

EDUCATIONAL STAKEHOLDERS INPUTS ON THE IMPLEMENTATION OF
BASIC SCIENCE CURRICULUM IN SOUTHWESTERN, NIGERIA
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Abstract

The study examined the inputs of educational stakeholders on the implementation of Basic Science curriculum in Southwestern, Nigeria. The study examined stakeholders' assessment of governments' involvement in the implementation of the National Policy in Basic Science in the Southwestern Nigeria; it examined implementation processes of the National Policy in Education in Basic Science in the study area. The study adopted descriptive research design. The population of the study comprised of all public junior secondary school Principals, Basic Science teachers, Parents of Basic Science Students and State Ministry of Education officials in Southwestern Nigeria. The sample for the study comprised of 81 principals, 162 Basic Science teachers, 162 parents of Basic Science students and 30 State Ministry of Education officials selected through multistage sampling procedure. Three instruments were used to generate data for the study were Stakeholders' Questionnaire on Governments' Involvement in the Implementation of Basic Science Curriculum (SQGIIBSC); Questionnaire on Implementation Process of Government's Involvement in Basic Science (QIPGIBS); Questionnaire on Teachers Involvement in the Implementation of National Policy on Basic Science (QTIINPBS). The data were analyzed using descriptive statistics of frequency count, percentage and mean. The questions raised were answered descriptively. The finding revealed that governments were

involved in the Regulation of the establishment and registration of school facilities at 50.1%, .It was concluded that government involvements' in the implementation processes of the National Policy in Basic Science were moderate at 54.0%. It was recommended among others that Governments should create more time and facilities needed to improve Basic Science laboratories and ensured that the National Policy on Education are well implemented in Basic Science.

Keyword: Inputs, Educational Stakeholders, Implementation, Basic Science Curriculum

Introduction

Education is a process by which children and young adults develop the abilities, attitudes and other forms of behaviour, which are of a positive value to the society in which they live. Egbezor & Okanezi, (2018). Education can take place in formal or informal settings and any experience that has a formative effect on the way one thinks, feels or acts may be considered educational. Science is an attempt by humans to gain better understanding and clearer interpretation of human beings and of the environment. Science is also an act of inquiry, which includes empirical observation and experimentation. Owolabi (2004) defines science as an integrated part of human activities. It is seen as a dynamic human activity concerned with manipulating spherical world. It is seen as "knowledge covering general truths and laws, obtained and tested through

scientific methods as concerned laws with the physical world”.

Basic Science is an important subject in junior secondary school curriculum and it depends on man's future to a large extent based on scientific advances & development of productive activity. Hence there is a great need to teach Basic Science in school curriculum. Cherkesova (2016) stated that Basic Science influences the formation of the philosophical world outlook and worldview principles, which expand the theoretical, conceptual notions of the surrounding world, the universe in all their manifestations, including those encompassing the intellectual, spiritual and social sphere. Okeya (2022) specified that Basic Science affects the creation of the philosophical global outlook and worldview principles, which develop the theoretical, conceptual philosophies of the surrounding world, the world in all their indices, including those encircling the intellectual, spiritual and social sphere. Oka (2015) observed that Basic Science formerly known as integrated science is a subject taught at both public and private schools at the Junior Secondary school level. Basic Science is an introductory course to the study of the sciences in the senior secondary school.

Offorma (2015) defined curriculum as a planned learning experiences offered to a learner in school, adding that it is a programme of studies made up of three components: Programme of studies, programme of activities and programme of guidance. The two basic philosophical issues in Nigerian education emphasize integrating the individual so as to become a sound and effective citizen and providing equal education for all citizens at primary through secondary and tertiary level. Following the declaration by the Federal Government of Nigeria on the 9-year basic education programme, the Nigerian Educational Research and Development Council (NERDC) restructured and realigned the existing primary and junior secondary curricula with the targets of the 9-year basic education within the contexts of National Economic Empowerment and Development Strategies (NEEDS).

