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PROBLEMS FACING SCIENCE TEACHERS IN PUBLIC SECONDARY SCHOOLS IN NIGERIA AND WAY FORWARD

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Abstract

The teaching of sciences programmes in the public secondary schools in Nigeria is a collective responsibility of all stakeholders involved, be it teachers, school authorities, parents, and the government. The various government at both the federal and state, employ science teachers to teach subjects like chemistry, physics, Biology, Mathematics, and environmental education, etc. The implementation of these programmes are hinged on the science teachers who are expected to ensure that the students acquire the necessary knowledge and scientific skills. It is unfortunate that these science teachers are facing many problems and these problems affects their productivity. This paper is aimed to discuss the problems faced by science teachers in public secondary schools in the post covid-19 era. This paper collate both the secondary data and primary data. The secondary data were used to provide empirical support for the salient points raised in the paper presentation. The secondary data were sourced from internet and print materials via Google search engines. The paper concluded that inadequate funding, teaching of large classes, poor training and retraining programme, inadequate laboratories, shortage of instructional materials, poor motivation, unconducive working environment and inadequate infrastructural facilities, ineffective supervision ,poor curriculum development, lack of Candidates' interest and insecurity problems are the problems currently faced by science teachers in Nigerian public secondary schools. To solve the problems facing sciences teachers in public secondary schools in Nigeria, this paper recommended among others, that government should increase the annual budget allocated for science programmes, and employ more professional science teachers to the public secondary schools so as to reduce the high teacher-students ratio in science classes.

Keyword: Science teachers, public secondary schools, problems and curriculum

1.0 Introduction

Public Secondary schools are educational institutions established by law to provide public services such as post-basic education for the general public. These schools are educational institutions owned by the government and established with the purpose of providing education after basic schools for the public. Public secondary schools in Nigeria offered varieties of programme to realize the general objective of education in the country. The New secondary schools curriculum according to Legit (2018) includes English studies (compulsory subject); Mathematics (compulsory subject); Civic Education (compulsory

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subject); Trade/Entrepreneurship Studies (compulsory subject, the student can choose one of 34 subjects); Humanities (Every student can choose 2, 3, 4 or 5 subjects depending on his or her potential); Science & Mathematics (Every student can choose 2, 3, 4 or 5 subjects); Technology (Every student can choose 2, 3, 4 or 5 subjects); Business Studies (Senior) (Every student can choose 2, 3, 4 or 5 subjects). The main idea of a new curriculum is to provide more practical experience for students.

Science programme in the New Curriculum include Mathematics, Physics, Chemistry, Biology, Further Mathematics, Technology, Technical Drawing etc. Science programs in Nigerian schools are given maximum attention due to their significant contribution to the technological development of the country. Ogunode & Jegede (2019) cited Adolphus, (2019) who opined that in Nigeria, science is taught and learnt as Basic Science and Technology from primary to junior secondary levels, and as biology, chemistry and physics for three years in the senior secondary (SS) classes (SS1-3).

Ajaja (2007) identified the objectives of teaching science to include:- Knowledge of science academic discipline; to acquire the skills of scientific method; having clear explanations for societal issues through increasing interest science literacy and societal goals; for personal needs and for career awareness. The realization of the objective of science programme in the secondary schools depends on the quality and quantities of professional teachers available and engaged to teach the various programmes at the secondary schools levels.

Ezechi & Ogbu (2017), states that the success of science programmes depends largely on the classroom teachers. They constitute the most important agent in the on going exercise to revolutionize the teaching and leaning of science. Science teachers are key to succesfull implementation of science programme. Ezechi, & Ogbu, (2017) observed that teachers are the pivot on which educational process hang. They can influence the teaching/learning outcomes either positively or negatively because they determine the quality of instructional delivery and also influence the quality of Education when it comes to implementation of the curriculum and educational policies. Teachers are to be considered when addressing issues such as quality assurance, qualitative delivery (teaching), quality context and quality learning outcomes (Ezechi, & Ogbu, 2017, Onucha, 2002). In realization of the important roles of science teachers in science programme implementation, the federal and states government through their various ministries, commissions and agencies employed science teachers and posted them to public secondary schools across the federation to implement the science programme and to ensure quality of teaching are deliver. These sciences teachers because of their unique functions in educational institutions especially in the public secondary schools are facing a lot of problems hindering effective delivery of their functions. This paper examines the problems faced by science teachers in Nigerian public secondary schools.

