



Extent of implementation of the basic science curriculum component of the universal basic education (UBE) programme in Port Harcourt urban schools, Nigeria

Hillary Wordu¹, Godlove Monfe²

¹ Department of Educational Foundations, Rivers State University, Port Harcourt, Nigeria

² Institutes of Education, Faculty of Education, Rivers State University, Port Harcourt, Nigeria

Abstract

The study investigated the Extent of Implementation of the Basic Science Curriculum Component of the Universal Basic Education (UBE) Programme in Port Harcourt Urban Schools, Nigeria. The study adopted descriptive survey research design. To achieve this five research questions were formulated to guide the study. The population of the study comprised 35 principals and 1,954 teachers in 35 schools offering Universal Basic Education (UBE) Programme in Port Harcourt Urban. The area of the study covers Obio/Akpor and Port Harcourt Local Government Areas in Rivers State. The sample size for the study comprised 35 principals and 196 teachers. The principals were purposively selected to include all member of the population due to its small size. In the case of teachers, simple random sampling technique was used to obtain the sample size. The instrument used for the data collection was a structured questionnaire of the Four points response Likert scale of Very High Extent (VHE) = 4 points, High Extent (HE) = 3 points, Low Extent (LE) = 2 points, and Very Low Extent (VLE) = 1 point. The questionnaire was validated and its reliability ascertained by test-rest method and the parallel sets of scores subjected to the Pearson's Product Moment Correlation to have a coefficient of 0.80. Mean and standard deviations were used to answer the research questions. The findings of the study revealed, among others, that to a High Extent, functional laboratories and adequate funds were not made available to enhance the teaching and learning of Basic Science in schools. Also, that environment affects the teaching and learning of Basic Science in Port Harcourt Urban Schools. It was recommended among others that Government should support the implementation of the teaching and learning of Science by providing modern, relevant and adequate facilities for the enhancement of the acquisition of requisition skills in the teaching and learning of Science in the Universal Basic Education secondary schools.

Keywords: education secondary schools, basic science, UBE

Introduction

Science, in its very simple term, is regarded as the attempt by man to gain better understanding and clearer interpretation of himself and of the environment around him. Helping to gain better understanding of the world, however, puts science in a better position to influence positively, conditions for life on planet. Also, science is an act of inquiry, which includes empirical observation and experimentation. Alebiosu (2003) posits that science points at searching for causes and providing reasons for or solutions to phenomena or experiences in life.

Marx (1998) believes that, science has been described as one of the greatest weapons human has ever invented for leaping into the unknown phenomenon. It has also been described as the language of nature without which communicating with the world within or outside, becomes impossible.

A good background in science enables people to quickly learn and understand how things around them work. Therefore, having the necessary science background and knowledge, goes a long way to affect people's life positively. It is therefore pertinent, that every individual; young, old, male or female, be scientifically literate in order to have a better survival. This has made the study of science and technology (which grows out of scientific discovery) indispensable to the survival of every individual on the one hand and on the other hand, an integral part of the culture of a nation, which has to be sustained, developed and passed

on to incoming generations.

The National Policy on Education (FGN, 2004), entrenches the teaching of science at all levels of education. This may be connected to the fact that the valuable role of basic science in the development of a nation needs not be over emphasized. Ibole (2000) ^[10] believes that science rules the universe. It serves and ensures human survival. Jegede (1983) asserts that, the development in science has so greatly affected the lives of every human being so much that, to be ignorant of the basic knowledge of this development is to live an empty, meaningless, and probably unrealistic life. Valley and Withier (2009) ^[21] strongly believe that, a solid foundation in computer sciences, which is an offshoot of science is essential to free-thinking participation in the world.