The implementation of the Basic Science programme started in July, 2006 with the

appropriation of the UBE fund to the Universal Basic Education Commission (UBEC) and subsequent disbursement to States. The New Basic Science curriculum was approved by the National Council of Education (NCE) in December 2005. The 9-3-4 system of education operates a curriculum with comprehensive opportunities for all candidates having varying talents and abilities to acquire different and relevant skills through technical, commercial and vocational subjects. The prevailing system of education in the country also lays great emphasis on the teaching of science and technology at all levels of the 9-3-4 education structure. With the adoption of the National Policy on Education, the Basic Science programme was introduced as core subject at the Junior Secondary School level to introduce students to the world of science and to prepare them for higher education in science and technology.

According to the National Policy on Education (FRN, 2014) the aims of Basic Science (Formerly Integrated Science) should be directed at enabling students who are exposed in it, to acquire the following skills are to Observe carefully and thoroughly, Report completely and accurately what is observed, organized information acquired, Generalizing on the basis of the acquired information, Predicting as a result of the generalization, Designing experiments (including control where necessary) to check predictions, stakeholders are the main determinant of this research.

A stakeholder in Education is anyone who has interest in the success of a school or school system. This includes the government officials, school board members, administrators and teachers. Parents and student are also stakeholders. A stakeholder refers to a person who has an interest or concern in the education at hand. A stakeholder has a vested interest in the success and welfare of a school or education system. This includes all parties that are directly affected by the success or failure of an education system, as well as those indirectly affected.

The National Policy on Basic Science is government way of actualising that part of the national goals which basic science can be used as a tool. However, before the national policy can be

complied and structured out, the overall philosophy and goals of the nation must first be identified. Some important and vital parts of the current national policy on education are;

- i. education will continue to rank high in the nation's development plans; Education is the most important instrument of change and any fundamental in the social and intellectual outlook of any society has to be proceeded by education
- ii. expansion would continue to affect education and training facilities, in response to social needs, education made accessible and affordable
- iii. education activities would be centred on the student for maximum self-development and self-fulfilment; depending on needs and possibilities,
- iv. Universal Basic Education (UBE) shall be provided in a variety of forms for all citizens
- v. educational evaluation and evaluation shall be liberalised but being based on part in conscious assessment of the progress of the student/individual
- vi. all levels of the education system, modern education techniques shall be increasingly used and would also be improved upon; physical and health education can be emphasised at all levels of education system
- vii. the national education system shall be structured to develop the practice of self-learning; government in this regard shall continue to encourage, the establishment. (FRN, 2014). In the absence of the National Policy on Education, there would be very insignificant revolution and very mute growth in nation's educational sector.

The roles of government as stipulated in the National Policy on Education 2014 in Basic Science are;

- i. to provide the child with diverse basic knowledge and skills for entrepreneurship, wealth generation and educational advancement.
- ii. develop patriotic young people equipped to contribute to social development and in the performance of their civic

responsibilities

- iii. inculcate values and raise morally upright individuals capable of independent thinking, and who appreciate the dignity of labour,
- iv. inspire national consciousness and harmonious co-existence, irrespective of differences in endowment, religion, colour ,ethnic and socioeconomic background
- v. provide opportunities for the child to develop manipulative skills that will enable the child function effectively in the society within the limits of the child's capacity's (FRN, 2014).

One of the stake holders used for this research is Parent. Parent is a caregiver of the offspring in their own species. In humans, a parent is the caretaker of a child (where "child" refers to offspring, not necessarily age). A biological parent is a person whose gamete resulted in a child, a male through the sperm, and a female through the ovum. Biological parents are first-degree relatives and have 50% genetic meet. A female can also become a parent through surrogacy. Some parents may be adoptive parents, who nurture and raise an offspring, but are not biologically related to the child. Orphans without adoptive parents can be raised by their grandparents or other family members. Parents have the following roles in curriculum implementation; they are key stakeholder in curriculum development for their inclusion bring in the aspect of democracy and diversity within the curriculum, monitoring, resource provision and a good rapport between parents and teacher (Slattery.2013)

The school principal is a person with leadership skills, who can maintain accountability, see potential and creative value in fellow teachers, peers, and students to enable them to strive for higher education by focusing on goal. (Rena, 2018) The principal build leaders in our world and make the school function smoothly, they are involved in all aspect of the schools' operation, they are an administrative manager, in charge of physical facilities management, financial management, coordination with government officials, parents and private sectors and

installing an adequate school plant. (Rena, 2018)

A teacher (also called a school teacher or, in some contexts, an educator) is a person who helps students to acquire knowledge, competence or virtue. Informally the role of teacher may be taken on by anyone (e.g. when showing a colleague how to perform a specific task). In some countries, teaching young people of school age may be carried out in an informal setting, such as within the family (home schooling), rather than in a formal setting such as a school or college. Some other professions may involve a significant amount of teaching (e.g. youth worker, pastor). In most countries, formal teaching of students is usually carried out by paid professional teachers.