2.0 Concept of Science Teachers

Secondary school education is an organized education system meant to prepare the people for higher education and career life (Aiyedun, 2020). National policy on education (NPE, 2004) defined Secondary Education as the post primary education, in other words, it is the education receive after primary education and before the tertiary education. Based on the 6-3-3-4 system of education, which has been changed to the 9-3-4 system based on the NPE (2013), secondary education comprised of six years duration, but given in two stages: a junior secondary school stage and a senior secondary school stage, each to run for three years duration.
The broad goals of Secondary Education according to the National Policy on Education (2004) include the preparation of individual for:

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i. Useful living within the society, and
ii. Higher education. In specific terms, the objectives are to:
i. provide all primary school leavers with the opportunity for education of a higher level, irrespective of sex, social status, religion or ethnic background;
ii. Offer diversified curriculum to cater for the differences in talents, opportunities and future roles;
iii. Provide trained manpower in the applied science, technology and commerce at sub-professional grades;
iv. Develop and promote Nigerian languages, art and culture in the context of world cultural heritage;
v. Inspire its students with a desire for self-improvement and achievement of excellence; and
vi. Foster national unity with an emphasis on the common ties that unite us in our diversity.

Science teachers are trained teachers that are saddled with responsibilities of providing science instruction to students. Science teachers instructs students in subject-specific classrooms. Science teachers create lesson plans; evaluate student performances; and teach using lectures, technology and hands-on learning experiences. They also model expected behavior to establish and maintain an orderly, disciplined classroom. Alaebo (2019) Science teachers are key factor to be considered when talking about the development of science education in any nation. Science teachers should use different strategies as there is no single universal approach for specific class. Many science teachers still hold to chalk and talk method which is not appropriate for science teaching in this age (Aina, 2011). Study by Olatunde-Aiyedun (2021a) that science **teachers** have the greatest part to play in society**.** Science teachers are the mirrors of society and a society which does no respect its teachers is bound to go in failure. The social and psychological conditions under which we all live today have minimized. The role of a science teacher as national builder, it is of basic importance that science teacher should be good specimen of our culture they should be divide to the ideas that characterized the purpose at their best The roles of science teachers to the social, economic and technological advancement cannot be underestimates as science teachers contributes to the development of a nation. Their roles are felt in the environment, health, nutrition, agriculture, transportation, material and energy production, and industrial development. Ekanem and Obodom, (2014), and Olatunde-Aiyedun and Ogunode (2021a) observed that the quality of education in any nation depends largely on the quality of her teachers and the status of any people depends on the quality of their education. Olatunde-Aiyedun and Ogunode (2021b) noted that education begins with the teacher not because he is the most important person but because he is able to control his own behaviour and the teaching environment.

3.0 Problems Facing Science Teachers in Public Secondary Schools in Nigeria

Inadequate funding, teaching of Large Classes, poor training and retraining programme, inadequate laboratories, shortage of instructional materials, poor motivation, unconducive working environment and inadequate infrastructural facilities, ineffective supervision, poor curriculum development, lack of Candidates' interest, and insecurity in Nigeria.

3.1 Inadequate funding

Inadequate funding is a very big problem facing the administration of science programme in Nigerian educational institutions. Funds released for the implementation of science programme in public secondary schools are not adequate to implement the programme. Many head of department of sciences programme cannot access funds from the school administrators to execute their programme. Ahmed, Emeka & Ogunode (2021) submitted that inadequate funding is a major problem responsible for poor development of science education. Science education is very expensive and cost effective. The annual budgetary allocation for the primary school education is inadequate. Ezechi & Ogbu (2017), submitted

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that funding science programmes and science related research has been a major problem facing technological growth and self-reliance in Nigeria. Government do not adequately fund science and science related programme and research. In addition to this, the little fund provided relapse and are embezzled by top officials in charge of its implementation. Reasons for shortage of funds in the implementation of science programme include, corruption, poor financial planning, increased in population and lack of political will to increase education funding. Ogunoode (2020); Ogunode & Jegede (2019) agrees that shortage of funds is a major problem affecting the implementation and development of science education in Nigeria.

