

REAPPRAISING THE CURRENT NATIONAL POLICY ON EDUCATION FOR FUNCTIONALITY AND SELF-RELIANCE: ISSUES AND CHALLENGES FOR MATHEMATICS EDUCATION

P.N. Ugwu

Abstract

This paper studied the current National Policy on Education (2004). In the five national objectives, it is found that the statements seem to be mere verbalization of well formulated objectives than practical. For the objectives to be realized effort of the government should be geared towards building libraries in primary schools, ensuring that they contain mathematics texts written in different languages other than English language. Educational resource centers should be built at least three in each local government area. Specialist teachers in various subjects like mathematics, science etc, should be sent to primary schools to save the pupils from gross mass failure in mathematics. It was found that there is no way of ensuring that those who could not continue their senior secondary school are put into the intended required place. Monitoring should therefore be taken very seriously by the government to ensure that the educational policies and lapses are taken care of. Teachers' salaries should be increased so that the greater percentage of their attention could be concentrated on their teaching instead of on other petty jobs.

Introduction

A nation's policy on education is a government's way of stating those parts of the national goals which can be achieved using education as a tool. No policy on education, however, can be formulated without first identifying the overall philosophy and goals of the nation. The overall philosophy of Nigeria are to:

1. live in unity and harmony as one indivisible, indissoluble, democratic and sovereign

nation founded on the principles of freedom, equality and justice.

2. promote inter-African solidarity and world peace through understanding (FRN, 2004).

Based on the philosophy of Nigeria, the five main national objectives of education were derived. They are stated as the building of:

- a. a free and democratic society
- b. a just and egalitarian society
- c. a great and dynamic economy
- d. a land full of bright opportunities for all citizens (FRN,2004).

The national objectives as documented in the national policy have been described by Adewole (1988), as lacking in clarification of the demands and implications of most of them. Also, Fajana (1982), observed that the policy document especially the area on national objectives is laden with empty concepts such as, 'freedom', 'democracy', 'egalitarianism', 'dignity', etc. He further stated that we have not always ensured that the advanced thinking of the few was understood by the managers, principals, and teachers of schools and by parents themselves. In addition, even the policy makers seem not to be sure of the means and ways of achieving the stated objectives. For instance, in the area of primary education, it is stated that in pursuance of the goals of primary education, that language of the environment or immediate community would be used (FRN, 2004). In Nigeria, there are so many ethnic languages (about 400), that one starts to wonder which one is the language of the immediate environment. We have three main Nigerian languages as Hausa, Yorba and Igbo. In the author's community most of her words

cannot be written down. Still in section 4 of the National Policy on Education which deals with primary education, it is stated that, everything possible shall be done to discourage the incidence of dropping out at the primary level of education. However, if this occurs, provision shall be made in the context of adult and non-formal education to enable such early leavers to continue with their education (FRN, 2004). In the statement, above there are lapses. For instance, adequate provision was not made for such children because once they go out of the formal school environment the teachers who seem to be the closet after the children's parents cannot trace them. They go into society and constitute nuisance.

In both primary and secondary schools government indicated their intention to introduce information and communication technology (ICT) since it will help in advancing knowledge and skills necessary for the children's effective functioning in the modern world. They further stated that infrastructure and training would be provided for the realization of ICT. These are policy statements which should be implemented word for word. In a study carried out by Ugwu (2000), only two schools in Nsukka education zone had not more than two computers each. One would expect that since the revision of the National Policy on Education in 2004 that there should have been improvement in the supply of modern equipment (computers, projectors, etc) in schools. Yet, in a study carried out Ugwu (2010), 90% of the secondary schools in the same Nsukka education zone have no computers. Even those who have, lack computer literate teachers. It is in the light of these gaps in the national policy that the author wants to examine the issues and challenges of the national policy for mathematics education.

Issues and Challenges for Mathematics Education

Mathematics is often described as the science of numbers and shapes. The study of numbers is vital for intellectual development as well as the development of innovative ideas and choice of career. Mathematics also deals with critical thinking and abstraction. All science subjects like chemistry, biology, physics and the like depend heavily on mathematics. Even in the social sciences, subjects like geography, economics, etc cannot be studied well without application of mathematics. It becomes obvious that for any country to achieve functionality and self-reliant education which will help individuals to be useful to them and to the larger society all resources required to study mathematics should be pursued with all vigor.