Since the commencement of the implementation of the National Policy on Basic Science in Nigeria which seeks to ensure an optimal and qualitative Basic Science, a stream of concerns has been raised by stakeholders in respect to the quality of Basic Science and its actual implementation. Despite all measures put in place by the Ministry of Education in Nigeria, there are still some lapses in the implementation. There is no doubt that the implementation of Basic Science requires the collaborative effort/input of all stakeholders, including the government, parents/guardians and school authorities. While the government is expected to provide the necessary teaching and learning resources, the availability of relevant students and the cooperation of parents/guardians in enrolling their children/wards cannot be overemphasised. Nigeria has many educational policy documents relating to Basic Science which include the National Policy on Basic Science.

The study examined the inputs of Educational Stakeholders on the implementation of Basic Science Curriculum in Southwestern, Nigeria.

The study specifically examined the stakeholders' assessment of governments' involvement in the implementation of the National Policy (2014) in Basic Science in the Southwestern Nigeria; It also examined the implementation processes of the National Policy in Education (2014) in Basic Science in the study area.

Research Questions

1. What are the stakeholders' assessment of governments' involvement in the implementation of the National Policy on Basic Science in Southwestern Nigeria?
2. What are the implementation process(es) of the National Policy in Basic Science on the areas of governments' involvement in Southwestern Nigeria?

Methodology

The study adopted descriptive research design of survey type. The population of the study comprised of all public junior secondary school Principals, all Basic Science teachers, all Parents of Basic Science Students and State Ministry of Education officials in Southwestern Nigeria. The sample for the study comprised of 81 principals, 162 Basic Science teachers, 162 parents of Basic Science students and 30 State Ministry of Education officials selected through multistage sampling procedure. Two instruments used to generate data for the study were Stakeholders' Questionnaire on Governments' Involvement in the Implementation of Basic Science Curriculum (SQGIIBSC); Questionnaire on Implementation Process of Government's Involvement in Basic Science (QIPGIBS); Validity of the instruments were ascertained using face and content validity procedure. While the reliability of the instruments were determined through Cronbach's alpha and split half reliability. Reliability coefficient of 0.73, 0.83, for SQGIIBSC and QIPGIBS respectively. The instruments were administered with the help of research assistants in the selected schools.

The data collected for this study were analyzed using descriptive statistics of frequency count, percentage and mean. The questions raised were answered descriptively.

Results

Research Question 1: What is the stakeholders' assessment of governments' involvement in the implementation of the national policy on Basic Science in Southwestern Nigeria?

In order to answer this research question, data collected were analysed using frequency, percentage and mean and as such the

stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in the study area was ascertained using the 14 items in Stakeholders' Questionnaire on Governments' Involvement in Implementation of National Policy on Basic Science (SQGIINPBS) which was administered on 162 parents, 162 teachers, 81 principals and 30 Ministry of Education officials were scored such that "Involved" response was allotted 1 and "Not Involved" response was allotted 0. The instrument has 14 items that were used to measure the level of stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in Southwestern Nigeria. Responses from individual to each item were computed and the minimum and maximum

scores obtained in this scale were 0 and 14 respectively. Stakeholders' involvement on the scale 0-6 were adjudged as having "Low Level" of stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in the study area. Stakeholders' involvement on the scale 7-9 were adjudged as having "Moderate Level" of stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in the study area. Stakeholders' involvement on the scale 10-14 were adjudged as having "High Level" of stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in the study area. The results are presented in Table 1

Table 1: Descriptive analysis of the stakeholders' assessment of governments' involvement in the implementation of the national policy in Basic Science in South western Nigeria