The Basic Science teacher's role is one of a facilitator of learning experience. The teacher is the one who provides learning opportunities and necessary guidance, to increase both the quality and quantity of learning acquired by the students. Educational researchers have shown that, teachers who are able to guide their students through learning situations by indirect influence such as questioning, prompting or leading rather than by direct teaching, informing or explaining, produce students who are less dependent and in general, learn more effectively (Adegoke, 2002) ^[1], Ben-Yunus (2002) ^[4] asserts that, the classroom teacher forms the cornerstone in curriculum implementation as the main force and the last person that ensures that any

curriculum is implemented according to specification. Therefore, if a teacher is untrained or unwilling to implement curriculum plans, his or her desired success cannot be attained. Nduanya (1986)^[12] opines that teaching and learning are more effective when teachers locate and use appropriate instructional materials. These instructional resources could be in the form of books, charts, models, maps, laboratory apparatus and equipment, projectors; computers and so on. The book has been regarded as an important single resource to both the science teacher and the learner. Some commentators in education have remarked that if education is the road out of poverty, books are the wheels needed for the journey. Books and other materials that will aid learning must be available and adequately provided in schools. Dike (2000)^[5] asserts that, if we want children and all citizens to acquire literacy, we must provide reading materials, the abundant and pleasurable reading materials found in libraries. The fact that the provision of teaching and learning facilities is a pre-requisite to the attainment of educational objectives calls for concerted effort at ensuring that, these and other elements be adequately provided in schools. Nwagwu (2002)^[15] therefore recommends that, a panel of information experts, intellectuals and educators with planning and management experience should ensure that the Universal Basic Education (UBE) programme does not take off without adequate preparation to guarantee successful implementation.

It is, therefore, worthy to note that the success of the Universal Basic Education (UBE) programme is very much dependent on the state of the antecedent variables, which are manpower requirements, infrastructural requirements, instructional materials and the programme objective. For instance, in the area of manpower requirement, Kalusi (2000) reports that, all over the world, services of teachers have been employed to ensure continuity in terms of manpower supply and maintenance of a steady socio-economic, cultural, scientific and political advancement. Surprisingly, the engineers, scientists, architects, medical doctors, bank managers, the police or the army officers, have been under the tutelage of the teacher. In fact, the role of the teacher in national development would be more appreciated when we recognize that the most precious of our natural resources, which is our children, are entrusted to the care of the teachers at an impressionistic stage in life. The teachers, therefore, not only make but they could also mar the prospect of a nation. More so, Adesoji (1998)^[2] opines that the work of the teachers will be influenced tremendously by the contents of the curriculum, the available teaching resources and the quality of the teachers. Also, for effective teaching and learning, school buildings, utilities, facilities and educational goals should be viewed as being closely interwoven and interdependent. School buildings as well as facilities are seen as a controlled environment, which facilitates the teaching-learning process as well as projecting the physical well-being of the students. In the secondary school, modern teaching of sciences, social science, arts and other vocational studies would require the use of laboratories and many other learning aids/ facilities such as films, overhead projectors, microfilms, transparencies, programmed instruction packages and computers.

This informs Obanya (2002)^[16] assertion that ensuring full attainment of the great ambition of the senior secondary

programme, will depend on the following curriculum implementation elements such as; social mobilization, infrastructure, teachers, out-of-school youths, the curriculum, instructional materials, special needs education and library development. Alani (2002)^[3] adds that for the senior secondary programme to be successful, the plan for the programme should focus on the following elements such as; educational data collection, survey of skills, creating awareness for the programme, teacher demand and supply, funding, provision of materials, equipment and facilities, inducement/welfare support for pupils/learners, curriculum preparation and enrichment and research, monitoring and evaluation.

These elements of curriculum implementation are essential in recording the success of the Universal UBE programme in general and Basic Science programme of UBE in particular. Hence, ascertaining the availability and adequacy of these elements, becomes inevitable and the objectives of the UBE can only be realized if there is an effective assessment endeavour is directed to the programme of the UBE. It is of necessity that these core curriculum components be assessed to ensure that the predetermined goals/objectives of the curriculum are achieved. This is the onus of this study.

Statement of the Problem.

There is need to investigate the extent of implementation of the Basic Science Curriculum in schools in Nigeria if there are indicators of poor funding, obsolete educational facilities, inadequate qualified teachers, inadequate science laboratory apparatus, inadequate text books, uncondusive learning/school environment, insufficient or non-supply of power, unqualified teachers, lack of incentive to motivate teachers, non-commitment by the school managers and, poor funding. This study attempts to find out the extent these resources are provided for the implementation of the Basic Science curriculum for the Universal Basic Education (UBE) programme in Port Harcourt urban in Rivers State. Previous studies have been made outside Port Harcourt (Ogunleye & Sowunmi, 2020; Ogungbesan, 2012 and Hudu, Ombugadu & Mahmuda)^[17]. Available literature has shown that such assessments have not been carried out in Port Harcourt. It is on this basis that this study becomes necessary and timely. These problems necessitated the need for a study on the extent of the implementation of basic science curriculum component of the Universal Basic Education (UBE) programme in Port Harcourt urban.

