

# SCIENCE AND ADULT LITERACY EDUCATION FOR NATION BUILDING IN NIGERIA: THE CURRICULUM APPROACH

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## **Abstract**

it has been an endless discourse in some quarters perhaps by the uninformed that (he adults who through adult basic literacy programme have acquired the basic knowledge of (he 3rs, do not need to learn science in the learning centres. The paper took -A look at the efforts of government to eliminate or drastically reduce adult illiteracy in Nigeria in the bid to create new adult literates. Science which could have given the country a focus in her bid to develop technologically, is completely missing in the curriculum designed for the adult literacy education programme. The paper therefore, saw the justification to provide broad elementary science curricula to adult learners as research has made it clear that the learners need basic sciences for nation building and development.

## **Introduction**

It has been acknowledged through research that the greater achievements of modern times are largely in the regions of the physical sciences. It has also been noted that scientific breakthroughs have a tremendous impact of revolutionising many of the industrial, social and economic activities of mankind. It has again been observed that there is no phase of education that is more vital than instruction of man in the elements of "physics, chemistry and biology" (Jayeola-Omoyeni, 1995).

Up to the 1980s and early part of 1990s research had it that in Nigeria, as high as 60 to 85% percent of the adult population were unread or stark illiterate people. The effort of government to combat the incidence of adult illiteracy had been commended. The National Policy on Education (1981) focuses attention on the possible ways of eliminating adult illiteracy nationwide. In doing this, the Federal, State and the Local governments were involved in mobilizing, the illiterate adults, financing human and material resources and establishing learning centres for the prospective learners in all the nooks and crannies of the federation.

It is on record that in September 1982, Alhaji Shehu Shagari who was then the Head of State launched a National Mass Literacy Campaign in the country. It is also on record that the military under General Ibrahim Babangida relaunched the Mass Literacy Campaign and established the National Commission for Mass Literacy, Adult and Non-Formal Education of Nigeria. All these were done to ensure a speedy elimination of the scourge of adult illiteracy in the country. The success of the exercises may not be our concern here. This has been done elsewhere by this author.

Evidence has shown that every year since the launching of the campaigns in 1982 several adult illiterates had become literates. The level of such literacy has been the equivalent of the primary six certificate. The purpose of this paper therefore is to show the place and importance of science in the neo-literate's life and re-establish the fact that elementary basic science is a vital need of the new literate so as to enable these group of people contribute and be involved in the scientific development of the nation at this computer age of nation building.

## **Adult Literacy**

It has been stressed by many researchers and authors that the development of a nation is largely determined by the level of literacy of its citizenry. Obanya (1992) viewed literacy as one of the fundamental requirements of modern civilization. Accordingly, Jayeola-Omoyeni, (1995) noted that the functional significance of a people's ability to read and write depends on such civilization. Great Britain, Germany, United States of America among others are ranking higher because of the low rate of adult illiteracy in the countries on political development which is a vital tool in nation building, it has already been asserted by UNESCO (1969) that illiterate adults are denied of a free-chosen representatives because of their limitation in the political conception of their area, lack of understanding of public affairs, and the inability to read party manifestoes.

## **Adult Literates And Science**

Jayeola-Omoyeni (1995) asserted that the traditional African life of the adults is shrouded in myths and mysteries and that it is through knowledge of science that the way they relate, think and pursue their socio-economic activities could be modified. It has been noted that the adult literacy education does not comprise the teaching of elementary science. The concern is that how could the several million new literates (to the language of the environment) be able to understand basic science and be able to apply it to solve their daily socio-economic

problems.

It must be recalled here that the adults having acquired the basic knowledge of the 3rs, apply it immediately to solve immediate problems in their respective communities. The denial of the adults who are of the out-of-school learners, the basic elementary science may seriously affect the agricultural production, (animal husbandry, crop production, fishery, metallurgy) and all other local synthetic and fabric productions. There is therefore the need for the curriculum of adult literacy education to consist of the elementary basic sciences.

There is no doubt that in the world of today, many countries are clamouring for a scientific break-through in all the dimensions of life. In Israel for example, all the Israelis are noted to be scientists. In Japan, all the people born in the country are scientists. In India, almost all the population had acquired elementary science. Egypt is not left out of the scientific race as about 90% of the population are scientists (Jayeola-Omoyeni, 2000).

In Nigeria, it may be rightly said that the adults who are the chief producers of goods and services which the nation needs, are not well learned or informed. The basic literacy provided for these adults with the absence of basic science appears not to be functional. This basic literacy cannot be functional, as it has been argued elsewhere by this author unless it is backed up by the acquisition of elementary science. There is no day or time the new literate adults are not involved in the application or the use of science in their day-to-day activities.

Undoubtedly, technology according to Iroaganachi (1999) plays a critical role in the development of a nation. It is so important that it serves as a parameter for grouping a country either as "first, second or third world". The growth of science and its anchor technology is therefore a matter of priority to nation building. The strength of a country is thus a direct measure of its scientific breakthrough and its technological advancement. For this to be, all citizens irrespective of where they may be must have access to scientific information.