S/N	Items	Involvement		Mean
		I f(%)	NI f(%)	
1.	Regulation of the establishment and registration of school facilities	218(50.1)	217(49.9)	2.31
2.	Ensuring compliance of the Teaching Science Commission (TESCOM) Act for the establishment of Basic Science	221(50.8)	214(49.2)	2.40
3.	Ensure compliance with and innovations to minimum standard prescriptions as related to Basic Science curriculum development programmes	225(51.7)	210(48.3)	2.47
4.	Developing and implementing Basic Science capacity building programmes for the subject and teachers	218(50.1)	217(49.9)	2.25
5.	Developing and implementing educational support services to orphans and vulnerable pupils	220(50.6)	215(49.4)	2.27
6.	Provision and distribution of policy guidelines for the establishment and management of elementary institutions	218(50.1)	217(49.9)	2.25
7.	Production and development of appropriate national curriculum and textbooks in Nigerian languages	190(43.2)	245(56.3)	1.85
8.	Approval of relevant supplementary reading materials and teachers/instructional manual	232(53.3)	203(46.7)	2.37
9.	Provision and approval of appropriate certification of work done and training received	240(55.2)	195(44.8)	2.49
10.	Ensuring full participation of government, communities and teacher associations in the running and maintenance of Basic Science facilities	225(51.7)	210(48.3)	2.47

S/N	Items	Involvement		Mean
		I f(%)	NI f(%)	
11.	Ensuring compliance with the stipulated medium of instruction at various Basic Science across the state	240(55.2)	195(44.8)	2.49
12.	Development of orthography of many more Nigerian languages	225(51.7)	210(48.3)	2.47
13.	Ensuring strict compliance with play as the main method of teaching	245(56.3)	210(48.3)	2.47
14.	Development of mechanisms for public-private partnerships	200(46.0)	190(43.2)	2.52
	Average mean is 2.32		235(54.0)	1.90

N = 435

Results in Table 1 showed the descriptive analysis of the stakeholders' assessment of the level of governments' involvement in the implementation of the national policy in Basic Science in Southwestern Nigeria. Considering mean values, it can be deduced from the Table that the regulation of the establishment and registration of school facilities ($\bar{x}=2.31$), ensuring compliance of the Teaching Science Commission (TESCOM) Act for the establishment of Basic Science ($\bar{x}=2.40$), ensure compliance with and innovations to minimum standard prescriptions as related to Basic Science curriculum development programmes ($\bar{x}=2.47$), developing and implementing Basic Science capacity building programmes for the subject and teachers ($\bar{x}=2.25$), developing and implementing educational support services to orphans and vulnerable pupils ($\bar{x}=2.27$), provision and distribution of policy guidelines for the

establishment and management of elementary institutions ($\bar{x}=2.25$), production and development of appropriate national curriculum and textbooks in Nigerian languages ($\bar{x}=1.85$), approval of relevant supplementary reading materials and teachers/instructional manual ($\bar{x}=2.37$), provision and approval of appropriate certification of work done and training received ($\bar{x}=2.49$), ensuring full participation of government, communities and teacher associations in the running and maintenance of Basic Science facilities ($\bar{x}=2.47$), ensuring compliance with the stipulated medium of instruction at various Basic Science across the state ($\bar{x}=2.49$), development of orthography of many more Nigerian languages ($\bar{x}=2.47$), ensuring strict compliance with play as the main method of teaching ($\bar{x}=2.52$) and development of mechanisms for public-private partnerships ($\bar{x}=1.90$) in the study area.

Research Question 2: What are the implementation process(es) of the national policy in basic science on the areas of governments' involvement in Southwestern Nigeria?

In order to answer this research question, data collected on the twelve items of the implementation processes of the national policy in Basic Science were subjected to descriptive analysis considering the mean values of applicable items on all the responses from the respondents (parents, teachers, principals and ministry of education officials) together. The results are presented in Table 2

Table 2: Descriptive analysis of the implementation processes of the national policy in Basic Science in the study area

