructional material when teaching.
3. There should be training for primary school teachers on how to use mother tongue to teach.
4. Teachers and supervisory agencies should bear in mind that the use of mother tongue for the teaching of all subjects at pre –primary and the first three years of primary education is a policy matter in the NPE, hence its implementation is not negotiable.

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