Purpose of the Study.

The Purpose of this Study is to investigate the extent of the implementation of the Basic Science curriculum component of the Universal Basic Education (UBE)) programme in Port Harcourt urban. The objectives are:

1. To find out the extent of the availability of course materials for the implementation of Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt urban.
2. To determine the extent do teachers utilize the curriculum guide in the teaching of Basic Science course in the UBE programme in Port Harcourt urban.
3. To assess the availability of laboratory facilities for the implementation of Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt.
4. To determinethe availability of funds for the

implementation of Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt.

- To determine the effect of learning environment on the implementation of Basic Sciences curriculum for Universal Basic Education (UBE) in Port Harcourt.

Research Questions.

To guide this study, the following research questions are raised to answer:

- To what extent are course materials available for the implementation of Basic science curriculum for Universal Basic Education (UBE) in Port Harcourt?
- To what extent do the teachers utilize the curriculum guide in the teaching of the Basic Science course in the UBE programme in Port Harcourt urban?
- To what extent are laboratory facilities made available for the implementation of Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt?
- To what extent are adequate funds provided to implement Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt?
- To what extent does the school environment affect teaching/learning and the implementation of Basic Science curriculum for Universal Basic Education (UBE) in Port Harcourt?

Method and Materials.

The study adopted a descriptive survey design to cover the area namely, Port Harcourt and Obio/Akpor Local Government Areas of Rivers State, Nigeria.

The population of the study comprised thirty five (35) principals and One Thousand nine Hundred and Fifty Four (1954) teachers in the (35) public junior secondary schools. The sample size for the study comprised thirty five principals, selected by purposive sampling technique while. 196 teachers were selected from a population of 1954 using multi-stage sampling technique.

The researcher develop a 50 items structured questionnaire of a Likert Scale titled Extent of The Implementation of Basic Science Curriculum Component (EIBSCC), which

was used to collect data for this study. The questionnaire items were arranged in ordinal scale of Very High Extent (VHE) = 4 points, High Extent (HE) = 3 points, Low Extent (LE) = 2 points and Very Low Extent (VLE) = 1 point.

The questionnaire was validated by two experts from the Departments of Science Education and Statistics in the university. The reliability of the instrument was determined through test-retest method. By this method 30 copies of the questionnaire were administered to 15 principals and 15 Basic Science Teachers in UBE from junior secondary schools in Degema Local Government Area in Rivers State. After two weeks interval, a fresh copies of the questionnaire items were re-administered to the same principals and teachers for the second time. The first and second responses sets were collected and analyzed using Pearson Product Moment Correlation statistics that yielded a reliability index of 0.80.

The copies of the questionnaire were administered to the respondents by hand. They were given the assurance that their responses would be purely used for this research, and it was retrieved in the same manner after the respondents had gone through it and indicated their options. However a total number of 231 copies of questionnaire (35 copies for principals and 196 for teachers) were administered and only 229 copies were correctly filled and retrieved, representing 99.1 retrieval rate. The data collected from the questionnaires were analyzed using percentages, mean score and standard deviation. Z-test was used to test the hypotheses at 0.05 significant level, also the hypotheses in section B were rated using the modified four likert scale.

The decision to accept an item was that if the mean score was equal or greater than the 2.5, then the item was accepted as agreed, but rejected or disagreed if the mean score was less than 2.5.

Results

Research Question 1

To What extent is the availability of course materials for the implementation of basic science curriculum of Universal Basic Education (UBE) in Port Harcourt?

