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USING YORUBA AS A MEDIUM OF INSTRUCTION IN THE TEACHING OF PRIMARY  
SCIENCE: AN EVALUATION OF THE IMPLEMENTATION OF THE NATIONAL POLICY  
ON EDUCATION

By

Dr. (Mrs.) A.T. ALABI  
DEPARTMENT OF EDUCATIONAL MANAGEMENT,  
UNIVERSITY OF ILORIN,  
ILORIN.

**ABSTRACT:**

*This study was designed to evaluate the extent to which Yoruba was being used as a medium of instruction in the teaching of Primary Science, as a national policy on education. All the 25 Primary Science teachers in the 20 randomly selected schools in Ilorin township formed the sample for the study. Relevant data for the study were collected using a questionnaire tagged "Yoruba Language and Primary Science Teaching Questionnaire (YLPSTQ). The instrument was face and content validated and its reliability coefficient of 0.91 was determined through a test-retest technique using five primary science teachers in schools outside the study sample. Simple percentage and rank ordering statistics -were used to analyse the data collected. The findings revealed that pupils' understanding, interest, participation and ability to relate scientific concepts to the environment are better enhanced with Yoruba Language. However, the difficulty in getting the Yoruba equivalents of science concepts and lack of textbooks written in Yoruba, among others, hinder effective use of the language by the teachers. As such, the policy of using Yoruba to teach Primary Science has not been effectively implemented. It was suggested that practical steps be taken to produce more Primary Science teachers and science textbooks in Yoruba towards effective implementation of the national policy. English Language as a subject should then be handled by well-trained teachers to prevent difficulty in understanding English at the secondary school level.*

**INTRODUCTION**

Language can be seen as a set of arbitrary vocal symbols shared by a group of people that are connected by mutual and natural trust. A reasonable proficiency in language is a prerequisite for effective learning. This is so because Language serves as a guide for thinking and thinking is requisite for effective communication. Effective communication in turn serves as

the serves for teaching and learning. Language is very important in the education of young children. Its skills include listening, speaking, reading and writing. The child receives verbal messages and acts on them. This continuous verbal give-and -take process forms me basis for social interaction as well as the development of the cognitive processes.

According to Marland (1977), language helps learning and learning helps language. The more closely the two are related, the effective the teaching-learning process. There is therefore the need to equip the pupils with appropriate language skills for \_ to learn meaningfully. And the role of the child's mother tongue in his acquisition of knowledge is appreciable. The child's mother tongue does not mean his mother's or father's native language. It is the language first contacted and mastered by him. Such a language is said to be acquired, so that the child may to learn any other language thereafter. Thus, a Yoruba born and bred in Kano may have Hausa as his mother Abiri (1983) stressed the need to develop the Yoruba Vg skills in Yoruba and English equally effectively. It is in recognition of this need that the Federal Republic of i (1981) stated that:

*Government will see to it that the medium of instruction in the primary schools in initially the mother tongue or the language of the immediate community and at a later stage, English (p. 13).*

Likewise FRN (1998) listed language of the environment as he curriculum for primary education in addition to English and French

Science constitutes an integral part of the primary school curriculum Nigeria. The general practice is to allocate two periods per week in the lower three classes and four periods per week in the upper three classes. The teacher, as the key instructional agent, needs appropriate skills to promote in pupils, the learning of scientific facts and how to solve problems by inquiry. Of paramount importance among these skills is communication skill which is possible through the use of appropriate language. Thinking is crucial in scientific (and any other type of human) attainment And thinking has structure; it is effectively set on in the pupil when the teacher uses language appropriately (Olajide, 1996; Adesuyan, 1998).

## LITERATURE BACKGROUND

Language plays a very important role in science. This is evident in the fact that science involves observations using all the senses, classifying these observations and drawing inferences there from. These inferences are then used to explain occurrences in order to understand the environment better. Science, according to Harlen (1983), is a method of exploring the physical properties of the world. It orders properties, identifies relationships among them, and establishes theories that can be empirically tested to explain the identified relationships. These theories allow for prediction of events and the consequences of acts and ultimate development of a technology to harness natural phenomena. Science is meant to help the learner develop an understanding and appreciation of the world through experiences. The experiences challenge the individual to analyse what *is* happening, reconsider what is already known and then come to a new understanding based on the total interaction of prior knowledge and current experiences.