3.2 Teaching of Large Classes

Science teachers in Nigerian public secondary schools are teaching large classes which is more than the normal class size. The National policy on education stipulates 1:35 teacher-students ratio for secondary schools in Nigeria (NPE, 2013). The teaching of large classes is affecting their productivity and affecting the quality of education. This submission agrees with the view of Osuolale, (2014) who observed that one of the press challenges in sciences is the teaching of large class size in science subjects teaching and lack of incentives for teachers. One teacher to 35 students are the recommended still remains a dream in schools classes are over populated to the tune of 50 and above. Ekanem, & Obodom, (2014) observed that most of our secondary school today especially in rural area do not have enough science teachers to handle the science subjects properly. The ratio is always 1:150. This unavailable makes practicals very or impossible to conduct. In a particular school of two hundred science students one may realize that science teachers are not up to three because most of the teachers lobbying for urban schools hence science education cannot achieve its goals. There are many factors responsible for teaching of large classes by science teachers in Nigerian public secondary schools. Some of the factors include, inadequate professional science teachers. Agun & Imogie (1988) prompted out the shortage of qualified teachers in many of our secondary schools particularly in the rural community. This will invariably affect the use of instructional materials in the teaching – learning activities because (a) The students' population may be much (b) The incompetent teacher who lacks the pedagogical skills may not be able to utilize the materials effectively even when they are available. Adeniyi (2016) submits that majorities of secondary schools in Nigeria are having the problem of shortage of professional science teachers. Ogunode & Jegede (2020) concluded that majorities of the sampled respondents agreed that inadequate science teachers, inadequate funding, inadequate infrastructural facilities, inadequate instructional materials, poor planning and ineffective supervision are the challenges to the implementation of science program in FCT Secondary schools, Abuja. Also, Ezechi, & Ogbu, (2017) noted that there is inadequate teacher compensation and professional development to attract, prepare and retain high quality and qualified teachers. Insufficient number of science and technology teachers taking active role in the preparation of the programmes. Another factor is inadequate classrooms or laboratories. Omorogbe, & Ewansiha, (2013) opines that the situation in many science classrooms in Nigeria is nothing to write home about. In many schools there are no laboratories. Some schools merely have empty rooms labeled laboratories. Students rarely have hands-on, minds-on experiences. Few days to science practical examinations, most schools acquire science equipments for teacher demonstration to students. This cannot make for effective learning and eventually results in poor achievement (Omoifo, 2012). To worsen the problem of lack of or inadequate resources, the few available ones are not properly maintained, protected and cared for.

3.3 Poor Training and Retraining Programme

Poor training and retraining programme is another major problems facing science teachers working in public secondary schools across the country. Many science teachers are still teaching with the knowledge and skills acquired during their higher education. Teachers needs constant training and retraining programme to upgrade their knowledge and skills. Ezechi, & Ogbu, (2017) observed that

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insufficient in-service training of the science teachers in the transition state of a new programme is a major constraint to the development of science programme while Omorogbe & Ewansiha's (2013) concluded that the teaching and learning of science in Nigerian schools cannot be said to be effective because of the poor performance of students resulting from inadequate teacher training and lack of in-service training and refresher courses, inappropriate teaching methodologies, lack of adequate knowledge of the subject matter, competencies, skills and lack of basic teaching-learning resources. Nwachukwu, (2012) opines that the problem is that classroom teachers do not even think about the goals, and may even not know what the policy demands from their work. It is important that science teachers be trained and retrained on the goals of teaching science, since teaching without aims is like traveling without knowing the destination. Teachers should always be trained on new curriculum. Omorogbe & Ewansiha's (2013) paper attempts to highlight the performance of students in science in Nigeria and some of the factors that affect performance in science and these factors are lack of effective In-service refresher courses and training programme, quality science teaching and teacher quality.

3.4 Inadequate Laboratories

Inadequate laboratories is another big problem facing science teachers teaching in public secondary schools in Nigeria. The laboratory is where science students engaged in hands-on-activities (Ekanem, & Obodom, 2014). Such as observations and experiment. Renner (2003) asserted that practical work in science assumes an important role in the development of the psychomotor domain of the taxonomy of educational objectives. The availability of science laboratory makes science lessons concrete and stimulating which helps to enhance the achievement of students in secondary schools (Ekanem & Obodom, 2014, Farrant, 2002). Many public secondary school not have adequate and well-furnished laboratories for teachers and students to carry out practical. Ezechi & Ogbu, (2017) submitted that majority of Nigerian schools lack laboratory spaces, those who have spaces lack equipment and necessary infrastructure for proper teaching and learning of science. Science therefore is not miracle where something happen out of nothing. Also, Osuolale (2014) acknowledged that most laboratories are not well equipped, schools rely more on imported laboratory apparatus and equipment and grants are never enough. Although government took a giant step by establishing science laboratory manufacturing industries like 'PRODA' Enugu, such industries have been long neglected by the same government that established them. Akpan (2002) observed that Nigeria problems have been that of implementation. He said that a visit to primary and secondary school science classrooms by a well informed and concerned science teacher will show that the nursed hope in curriculum reform are expensive venture in the past decade. So therefore, turning out, in the nearest future, qualified and dedicated scientist, engineers, medical doctors etc. from these schools are in serious danger. If any science is to be taught well, it should be taught practically, hence the need for sufficient materials for effective teaching of science within and outside the laboratory. Ogunmade, (2006) opines that due to the fact that the majority of schools lack the essential resources for imparting the knowledge of science concepts to students, many students learn little science, learning tends to be by rote and many students find science not interesting and boring. There are mostly less laboratory equipment used to teach students. Many labs cannot be completed in less than 50 minutes. Therefore, science teachers are often faced with the challenge of dividing labs up over the course of a couple of days.