Table 1: Table of mean scores of extent to which course materials are made available for the implementation of Basic Science Curriculum of the Universal Basic Education (UBE) in Port Harcourt urban.

| S/N | Items | Principals (N = 35) | | | Teachers (N = 194) | | |
|-----|--|---------------------|-----------------|-------------|--------------------|-----------------|-------------|
| | | X _P | SD _P | Remarks | X _T | SD _T | Remarks |
| 1. | There are text books provided for teaching and learning of basic science. | 2.41 | 1.23 | Low Extent | 2.38 | 1.87 | Low Extent |
| 2. | The text books provided by the school for teaching and learning of Basic science are in conformity with the national curriculum content. | 2.38 | 1.87 | Low Extent | 2.41 | 1.23 | Low Extent |
| 3. | There are computers available to enhance the teaching and learning of Basic Science in schools. | 2.38 | 1.87 | Low Extent | 2.38 | 1.87 | Low Extent |
| 4. | Internet services are made available for the teaching and learning of Basic Science. | 2.38 | 1.87 | Low Extent | 2.38 | 1.87 | Low Extent |
| 5. | Models such as; skeletal system, ear, kidney are provided to aid the teaching and learning of Basic Science | 3.55 | 0.71 | High Extent | 3.55 | 0.71 | High Extent |
| 6. | There are slides, projectors, video clips to enhance the teaching and learning of Basic Science | 2.38 | 1.87 | Low Extent | 2.38 | 1.87 | Low Extent |
| 7. | Tree seedlings and Garden implements, are available for the teaching and learning of Basic Science | 2.54 | 0.90 | High Extent | 2.71 | 0.89 | High Extent |
| 8. | The text books provided for the teaching and learning of Basic Science are current. | 2.41 | 1.23 | Low Extent | 2.38 | 1.87 | Low Extent |
| 9. | Mechanic and carpentry workshops are visited to enhance the teaching and learning of Basic Science | 2.38 | 1.87 | Low Extent | 2.86 | 1.22 | High Extent |
| 10. | Plant /Animal specimens are collected and their album made to enhance the teaching and learning of Basic Science | 2.38 | 1.87 | Low Extent | 2.57 | 0.97 | High Extent |
| | Grand Mean & SD | 2.51 | 1.52 | | 2.6 | 1.43 | |

Source: Field Survey (2021)

Table 1: shows the extent to which course materials are made available for the implementation of the Basic Science curriculum of the UBE in Port Harcourt. Items 5 and 7 with mean values of 3.55 and 2.54, standard deviation values of 0.71 and 0.90, for principals, mean values of 3.55, 2.71, 2.86, 2.57 and standard deviation values of 0.71, 0.89, 1.22, 0.97 for teachers respectively, fell within the range of high

extent that course materials were not made available for the implementation of Basic Science curriculum of the UBE in Port Harcourt.

Research Question 2: To what extent does Universal Basic Education (UBE) teachers in Port Harcourt do make use of Basic science curriculum guide in their lesson preparation?

Table 2: Table of Mean scores of extent to which Universal Basic Education (UBE) teachers in Port Harcourt do make use of basic science curriculum guide in their lesson preparation.

| S/N | Items | Principals (N = 35) | | | Teachers (N = 194) | | |
|-----|--|---------------------|-----------------|-------------|--------------------|-----------------|-------------|
| | | \bar{X}_P | SD _P | Remarks | \bar{X}_T | SD _T | Remarks |
| 11. | Basic science teachers use text book when teaching. | 2.71 | 0.89 | High Extent | 2.96 | 1.43 | High Extent |
| 12. | Basic science teachers teach with lesson note book. | 3.55 | 0.71 | High Extent | 3.74 | 1.04 | High Extent |
| 13. | Basic science is taught in class with Practical for students to better understand what they have learned. | 2.38 | 1.87 | High Extent | 2.54 | 0.90 | High Extent |
| 14. | Study guide provided by the school for teaching and learning of Basic science is in conformity with national curriculum content. | 2.54 | 0.90 | High Extent | 2.54 | 0.90 | High Extent |
| 15. | Basic science have specific curriculum guide. | 2.54 | 0.90 | High Extent | 2.54 | 0.90 | High Extent |
| 16. | The curriculum makes provision for activities to enhance students' understanding of Basic Science. | 2.41 | 1.23 | Low Extent | 2.41 | 1.23 | Low Extent |
| 17. | The curriculum is consistent with the modern day innovative teaching of Basic Science in Schools. | 2.96 | 1.43 | High Extent | 2.96 | 1.43 | High Extent |
| 18. | The curriculum is divided into themes and it is accessible by the teachers. | 3.74 | 1.04 | High Extent | 2.38 | 1.87 | High Extent |
| 19. | Teachers are trained and retrained through in service programs on how to use the curriculum. | 2.54 | 0.90 | High Extent | 2.71 | 0.89 | High Extent |
| 20. | Teachers find the use of curriculum easy in preparing their lesson note for teaching and learning Basic Science in schools. | 2.38 | 1.87 | High Extent | 2.38 | 1.87 | High Extent |
| | Grand Mean & SD | 2.77 | 1.17 | | 2.71 | 1.24 | |