The basic processes of science appropriate *for* children at the Primary School level are identified by some activities (Spordek, 1978). These activities include observation with a purpose, use of space-time relationships such as speed and angles, and classification of objects for orderliness. Other activities are communication and prediction by drawing inferences from gathered information. True learning according to Bronowski (1973), is not characterized -so much by the answering of questions as by asking of them.

For pupils to be able to carry out these activities successfully and attain optimum learning in science, the language of instruction must be familiar and understandable. Hence, the need for the use of mother tongue in teaching science in primary schools. Accordingly, Fafunwa (1977) submitted that a number of studies carried out on "Primary school Dropout" in Nigeria and elsewhere attributed the high rate of 40 to 60 percent to some factors. The major of these factors was the foreign medium of instruction usually introduced prematurely. This premature introduction of foreign language results in little or no continuity between the African child's home experience and his school experience. This situation does not arise in Western countries where the child's school experience is a continuation of his home experience and exposure, and in the native tongue. This results in acquisition, at very early stages, of self-confidence, initiative, resourcefulness,

creative reasoning and, adaptability skills necessary for further growth in later stage of development.

In the six year Yoruba Medium Primary Education Project at the University of Ife (now Obafemi Awolowo University), the Yoruba Language was employed to bridge the gap between the home and the school. The Project was predicated on the assertion that if a child is helped to lay a solid foundation of his future development in his own mother tongue, he will be better able to build upon it in later years, even in another language. This is especially so if the other language is taught as a separate subject and handled by specialist teachers.

To transform a science teacher from a provider of facts to a facilitator of learning experiences, the pupils must participate (UNESCO, 1980).

Language could however be a barrier if not properly grasped by the pupils. It thus becomes imperative that science programmes be developed locally in relation to the problems and available. Opportunities in Nigeria, using the most appropriate language for easy understanding.

### **PURPOSE OF THE STUDY**

The purpose of this study was to investigate the use of Yoruba Language as the language of the environment in effective teaching and learning of Primary Science. In the study, science programme is seen as providing opportunities for pupils to improve their observational skills of natural phenomena. It also involves using everyday occurrences in the classroom to generate and test ideas for solving day-to-day problems.

The significance of the study hinges on assessing the effectiveness of the use of Yoruba Language as the medium of instruction in Primary Science. In addition, necessary measures that could lead to effective teaching and learning of Primary Science in the schools are suggested. This would form the foundation for future scientific and technological advancement for Nigeria.

### **RESEARCH QUESTIONS**

**This study sought to answer the following basic questions:**

1. Which of die languages - Yoruba and English - do the science teachers find more convenient to teach science Lesson?

2. How effective is Yoruba Language in the teaching of science lessons in terms of pupils' understanding and interest and syllabus coverage?
3. What problems do science teachers encounter in the use of Yoruba Language for their lessons?

## **METHODOLOGY**

The study is a problems and prospects of using Yoruba language in the teaching of primary science in the primary schools. A questionnaire tagged “Yoruba language and primary science teaching questionnaire (YLPSTQ)” was design and content validated by incorporating the suggestion of science educators in its final draft. The reliability of YLPSTQ was determined by a test –retest technique musing five primary teacher in schools outside the study sample. A reliable coefficient of 91 was obtained. The instrument was teachers in the 20 randomly selected schools formed the sample for the study.

### **Data Analysis and Results**

The data for the study were analyzed using simple percentage and rank ordering .a norm was set at 50% for effectiveness in the use Yoruba or English language to impact scientific knowledge to pupils in the primary schools. the result of the analysis are presented according to the stated research question.

#### **Research question 1:**

Which of the languages- Yoruba and English – do the science teacher find more convenient to teach science lessons?