3.5 Shortage of Instructional Materials

Shortage of instructional materials is a major problem facing science teachers in Nigerian public secondary schools. Many science teachers do not have adequate instructional materials to deploy for teaching and this is affecting the learning processes of the students. Students learn fast when instructional aid are applied in the implementation of the teaching. Omorogbe and Ewansiha, (2013) observed that lack of ideal resources for science teaching and learning in Nigerian schools has been a major issue of concern. It is a well known fact that the quality of education a student receives largely

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depends on the quality of teaching/learning resources provided. Teaching learning resources are all the things used by the teacher during teaching to aid understanding and make teaching successful and effective. They include, modern textbooks, equipment, consumables like chemicals and reagents, models, charts etc. and the physical learning environments which include the science classrooms and laboratories (Olatunde-Aiyedun, 2021b). One of the major objective of science education is to teach students the scientific process (Orji, Ogar & Aiyedun, 2018). Students need some investigative skills such as observing, measuring, classifying recording experimenting, analyzing inferring, etc. Ogunmade (2006) stated that "Majority of students do not have textbooks and most of the schools do not have libraries and where they have one, the textbooks in the libraries are outdated. Opara & David (2014) investigated the factors that affect teaching and learning of Basic Science and Technology in primary schools. The study revealed that most of the instructional materials were not available for teaching basic science in primary schools. The non-available of material implies their non-utilization. Also, Ayodele (1999) noted the problems as inadequacy of textbooks, lack of learner's interest, unqualified science and psychological fears of science subjects as factors responsible for poor performance in science subjects while Osuolale, (2014) observed that textbooks are not adequately available. The ones that are available are written by foreigners with their language and cultural background, making it difficult for indigenous teachers try to complement by writing textbooks, most of their work lack in standard, probably because they are horridly written just to bridge gabs, without adequate research. Studies of **Ojelade, Aregbesola, Ekele and Aiyedun (2020)** showed that course materials in schools were not enough and it was difficult to get those materials. Ogunode, Okwelogu and Olatunde-Aiyedun (2021) acknowledge that Nigerian schools at all levels are lacking the essential materials for learning, especially for science practical classes. This, no doubt, affects the learning process. Most secondary schools lack science materials, and those that claim to have are managing the old ones. Hence, the students only cram theoretical steps rather than carrying out the practical. Also, many schools and colleges have building that they call library, but most of these so called libraries are not equipped with needed books, journals and magazines. Reasons for shortage of instructional materials including inadequate funding, poor planning, corruption, poor maintenance culture and poor school security.

3.6 Poor Motivation

Another problem facing science teachers in Nigerian public secondary schools is poor motivation. Generally, teachers' teaching in Nigerian educational institutions are poorly motivated. This submission is confirmed by study carried out by Ezechi (2016) as cited in Ezechi and Ogbu, (2017) showed that science teachers in Nigeria are not motivated. Science teachers are faced with poor condition of service, their salaries are not paid regularly, and teachers are not given opportunities for developmental programmes and were not granted funds for creativity. All these have affected teachers' performance in contributing towards learning (Olatunde-Aiyedun, Ogunode & Eyiolorunse-Aiyedun, 2021). Ekpo and Aiyedun (2018) observed that funding science programmes and science related research has been a major problem facing technological growth and self reliance in Nigeria. Government do not adequately fund science and science related programmes and research. In addition to this, the little fund provided relapse and are embezzled by top official in-charge of its implementation. Omorogbe, & Ewansiha, (2013) submitted that teacher salary is very important as a predictor of students achievement because it has a capacity to uplift the other aspects of teacher quality. If a teacher gets a suitable salary that covers the basic living costs, he may be able to live comfortably and thus be more effective as he is motivated to use his abilities, competencies and skills. Poor remuneration affects the morale of teachers, distracts and hinders their commitment and effectiveness.