In pursuance of both the primary and secondary school education goals, the policy document stated that it will provide:

- a. school library
- b. educational resource centre
- c. specialist teachers of particular subjects such as mathematics, science, physical education, language Arts (in relation to English, French, sign language and Nigerian language) etc.
- d. necessary infrastructure and training for the integration of ICT in the school system (FRN, 2004).

Also, that those who complete junior secondary school shall be streamed into:

1. the senior secondary school
2. the technical college
3. an out-of-school vocational training centre
4. an apprenticeship scheme (FRN, 2004)

When one looks at the means and ways the government intends to achieve the goals of education, in the face of the goings-on in our nation, one begins to look at the nation's policy on education as just a mere story telling. For instance, library which is a repository of

Reappraising the Current National Policy on Education for Functionality and Self-Reliance: Issues and Challenges for Mathematics Education

knowledge is supposed to be in every primary and secondary schools to facilitate learning. In fact, no meaningful teaching/learning and research can take place without the library. In describing the library Prytherch (1987), stated that library is a collection of books and other literary materials kept for reading, study and consultation. Furthermore, Alokun (1994), define library as the store house of knowledge. Continuing, he stated that library is the nerve centre of educational institution. In addition, since there is information explosion which necessitates the need for proper organization of materials for the use of pupils/students, scholars and researchers in various areas of knowledge, the need for the library becomes more important. However, from experience, the building of libraries in primary schools which is the base of all other levels of education is far fetched as the greater percentage (90%) of primary schools in Nsukka education zone has no libraries (Ugwu, 2010). These libraries are supposed to have different texts from different authors and this would help learners conceptualize difficult learning experience especially in mathematics that demand explicit explanation.

Educational resource centre is one of the means through which learning could be achieved by using both human and material resources in the centre. In the centre, different types of teaching materials including resource persons to direct/teach the pupils are found. Unfortunately, this could hardly be seen in our primary schools. The uses of materials are very important in the teaching/learning of mathematical concepts. When teaching mathematics, the teacher should make the teaching appear concrete as much as he/she could to minimize the abstractness of the subject. To emphasize the need of teaching materials in teaching, Onyejemezi (1981), stated that resource materials result in more effective learning of factual information and skills in less time than verbalization. There is also a Chinese saying that 'a look is worth a thousand words'.

Without teaching materials, children at the pre-operational and concrete operational stage will find learning mathematics very difficult.

Also, it is stated in the National Policy on Education that specialist teachers such as mathematics, French science teachers etc, would be sent to primary schools to teach those subjects but it seems that the statement is a mere fairy tale. As at today, specialist teachers especially those of mathematics have not arrived in the primary schools. If done, it will help reduce the poor performance of pupils in subjects like mathematics and sciences and even there will be better performance in other subjects. In primary schools, particular teacher/teachers teach all subjects to each group or class irrespective of the fact whether he or she is knowledgeable in the area. The situation has a serious implication in our educational system. For instance, the author was on teaching practice supervision and a teacher was teaching primary five pupils the difference between a triangle and an angle. The teacher was teaching the pupils that "a triangle is an angle" and the author had to intervene because it is difficult for children to unlearn what they have learnt. The issue of sending specialist teacher to primary schools especially in the areas of mathematics, science, and English is very important since the teacher is all and all in the classroom.

Again, the policy document prescribed the language of the environment for the first three years. It stated that during the period, English shall be thought as a subject. Then from the forth year, it shall progressively be used as a medium of instruction and the language of immediate environment and French shall be taught as a subject. It should be noted that language is a key mode of communication in the classroom (Ebel, 1969). In effect, language handicap affects larger proportion of children entering school than is generally realized. Therefore, the language to be used in teaching children especially at their early stage in school matters a lot.