**Table 1: teacher responses to the use yoruba /English language (in percentage)**

Variable	Yoruba	English
Language frequently used in teaching	24.00%	76.00%
Language convenient to use by teachers	32.00%	68.00%
Ease of appropriate words for science concepts	8.00%	92.00%
<b>AVERAGE%</b>	<b>21.33</b>	<b>78.67</b>

Results in Table 1 show that English Language is found more convenient and hence, more frequently used (76.00% ) than Yoruba Language (24.00%) in the teaching of Primary Science. This could be due to the relative ease of getting appropriate words for science concepts in English Language (92.00%) than in Yoruba Language (8.00%).

**Research Question 2:**

How effective is Yoruba Language in the teaching of science lessons in terms of pupils' understanding and interests, and syllabus coverage ?

**Table 2: Effectiveness in the use of Yoruba Language for Science Lessons**

S/No.	Variable	Yoruba	English	Remarks
1.	Relative understanding of Science	76.00 %	24.00 %	Effective
2.	Relative participation of pupils in lessons	72.00 %	28.00 %	Effective
3.	Heightening of pupil's interest in lesson	80.00 %	20.00%	Effective
4.	Ability to relate learnt concepts to the environment	80.00%	20.00 %	Effective
5.	Coverage of units of syllabus	28.00%	72.00%	Ineffective
6.	Overall %	67.20 %	32.80 %	Effective

Table 2 shows that Yoruba Language is effective in imparting knowledge of Primary Science to pupils (67.20%) However, the use of Yoruba Language in adequate coverage of the science syllabus is ineffective (28.00%).

**Research Question 3:**

What problems do science teachers encounter in the use of Yoruba Language for their lessons?

**Table 3: Rank order of identified problems in the use of Yoruba Language**

S/No.	Questionnaire item	Respondents' Agreement	
		%	Rank
1.	Poor knowledge of Science teachers in Yoruba	72.00	4
2.	Lack of appropriate words for science terms, apparatus and concepts	96.00	2
3.	Lack of instructional materials such as textbooks in Yoruba	100.00	3
4.	Examination questions not set in Yoruba but in English	76.00	3

5.	Difficulty in understanding English at the secondary	68.00	5
6.	Inability of pupils to compete with other colleagues outside	44.00	7
7.	Lowering of intelligence	24.00	8
8.	Confusion of using two languages for instruction	68.00	5

Table 3 displays the rank order of problems associated with the use of Yoruba in the teaching of Primary Science. The respondents indicated their level of agreement to the problem using a 4-point degree: strongly agrees, agree, disagree and strong disagree. The problems range from lack of science textbooks in Yoruba Language, lack of appropriate Yoruba words for science concepts, confusion of using two languages for instruction. In observation during data collection, it was revealed that there were inadequate science teachers in the primary schools. Some schools originally planned to be used for the study had no single Primary Science teacher. Most have teachers for only classes four to six, some only in class six. The other classes were being handled by the class teachers who might not be science-oriented. Only three of the schools had science teachers for classes one to three, in addition to classes four to six.

On suggestion for the use of Yoruba Language in teaching Primary Science, 72.00% of the respondents agreed that Yoruba Language should be used in classes one to three.

## MAJOR FINDINGS

This study has found that the use of Yoruba for the teaching of Primary Science was not effectively implemented as stipulated in the National Policy on Education. English Language is found to be more convenient for the science teacher\* and thus more frequently used in teaching their lessons (76.00%).

Yoruba Language is found to be more effective in the teaching of Primary Science, especially in the areas of heightening pupils' interests, participation and understanding, and ability to relate learnt concepts to the environment. However, English Language is more effective in ensuring syllabus coverage (72.00%).

Moreover, problems encountered by science teachers in the use of Yoruba Language include, among others, lack of appropriate words for science concepts, lack of science textbooks in Yoruba, and poor knowledge of science teachers in Yoruba.