3.7 Inadequate Infrastructural Facilities

Ogunode and Agwor (2021) viewed school infrastructural facilities as social capital within the school environment. They include school buildings/complexes such as classrooms, tables, exam hall, chairs,

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auditoria, desks, staff offices, seminar/conference/board rooms, laboratories, workshops, studios, farms, gymnasia, central libraries, specialized/professional libraries, faculty libraries, departmental libraries, etc., Institute/centers' specialized facilities e.g. ICT infrastructure, special laboratories, conference facilities, etc., and Boards e.g. interactive, magnetic, screen and chalk, etc., ICT that is computer laboratories and services, network connectivity, multi-media system, public address system, slide, and video projectors, and Ergonomics furnishing in laboratories, libraries, and lecture rooms/ theaters, moot courts, and studios, etc. Students' hotels or accommodation include Boys and Girls hostels; municipal/physical infrastructure i.e. power supply, water supply, good road networks, sports, health and sanitation, staff schools, security facilities, etc. As important as the infrastructural facilities to the realization of science education objectives in secondary schools, it is unfortunate that many public secondary schools do not have adequate offices for teachers and classrooms for students. Ogunode, Eyiolorunse-Aiyedun and Olatunde-Aiyedun (2021) observed that classes are always crowded with up to ninety students in class designed for about thirty students in most cases, especially in public secondary schools, chairs are not enough. Students will be sharing seats and some would start to receive lectures. And where by students are learning science subjects, they will lack concentration as they would be easily distracted. Omorogbe, & Ewansiha, (2013) observed that due to the fact that majority of schools lack the essential resources for imparting the knowledge of science concepts to students, many students learn little science, learning tends to be by rote and many students find science not interesting and boring (Ogunmade, 2006). Audu and Oghogho, (2006) submitted that the teacher student interactions in many science classrooms are not healthy because of lack of adequate resources. In most of our schools, there are no facilities for the teachers to demonstrate phenomena, let alone allow the students to have opportunities for finding out things for themselves. Reasons responsible for inadequate infrastructural facilities according to Ogunode & Agwor (2021) are inadequate funding of secondary schools, poor infrastructural facilities planning, poor qualities of infrastructural facilities, institutional corruption, ineffective monitoring and evaluation of infrastructural facilities, increased in student population, damages of facilities by students of secondary school**.**

3.8 Ineffective Supervision

Ineffective supervision of science teachers is another big problem facing the science teachers teaching in public secondary schools. Supervisors are professionals employed to help the teachers to grow professionally. Ogunode, Olatunde-Aiyedun and Akin-Ibidiran (2021) observed that the basic function of the inspectorate is to maintain effective instruction in schools. But due to the acute shortage of properly trained personnel in this field, effective supervision has been unavailable, thereby promoting nonchalance attitude among science teachers.

3.9 Poor Curriculum Development

Science teachers faces many challenges in implementing science programme due to poor planning and development. Sciences teachers are not fully been involved in the science curriculum planning and development. Adikwu (2008) stated that the problem with science education is a lack of good curriculum, that curriculum must be developed, and that there should be a readily-available inquiry-based curriculum. He went further to observed that one reason to develop new curriculum is to introduce modern scientific techniques derived from current laboratory experiments. He also advised that teachers should always be trained on any new curriculum while Adeyegbe (2004) noted that some of the contents of science curriculum are of little relevance to the general education of the intended level and cannot even be covered within the time limit. Other researchers also held the same view based on investigations. They therefore concluded that if the objectives of science education are to be achieved for sustainable development, that curriculum planners should review and update the curriculum.

3.10 Lack of Candidates' Interest

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Many students offering sciences and science related subjects do not have the capacity and some are forced to offer the programme. Due to these reasons, most students in science classes seldom show positive interest in the studying of science programme. All these problems is affecting science teachers because students' interest is crucial is understanding the programme. Ekanem, & Obodom, (2014) observes that most of the students in secondary schools do not show enough interest in secondary school especially when asked to choose the subjects in SSS class 2, they often do not choose the pure sciences because science is abstract and students prefer art and social science subjects. By so doing they show lack of serious interest for science subjects.