Source: Field Survey (2021)

Table 2: shows the extent to which the UBE teachers in Port Harcourt do make use of Basic science curriculum guide in their lesson preparation. Items 11, 12, 14, 15, 17, 18 and 19 with means values of 2.71, 3.55, 2.54, 2.54, 2.96, 3.74, 2.54 and standard deviation values of 0.89, 0.71, 0.90, 0.90, 1.43, 1.04, 0.90 for principals, and mean values of 2.96, 3.74, 2.54, 2.54, 2.54, 2.96, 2.71 and standard deviation values of 1.43, 1.04, 0.9, 0.9, 0.9, 1.43, 0.89 for teachers respectively, fell within the range of high extent. Therefore, with a grand

mean of 2.77 for principals and 2.71 for teachers, it was evidence that principals and teachers agreed to a high extent that there were no available Basic science curriculum guide for teachers to make use of when preparation of their lesson.

Research Question 3: To what extent is the availability of laboratory facilities for the implementation of basic science curriculum for Universal Basic Education (UBE) in Port Harcourt?

Table 3: Table of mean scores of extent to which laboratory facilities are made available of for the implementation of Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt.

| S/N | Items | Principals (N = 35) | | | Teachers (N = 194) | | |
|-----|--|---------------------|-----------------|-------------|--------------------|-----------------|-------------|
| | | \bar{X}_P | SD _P | Remarks | \bar{X}_T | SD _T | Remarks |
| 21. | Basic science laboratories provided in the schools to aid student learning are equipped. | 3.55 | 0.71 | High Extent | 3.74 | 1.04 | High Extent |
| 22. | There are laboratories for Basic science practical in the school. | 2.86 | 1.22 | High Extent | 2.41 | 1.23 | Low Extent |
| 23. | There are enough apparatus in the laboratories for the teaching and learning of Basic science. | 2.38 | 1.87 | Low Extent | 2.41 | 1.23 | Low Extent |
| 24. | Laboratories meant for basic science practical in the school are in good condition. | 2.71 | 0.89 | High Extent | 3.74 | 1.04 | High Extent |
| 25. | All equipment for effective teaching of Basic science are available in the schools. | 2.41 | 1.23 | Low Extent | 2.41 | 1.23 | Low Extent |
| 26. | Laboratory teaching experience enhances mastery of Basic Science in Schools. | 2.57 | 0.97 | High Extent | 3.23 | 1.56 | Low Extent |
| 27. | Basic Science teachers have the scientific skills for laboratory practical. | 2.86 | 1.22 | High Extent | 2.54 | 0.90 | High Extent |
| 28. | Laboratories provided to enhance teaching and learning of Basic Science are accessible to teachers and students. | 3.23 | 1.56 | High Extent | 2.41 | 1.23 | Low Extent |
| 29. | Laboratory teaching is more effective and understanding than classroom teaching of Basic Science. | 2.71 | 0.89 | High Extent | 2.96 | 1.43 | High Extent |
| 30. | Location of the science laboratory encourages usage by the teachers for practical. | 3.55 | 0.71 | High Extent | 3.74 | 1.04 | High Extent |
| | Grand Mean & SD | 2.88 | 1.12 | | 2.95 | 1.19 | |

Source: Field Survey (2018)