## DISCUSSION OF FINDINGS

From the findings of this study, majority of the respondents confirmed the use of Yoruba Language to elicit Pupils' understanding (76.00%), interest (80.00%), participation (72.00%) and ability to relate learnt concepts to the environment

(80.00%). All these are requisites for meaningful learning in science. This is so because science is seen as the study of man's environment in an attempt to improve his situation (Newton, 1988). Thus, for the learner to be able to gather enough information to be applied to his daily life, he must understand the scientific concepts in relation to his environment.

Among the major problems facing Yoruba as a language of teaching Primary Science are lack of science textbooks written in Yoruba Language and difficulty in getting Yoruba equivalents of science terminologies and concepts. These problems might be responsible for the more frequent use of English Language (76.00%) and for inadequate coverage of the syllabus (72.00%). This is in spite of the fact that majority of the respondents were Yoruba (92.00%). These findings corroborate Olorunselu's (1993) findings that the use of local language as a medium of instruction in primary

school level was hindered by many problems. Prominent among which were inadequate instructional materials in local language and difficulty in switching to English Language at a higher level

In spite of these problems, 72.00% of the science teachers suggested the use of Yoruba Language to teach Primary Science, especially in classes one to three. This is in line with the already prepared science curriculum in Yoruba Language. Accordingly, copies of science syllabus in Yoruba have been distributed to the schools. The material called "koko koriku loomu fun Eko Sayensi ni Ile-Eko Alakoobere" was produced by the National Primary Education Commission in conduction with the Federal Ministry of Education Special Programme Unit, Kaduna in June ,1990. The curriculum is for classes one to three. This might be a right step towards evolving a language policy for Nigeria (Afolayan, 1977).

The inadequate number of science teachers, in the schools has the implication of retarding efforts at laying a good foundation for scientific knowledge and its application in later years. (1988). Thus, for the learner to be able to gather enough information to be applied to his dairy life, he must understand the scientific concepts in relation to his environment. Among the major problems facing Yoruba as a language of teaching Primary Science are lack of science textbooks written in Yoruba Language and difficulty in getting Yoruba equivalents of science terminologies and concepts. These problems might be responsible for the more frequent use of English Language (76.00%) and for adequate coverage of the syllabus (72.00%). This is in spite of the fact mat majority of the respondents were Yoruba (92.00%). These findings corroborate Olorunsclu's (1993) findings that the use of local language as a medium of instruction in primary school level was hindered by many problems. Prominent among which were inadequate instructional materials in local language and difficulty in switching to English Language at a higher level.

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## **CONCLUSION**

Science learning and application require a child to think and put his/her thoughts into spoken and written words, drawings and pictures, graphs and equations. For these to take place effectively, the language used for teaching should be familiar and understandable to the child. Towards making Yoruba Language effective in teaching Primary Science some suggestions are made.

## **SUGGESTION**

In collaboration of some of the suggestion made by the respondents Yoruba language should be used to teach Primary science, for a starts in classes one to three. Then practical steps should be made long term to extend this to class six. To start with. As much as practicable, teachers who understand Yoruba should be allocated Primary science, using the English texts and translating to Yoruba as much as possible. In the long term, teacher training programmes should be planned to produce teachers and books in Yoruba. These teachers would have a scientific store of vocabulary in Yoruba Language. Those scientific concepts that cannot easily get Yoruba equivalents should be coined and borrowed.

Consequently, suitable literature needs to be developed to update Yoruba Language. The Association of Yoruba Language Teachers should be consulted and motivated to develop appropriate vocabulary for science terminologies.

Furthermore, more science teachers should be trained to handle Primary Science from classes one to six. This is to ensure gradual and continuous comprehensive learning, necessary for a solid foundation in scientific application,

Also, the difficulties envisaged in switching to English Language in the upper three classes would be reduced if well-trained English Language teachers are employed to teach English as a subject from class one. This step would in the long term, minimize the difficulty in understanding English Language at the secondary school. The same applies to other major Nigerian languages such as Hausa and Igbo, Nigeria being a multilingual country.

In addition, making one indigenous language the official language out of the over 300 languages in Nigeria could begin by making the mother tongue the medium of instruction at the primary level. When mother tongues are fully developed everywhere, it would then be easier and safer to take a decision on an indigenous official language.

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