3.11 Insecurity in Public Schools

Insurgency has subjected the Nigerian schools in particular, and the entire country to severe environmental and humanitarian crises which range from fear of the unknown to displace of people, and discouragement of the girl-child to go to school. The major insurgency experienced in Nigeria is the Boko Haram terrorism who's mandate is that Education should not be allowed as if is a sin to their mythical believe/religion. These has discouraged students, teachers and parents from benefiting in education which is a fundamental human right (Ekpo & Aiyedun, 2019).

Way Forward

To solve the problems facing sciences teachers in public secondary schools in Nigeria, this paper recommended the following:

i. The government should increase the annual budget allocated to education, especially the public secondary schools in Nigeria and ensure more funds are utilized for science programme across the country.

ii. The government should employ more professional science teachers and deploy them to the public secondary schools. This will help to reduce the high teacher-students ratio in science classes.

iii. The government should ensure that science teachers are constantly trained and retrained. This will help to improve the quality of science education in public secondary schools. Bajah (1982) recommended that teachers of science need good training to enable them meet a better requirement and enough academic information in a variety of the basic science subject while Omorogbe, & Ewansiha, (2013) and Dahar, Dahar, Dahar and Faize, (2011) are of the opinions that training and retraining of science teachers should be given greater emphasis and implementation. Such training should take cognizance of effective teaching strategies, acquisition of adequate concept of the nature of science and adequate knowledge base/ content for effective science teaching. However if teachers are properly trained, it is expected that they will be effective. Therefore it is strongly recommended to improve the existing science teachers training programme with respect to admission criteria, curriculum, teaching practice and measurement and evaluation process. Proper training of teacher may strengthen the causal relationship between the various qualities of teachers and academic achievement..

iv. The government should provide adequate laboratories in all public secondary schools. This will help to improve the quality of teaching and learning of science education. Schools need to employ qualified science teachers that have a lot to offer in terms of practical and theoretical aspect of teaching and not half baked teachers. Omorogbe, & Ewansiha, (2013) recommended that since effective teaching and learning of science requires adequate resources such as classrooms, laboratories, textbooks, charts, models and consumables like chemicals and reagents for the teachers to engage students in practical and activity work, the stakeholders in science

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education should provide enough funds to build more classrooms, laboratories and provide the equipments and resources for the teaching and learning of science. Libraries should be provided with modern quality science textbooks for teachers and students.

v. More instructional materials should be provided for science teachers teaching in public secondary schools in Nigeria. Ezechi, & Ogbu, (2017) submitted since the state of national economy has made it almost impossible for the provision of the real science equipment and other structural facilities necessary for effective science teaching, massive improvisation of science equipment should be embarked upon making use of local and cheaper materials. This should involve the science teachers and their students as well as the government. In this way, many of the basic and necessary science equipment that will make science teaching lively, interesting and meaningful can be improvised. Examples of such items are: imported reagent bottles could be substituted with clear or non coloured bottles like those of soft drinks with names of the reagents written and labeled on such bottles, the usual gas fittings and supply could be replaced with ordinary kerosene stove, retort stands could be made from pieces of iron and rods locally, the expensive glass funnels can be replaced with locally made plastic funnels etc.

vi. Science Teachers should be motivated by increasing their salaries, allowances and provision of adequate working environment.

vii. More infrastructural facilities should be provided to all public secondary schools especially science facilities. Ezechi, & Ogbu, (2017) observed that effective teaching and learning of science requires adequate resources such as classrooms, laboratories, textbooks, charts models and consumables like chemicals and reagents for the teachers to engage students in practical and activity work, the stakeholders in Science Education should provide enough fund to build more classrooms, laboratories and provide equipments and resources for the teaching and learning of science. Libraries should be provided with modern quality science textbooks for teachers and students. Subjects like biology, chemistry, physics needs adequate lab equipment to enable science teachers' perform their professional duties in the classroom.

viii. Government should employ more science supervisors to improve the supervision of science programme in public secondary schools.

ix. Science curriculum for every programme should be resigned and sciences teachers should be involved when planning and developing sciences curriculum. This will help full implementation of the curriculum

x. Government should provide adequate security in all public secondary schools. More security personnel should be deployed to schools and offices to provide security to teachers and students.

xi. Students should be motivated to offer science programme by granting scholarship in sciences

Conclusion

In conclusion, the place of science teachers in the implementation of sciences programme in the educational institutions cannot be underestimated. Science teachers are crucial to the realization of science education objective. It is very important to ensure that conducive working environment are provided for the sciences teachers. In this paper, problems facing science teachers in Nigerian public secondary schools were discussed and measures to address the various problems identified were suggested.

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