S/N	Items	A f(%)	NA f(%)	Mean
1.	Directly involvement in the establishment of Basic Science across the State	218(50.1)	217(49.9)	2.15
2.	Making it compulsory for various government funded schools to established Basic Science laboratory in their premises	235(54.0)	200(46.0)	2.39
3.	Encouraging community and private individuals to establish and manage Basic Science laboratory and facilities	220(50.6)	215(49.4)	2.30
4.	Encouraging the appropriate government funded higher institutions to make provision for the training of specialist in Basic Science	210(48.3)	225(51.7)	1.79
5.	Setting and monitoring that minimum standard for Basic Science in the country is adhered to	220(50.6)	215(49.4)	2.30
6.	Provision of technical assistance to service providers through work plans, programmes and guidelines that help to translate policy positions into actions	215(49.4)	220(50.6)	1.83
7.	Provision of training manuals for Basic Science teachers	245(56.3)	190(43.7)	2.51
8.	Ensuring ongoing and regular monitoring of the Basic Science teachers	230(52.9)	205(47.1)	2.35
9.	Actively participating in the national or state Basic Science Education coordinating committee	210(48.3)	225(51.7)	1.79
10.	Ensuring policy sensitization and advocacy for Basic Science involvement	221(50.8)	214(49.2)	2.32
11.	Making special provisions for Basic Science activities and programmes in their line budgets	218(50.1)	217(49.9)	2.15
12.	Facilitating Basic Science related research	200(46.0)	235(54.0)	1.69

N = 435

Results in Table 4.6 showed the descriptive analysis of the implementation processes of the national policy in Basic Science in the study area. Considering the mean values, it can be gathered from the Table that directly involved in the establishment of Basic Science across the State ($\bar{x}=2.15$), making it compulsory for various government funded schools to established Basic Science laboratory and facilities in their premises ($\bar{x}=2.39$), encouraging community and private individuals to establish and manage Basic Science ($\bar{x}=2.30$), setting and monitoring that minimum standard for Basic Science in the country is adhered to ($\bar{x}=2.30$), provision of training manuals for Basic Science teachers ($\bar{x}=2.51$), ensuring ongoing and regular monitoring of the Basic Science teachers ($\bar{x}=2.35$), ensuring policy sensitization and

advocacy for Basic Science involvement ($\bar{x}=2.32$) and making special provisions for Basic Science activities and programmes in their line budgets ($\bar{x}= 2.15$) are the implementation processes of the national policy in Basic Science in the study area.

Discussion

The study examined stakeholder assessment of governments' involvement as stated in the national policy on basic science revealed that governments were involved in the Regulation of the establishment and registration of school facilities, Ensure compliance with and innovations to minimum standard prescriptions, especially as they relate to Basic Science curriculum development programmes and

activities, Provision and distribution of policy guidelines for the establishment and management of elementary institutions, Ensuring compliance with the stipulated medium of instruction at various Basic Science across the state. However, it was revealed that governments were moderate in ensuring strict compliance with assessment of Government involvements in the implementation of National Policy in Basic Science. At 0-6 is low level, 7-9 are at moderate level, 10-14 is at high level at stakeholder assessment of Government involvement in the implementation of National Policy in Basic Science. Okoroma (2006) explained that a gap often exists between formation of policy and its implementation. Ajaja (2010) supported that Basic Science should be taught at all levels, that the implementation process must be well implemented. Iman (2012) lamented that the policy made education in Nigeria the Federal Government's responsibility in terms of centralized control and funding of education as a way to achieve the developmental objectives. Odukoya (2009) identified frequent changes in policies and repeated alterations in government as one of the major factors affecting the implementation of NPE.

Conclusion

Based on the findings of the research, it was observed that stakeholder' assessment of governments' involvement in the implementation of the National Policy in Basic Science are moderate. The implementation processes of the national policy on Basic Science, provision of training manuals for Basic Science teacher has the highest mean, Again, there was average results on the extent of compliance in the implementation processes.

Recommendations

Consequent upon the experience of the researcher in the field, the following recommendations are hereby made.

- i. Governments should create more time and facilities needed to improve Basic Science laboratories, facilities and ensured that the National Policy on Education are well implemented in Basic Science,. This could be done through grants or any other form of assistance to

various schools so that all the stakeholders will be highly involved in the implementation.

- ii. Governments should show more interest in Basic Science by providing needed quality human and materials resources for high effective implementation of National Policy in Basic Science. Also Government should encouraging both community and private efforts in the establishment of Basic Science based on set standards making provision in teachers education programmes for specialisation in Basic Science and education

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