Table 3: shows the extent to which laboratory facilities are made available for the implementation of Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt. Items 21, 22, 24, 26, 27, 28, 29 and 30 with mean values of 3.55, 2.86, 2.71, 2.57, 2.86, 3.23, 2.71, 3.55 and standard deviation values of 0.71, 1.22, 0.89, 0.97, 1.22, 1.56, 0.89, 0.71 for principals, and mean value of 3.74, 3.74, 3.23, 2.54, 2.96, 3.74 and standard deviation values of 1.04, 1.04, 1.56, 0.9, 1.43, 1.04 for teachers respectively, fell

within the range of high extent. Therefore, with a grand mean of 2.88 for principals and 2.95 for teachers, it was evident that principals and teachers agreed to a high extent that there were no Functional laboratory facilities provided for the implementation of Basic science curriculum of UBE in Port Harcourt.

Research Question 4: To what extent is fund available for the implementation of Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt?

Table 4: Table of Mean scores of extent to which Adequate Funds are provided to implement Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt.

| S/N | Items | Principals (N = 35) | | | Teachers (N = 194) | | |
|-----|--|---------------------|-----------------|-------------|--------------------|-----------------|-------------|
| | | \bar{X}_P | SD _P | Remarks | \bar{X}_T | SD _T | Remarks |
| 31. | There are sufficient funds provided for the procurement of facilities to enable students learn better and acquire relevant skills. | 2.96 | 1.43 | High Extent | 2.96 | 1.43 | High Extent |
| 32. | There are funds provided for teachers' seminars and workshops to improve their teaching and learning of Basic science. | 3.74 | 1.04 | High Extent | 3.74 | 1.04 | High Extent |
| 33. | There are funds allocated for students' field work to enable them interact and achieve quality learning. | 2.54 | 0.90 | High Extent | 2.54 | 0.90 | High Extent |
| 34. | Funds are made available for the acquisition of latest gadgets to enhance the learning of Basic Science I schools | 3.74 | 1.04 | High Extent | 2.54 | 0.90 | High Extent |
| 35. | There are specific funds provided for Basic science curriculum | 3.55 | 0.71 | High Extent | 2.54 | 0.90 | High Extent |
| 36. | The funds allocated for Basic Science curriculum implementation, are judiciously used/implemented. | 2.38 | 1.87 | Low Extent | 2.41 | 1.23 | Low Extent |
| 37. | Parents Teachers Association (PTA) also contribute to the funding of Basic Science teaching and learning in schools. | 2.71 | 0.89 | High Extent | 2.96 | 1.43 | High Extent |
| 38. | Teachers sometimes fund projects/activities carried out to enhance Basic Science Study. | 3.23 | 1.56 | High Extent | 3.55 | 0.71 | High Extent |
| 39. | Fund provided by the government to enhance teaching and learning of Basic Science, gets to the school. | 2.86 | 1.22 | High Extent | 2.71 | 0.89 | High Extent |
| 40. | Funds provided by government to enhance teaching and learning of Basic Science are insufficient. | 2.57 | 0.97 | High Extent | 3.23 | 1.56 | High Extent |
| | Grand Mean & SD | 3.02 | 1.16 | | 2.91 | 1.09 | |

Source: Field Survey (2021)

Table 4: shows the extent to which adequate funds are provided to implement Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt. Items 31, 32, 33, 34, 35, 37, 38, 39 and 40 with mean values of 2.96, 3.74, 2.54, 3.74, 3.55, 2.71, 3.23, 2.86, 2.75 with standard deviation values of 1.43, 1.04, 0.9, 1.04, 0.71, 0.89, 1.56, 1.22, 0.97 for principals; and mean values of 2.96, 3.74, 2.54, 2.54, 2.96, 3.55, 2.71, 3.23 with standard deviation values of 1.43, 1.04, 0.9, 0.9, 0.9, 1.43, 0.71, 0.89, 1.65 for teachers respectively, fell within the range of high

extent. Therefore, with a grand mean of 3.02 for principals and 2.91 for teachers, it was evident that principals and teachers agreed to a high extent that there were no adequate funds to implement Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt.

Research Question 5

To what extent does school environmental affect teaching and implementation of basic science curriculum of Universal Basic Education (UBE) in Port Harcourt?