### Adult Literacy Enrolment

As earlier stated, there is an encouraging enrolment of adult illiterates in adult literacy education in Nigeria. As could be seen, Table 1 shows an enrolment figure of illiterate adults in Nigeria between 1987 when the Ibrahim Babangida administration re-launched the National Mass Literacy Campaign. Adult and Non-Formal Education was put in place by the same administration.

**Table 1: Adult Literacy Education Enrolment In Nigeria 1987-1991**

Year	Male	Female	Total
1987	337997	182042	520039
1988	435195	288774	724969
1989	337786	281044	61883
1990	376295	98659	674954
1991	367056	253240	620296
Total	1,855,329	1,303,759	3,159,088

**Source:** Annual Abstract of Statistics, Total is that of the author.

Between 1987 and 1991 a total number of 3,159,088 had enrolled at the various learning centres. It has been projected that out of this figure, at least 60% would be sustained to complete the literacy programme. It may mean that 1,895,453 adult would have become literates between 1987 and 1991. With a projection of annual increase of about 5.2%, about 2,782,529 adult illiterates would have become literate between 1987 and year 2000. These populations are scattered all over the country.

It has been noted that none of the neo-literates are scientifically literate in the actual sense of it. However, some critics had opined that since the "participants are involved in numeracy (arithmetic) they have started learning science".

Perhaps the learning of arithmetic at the centres do not envelope the fact that arithmetic is not basically science. Arithmetic is a branch of mathematics that deals with calculation using numbers. Even in the National Adult Basic Literacy Curriculum of 1990, the objective of numeracy is for the adults to:

recognize, read and write numerals, recognise and apply the arithmetical signs recognise; units of time, units of length and units of liquid measurement, identify the symbol of Naira and kobo. recognize units of time and tell time correctly....

To develop the numeracy concept further to match the mathematical attributes and to remove any scientific attrition, is really an instructional problem. The problem has to be tackled so as to enable neo-literals to apply the newly acquired knowledge in their daily activities. Hence the new curricular approach.

## **Adult Literacy Science Curriculum Proposed**

One of the science policies in Nigeria according to Evti(1996) is that:

The teaching and learning of science shall be done in such a way as to develop the child in the three domains (cognitive, affective and psychomotor) of educational objectives, i

As this is so, there is no doubt about the fact that adults who had acquired or who are still receiving the basic knowledge of reading, writing and numerating, need to be scientifically literate so as to develop themselves and in turn develop the nation technologically. The objective of science to the adult neo-literates should among others be:

- (a) To enable them acquire appropriate elementary science skills, abilities and competences (mental and physical) as equipment for the individual to live in and contribute to the development of the society;
- (b) To increase the awareness in adults that they live in the world of mysteries and superstitious beliefs that are placed on them by obnoxious traditions and ignorance;
- (c) To make them more functional, more practical in their approach towards life and to facilitate high productivity with the broad use of new technologies;
- (d) To enable them adjust to new changes so that their contributions to the societal needs can be meaningful;
- (e) To foster a well-informed mind in the new literates so as to enhance a better way of reaching the other illiterate adults scientifically and re-define cultural orientations;
- (f) To inculcate in the new literates that it is through the scientific findings and knowledge that their perception of the world, the way they think and relate with themselves could be positively altered.

## **Science Curriculum**

The science curriculum envisaged and to be designed for the adult literacy education participants should be an integrative option. This is considered appropriate in order to enlist the interest of the learners. In addition, no aspect of science would be left untouched given the spate of time and the maturity of the learners.

In a multi-lingual or multi-dialectal country, and with its diversified socio-cultural backgrounds and economic activities, due consideration must be given to the materials presented so as to make the basic science relevant and appealing to the needs of the learners. There is equally the need to make this elementary science learner-centred, that is, the activities of the adult learners should have the most important educative influence on them. Rote learning should never be encouraged. Instructors must always bear in mind the need to present the participants with real opportunities and real life situations for the application of the skill of science during the learning processes.

## **Elementary Science Curriculum Contents**

The basic science contents for adult literacy education programme should be:

- (i) Men as a living thing;
- (ii) Man and his home;
- (iii) Living and non-living things in the environment; (iv) Controlling the environment; (v) Health and disease; (vi) Nutrition and diet of man;
- (vii) Activities of the living things movement, feeding, reproduction and growth; (viii) Earth and natural resources; (ix) Man and space; (x) Man and machine.

Teaching or mode of instruction should be done in the language of the environment and each unit of the curriculum content should be broken down to manageable proportion to cover a nine-month period slated for adult basic literacy programme. The instructors should be well developed in the use of the language of the environment and must be ready to communicate effectively the various scientific concepts.

## **Conclusion**

It has been shown that there is no doubt that the adults in the learning centres want to be scientifically literate. The curriculum if adopted would be a base for the neo-literates to be more productive in their areas of operation. They would be able to contribute meaningfully to the development of the nation.

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