The language of the environment or immediate community should be made explicit since language of the environment may constitute a source of barrier to some of the pupils who are not indigenes of the community. For instance, in the same education zone such as Nsukka, a pupil from Aku in Igbo-Etiti local government area in Nsukka education zone could hardly understand what another pupil from Uzo-Uwani local government of the same education zone is speaking and this is same with the teacher. It is therefore, required that the teacher uses central Igbo which is accepted to all people from Igbo land other than the Language of the immediate community. Language handicap is a very serious handicap and as such teachers should strive to use the language that every pupil in the class would understand for a better achievement academically. For instance, children can easily solve problems which do not involve word problems but immediately it changes to word problems, it becomes difficult for them. For example, if students are given a problem such as: $Y^2 - 8y + 15 = 0$, many will solve it with ease but immediately it changes to word problem where they need to analyze the situation, it becomes very difficult. For instance, the sum of two numbers is 8, their product is 15. Find the numbers. This is exactly the same problem as $Y^2 - 8y + 15 = 0$ but they may fail to encode because of their deficiency language wise.

In the policy document, it was further stated that students who complete junior secondary schools shall be streamed into:

- a. the senior secondary school
- b. the technical college
- c. an out-of-school vocational training centre
- d. an apprenticeship scheme

The only workable policy seems to be the transition from JSS III to senior secondary school. The other three are in theory. From experience, most of the

students who could not continue up to senior secondary school go into the world and constitute social problems. Only very few take to apprenticeship. We recall that one of the national goals of Nigeria's national policy is the building of a land full of bright opportunities for all citizens. These groups of students are not given the opportunity since government did not prepare adequate means for proper transition into any of the three categories (ii to iv). Further, government stated that they will provide such important thing as infrastructural amenities in secondary schools.

Infrastructural Amenities

Infrastructural amenities like electricity, water, building of libraries and they like contribute a lot to the achievement of educational objectives. In some schools, for instance, the roofs of classrooms have been blown off by wind. The children of such area stay under trees. If eventually there is a rainy day, that ends the study that day. In some rural areas, where the community cannot afford to build good classroom blocks, mud blocks are used to build the classroom and children receive their lesson sitting on the floor. This situation is rampant in Kogi and Benue states of Nigeria. In these places, library and seats cannot be dreamt of. Yet, libraries are supposed to be in every primary school and are supposed to contain different text-books on mathematics and other subjects written in different languages (language of the environment or immediate community). The nature of mathematics is such that it demands conducive atmosphere for better performance. One of the goals of the National Policy on Education in primary school is the laying of sound bases for scientific and reflective thinking. But it is difficult to achieve reflective thinking and

Reappraising the Current National Policy on Education for Functionality and Self-Reliance: Issues and Challenges for Mathematics Education

science in the absence of infrastructural amenities.

Conclusion

There are some gaps in the National Policy on Education. Such things as the library, educational resource centres, infrastructural amenities are found to be lacking in our primary schools and some secondary schools. Both the federal and state governments and private agencies should seek for a more permeable way of achieving the educational objectives of Nigeria nation.

Recommendation

Based on the out come of the study, the following recommendations were made:

Government should find an efficient and effective way of monitoring teaching/learning and other activities going on in the school.

Education resource centres should be built in different local government areas of Nigeria.

Libraries as a repository of knowledge should be built in primary schools to facilitate learning.

Finally, teacher's salaries should be increased to help minimize truancy among the teachers and maximize achievement academically.

References

Alokun, N.A.T. (1994), Using the library for education research: *A Journal of teacher education*. National Commission for Colleges of Education, Kanuna. 3(1&2) 165.

Ebel, R. (1969), *Encyclopedia of education research*: London Macmillan.

Fajana, A (1982), *Education Policy in Nigeria: A century of experiment*: Inaugural Lecture Series 55. UNIFE Press.

Federal Republic of Nigeria (2004), *National policy on education*: 4th Edition, Lagos, NERDC.

Onyejemezi, D.A. (1981), *Curriculum development in Africa*: (Ed), Onwuka, U. Africana Fed. Publisher Ltd.

Prytherch, R. (1987), *Harold's librarian's glossary*: Vermont Gower, Book Field.

Ugwu, P.N. (2010), Mathematics curriculum reform in the 21st century: Implications for Nigeria educational system: Paper presented at the 1st international conference on curriculum reforms in the 21st century: Implications for Nigerian educational system (16th-19th June) at PAA, University of Nigeria, Nsukka.

*P. N. Ugwu
Department of Mathematics,
Federal College of Education,
Eha-Amufu.*