Table 5: Table of Mean scores of extent to which school environment affects teaching and implementation of basic science curriculum of Universal Basic Education (UBE) in Port Harcourt.

| S/N | Items | Principals (N = 35) | | | Teachers (N = 194) | | |
|-----|---|---------------------|-----------------|-------------|--------------------|-----------------|-------------|
| | | \bar{X}_P | SD _P | Remarks | \bar{X}_T | SD _T | Remarks |
| 41. | Serenity of an environment influences learning and implementation of Basic science. | 2.71 | 0.89 | High Extent | 2.57 | 0.97 | High Extent |
| 42. | Climate of an environment affects learning of Basic science. | 3.55 | 0.71 | High Extent | 2.86 | 1.22 | High Extent |
| 43. | Basic science can be taught and implemented in any environment. | 3.55 | 0.71 | High Extent | 3.23 | 1.56 | High Extent |
| 44. | Teaching and learning Basic science needs a special environment. | 2.54 | 0.90 | High Extent | 2.71 | 0.89 | High Extent |
| 45. | Attitude of parents to education in the environment affects the learning of Basic science. | 2.54 | 0.90 | High Extent | 3.55 | 0.71 | High Extent |
| 46. | The lighting system of the school enhances the learning and teaching of Basic Science. | 2.86 | 1.22 | High Extent | 2.57 | 0.97 | High Extent |
| 47. | The location and site of school, affects the teaching and learning of Basic Science. | 2.96 | 1.43 | High Extent | 2.86 | 1.22 | High Extent |
| 48. | Healthy snacks and well-rounded meal, support Basic Science learning in schools. | 3.74 | 1.04 | High Extent | 3.23 | 1.56 | High Extent |
| 49. | The psychological classroom environment is just as important as the physical one to enhance the teaching and learning of Basic Science. | 2.54 | 0.90 | High Extent | 2.71 | 0.89 | High Extent |
| 50. | Crowded classroom and a high density of students, often affect the teaching and | 2.54 | 0.90 | High Extent | 3.55 | 0.71 | High Extent |

| | | | | | | |
|--|----------------------------|------|------|--|------|------------------|
| | learning of Basic Science. | | | | | |
| | Grand Mean & SD | 2.95 | 0.96 | | 2.98 | 1.07 High Extent |

Source: Field Survey (2021)

Table 5: shows the extent to which school environment affect Steaching and implementation of the Basic Science curriculum of the Universal Basic Education (UBE) in Port Harcourt. Items 41, 42, 43, 44, 45, 46, 47, 48, 49 and 50 with mean values of 2.71, 3.55, 3.55, 2.54, 2.54, 2.86, 2.96, 3.74, 2.54, 2.54 with standard deviation values of 0.89, 0.71, 0.71, 0.9, 0.9, 1.22, 1.43, 1.04, 0.9, 0.9 for principals; and mean values of 2.57, 2.86, 3.23, 2.71, 3.55, 2.57, 2.86, 3.23, 2.71, 3.55 with standard deviation values of 0.97, 1.22, 1.56, 0.89, 0.71, 0.97, 1.22, 1.56, 0.89, 0.71 for teachers respectively, fell within the range of high extent. Therefore, with a grand means of 2.95 for principals and 2.98 for teachers, it was evident that principals and teachers agreed to a high extent that School environment affects curriculum implementation and learning of Basic Science.

Summary of Major Findings

The following were the major findings of the study

1. Principals and teachers agreed to a high extent that Course materials were not made available for the implementation of Basic Science curriculum of Universal Basic Education (UBE) in Port Harcourt.
2. Principals and teachers agreed to a high extent that There were no available Basic science curriculum guide of Universal Basic Education(UBE) teachers in Port Harcourt to make use of when preparation their lesson.
3. Principals and teachers agreed to a high extent that there were no Functional laboratory facilities provided for the implementation of Basic science curriculum for Universal Basic Education (UBE) in Port Harcourt.
4. Principals and teachers agreed to a high extent that there were no adequate funds for the implementation of Basic science curriculum of Universal Basic Education (UBE) in Port Harcourt.
5. Principals and teachers agreed to a high extent that School environment affects curriculum implementation and learning of Basic science.

Discussion of Findings.

On the extentto which course materials are made available for the implementation of Basic science curriculum for UBE in Port Harcourt, the findings of this study revealed that there were no text books provided for teaching and learning of Basic science. Materials provided by the schools for teaching and learning of Basic science, were not in conformity with national curriculum content. All the text books provided for the teaching and learning of Basic science were not current, and Materials available were not enough to improve instructional delivery and performance of students in teaching and understanding Basic science. This findings are in line with Dike’s (2000) ^[5] assertion that if we want learners to develop skills for lifelong learning, we must give them opportunities to enquire, to search, to explore, to practice, to solve problems such as are found in libraries and if we want to introduce them to the world of knowledge and teach them to handle information in many forms, we need the resources of a well-equipped library.

On the extentto which Universal Basic Education (UBE) teachers in Port Harcourt do make use of Basic science

curriculum guide in their lesson preparation, the findings of the study revealed that Basic science teachers don’t use text book when teaching. Most Basic science teacher, often teach off hand without lesson note book nor text book, they only teach basic science in class but no practical for students to better understand what they have learned. Study guide provided by the school for teaching and learning of Basic science, was not in conformity with national curriculum content. In corroboration with these findings, the Federal Republic of Nigeria (2013) stated that Nigeria cannot afford to ignore the role which curriculum guide plays in achieving the national goals of technological development considering the fact that educational system around the world face formidable challenges. Fresh approaches are needed to address persistent problems of the past and provide students with an education that is relevant to the needs of the modern information based global economy.

On the extent to which laboratory facilities are made available for the implementation of Basic science curriculum of the UBE in Port Harcourt, the findings of this study revealed that Basic science laboratory provided in the school to aid students’ learning, is not equipped. There are enough apparatus in the laboratory for the teaching and learning of Basic science and Laboratories meant for Basic science practical in the schools, are dilapidated. In corroboration with these findings, Ehiamentalor (2001) assertion that facilities are factors which enable production workers to achieve the goals of an organization. In support of this, Olorok (2006) posited that the use of laboratory facilities enhance learning experiences and lead to interaction within the learning environment.

On the extentto which Adequate Funds are provided to implement Basic science curriculum of UBE in Port Harcourt, the findings of the study revealed that There were no sufficient funds provided for the procurement of facilities to enable students to learn better and acquire relevant skills. There were no funds provided for teachers’ seminars and workshops to improve the teaching and learning of Basic science. There were no fund allocated for students’ field work to enable them interact and achieve quality learning. No Funds set aside to fuel standby generators to provide adequate lighting that ensures the comfort and better achievement of students in the school and no funds allocated for students’ field work to enable the students to interact and achieve quality learning. Supporting the above findings, Onyeachu (2006) noted that funding is another issue that affects implementation of secondary school curriculum. Every project requires money for its effective implementation. A situation where there is no money for purchase of equipment, books, furniture and other facilities, teachers cannot perform effectively. On the extentto which school environment affects teaching and implementation of Basic science curriculum of the UBE in Port Harcourt, the findings of the study revealed that Serenity of an environment influences learning and implementation of basic science. Climate of an environment affects learning of Basic science andthe Attitude of parents to education in the environment, affects the learning of Basic science. Supporting the above findings, Nwachuku (2005) ^[14] further

complains with dismay that most schools are caricatures of what schools should be in a modern state – collapsing buildings, leaking roofs, unkempt surroundings, houses with few or no public toilets, a disdain for aesthetics, schools that are designed and run merely to maintain the *status quo*, that is poor quality services for majority of the populace. This issue needs to be re-addressed because of its negative effects.

Conclusion.

Based on the findings of this study, it is concluded that adequate laboratory facilities enhance the productivity of students in class, the provision of textbooks for Basic science increase the learning ability of students in school, and sufficient funds provide for the procurement of facilities for the implementation of Basic Science teaching and learning, to enable students to learn better and acquire relevant skills in Universal Basic Education in Port Harcourt urban.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Government should support the implementation of Basic Science Teaching and learning by providing modern, relevant and adequate facilities for the enhancement of the acquisition of requisition skills in secondary schools.
2. Government should provide adequate funding to enhance the smooth and effective teaching and learning of basic science in secondary schools.
3. School administrators should ensure that relevant Basic science textbooks and others materials are recommended and made available to Basic science students for the enhancement of requisite knowledge.

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