



Wastages in the Utilization of Facilities in Public Secondary Schools in Ikom Education Zone of Cross River State, Nigeria

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Received May., 2018, Accepted and published June, 2018

Abstract

Wastage in education has constituted a major obstacle to educational development and economic growth in the developing countries including Nigeria. This study examined wastage in the utilization of public secondary schools facilities in Ikom Education Zone, of Cross River State, Nigeria. The study was a survey involving 1,800 teachers, comprising 120 principals and 1,680 teachers in public secondary schools in Ikom Education zone. The accidental sampling technique was adopted to select a sample size of 360 respondents representing 20% of the entire target population. A questionnaire titled: School Facilities Utilization Schedule Questionnaire (SFUSQ) was used to collect data and analysis was done using percentages. The result revealed that, there was wastage of school facilities such as laboratories and libraries in the public secondary schools in Ikom Education Zone, as it was evidence in different rates. It was therefore recommended that, the government and education stakeholders in the state, through the school administrators should ensure adequate utilization of resources for academic activities such as, laboratory, library, technical workshops and computer studies.

Keywords: Utilization and wastage, school facilities, laboratory and library.

Introduction

In Nigeria, the society depends on educational institutions for production of individuals who can fit properly and contribute meaningfully to the development of the environment; hence, the National Policy on Education (FRN, 2004) affirms that, education is the instrument per excellence for national development. For the achievement of the national educational goals, facilities are allocated annually to primary, secondary and tertiary institutions. These facilities cannot yield result expected if not being used appropriately and productively. The action or process of losing or destroying educational facilities by using it carelessly or extravagantly is seen as wastage.

Educational wastage can be referred to as losses resulting from breakage, decay, leakage or shrinkage of goods or materials meant for the running of the educational system. Okunamiri (2009) opined that the concept of wastage is inseparable from the concept of inefficiency but educational wastage implies inefficient use of educational resources. Wastage in education can be caused by nature, inability and incapability of students, the nature of the educational system, the human

resources (teachers) available to education, the socio-physical environment and the labour market (Nwacke, (2006).

Annually, public, secondary schools are allocated various financial and non-financial resources to carry out their primary functions of teaching and learning. As viewed by Babalola (2001), Nigeria is among the countries where opportunities for human development have been missed, and reasons for this defects have been ascribed to political instability, economic mismanagement, widespread recession, rising interest rates and level of indebtedness. The argument against public subsidy in higher education was very strong; hence the primary, secondary and higher education should receive the highest investment priority respectively which must not be eroded by high wastage rate.

Oyetakim (2011) asserts that educational wastage is an unprofitable and uneconomical utilization of time and resources. This means that, wastage is also the input, time, effort expended in doing things but with no positive outcomes or outputs. This can threaten the internal efficiency of the education system. Gupta (2001) noted that the question of internal efficiency is ultimately linked to misuse of resource allocation and utilization. Educational resources like school building, equipments, laboratory apparatus like test tubes, chemical, beaker, etc, textbooks, instructional materials, school furniture, etc It is a stumbling block to the realization of the nation's aims and objectives of secondary education.

Educational Facilities in Public Secondary Schools

The educational objectives of the secondary school are to prepare students to make positive contribution to the development of the society, and to acquire attitudes of national patriotism, self-respect, cooperation, adaptability and a sense of purpose and self-discipline (Sifuna, 2001; Olatoun, 2012). It is the gateway to tertiary education and essentially provides greater number of lower level manpower needed for proper economic growth and national development. Hence, Abraham (2001) and Zepatou, Loizidou, Chaloulakou and Spyrellis, (2016) both describes it as the level of education between primary and tertiary education. To facilitate teaching and learning at this level of education, very many factors contribute to the efficiency and effectiveness of learning, one of which are the facilities involved.

Secondary school facilities are the physical infrastructures and equipment used during the process of teaching and learning to achieve the goals of the educational system. Adebeyeje (2009) collaborated this through the author's definition of physical facilities as the essential materials that must be put in place and into consideration for the objectives of the school system to be accomplished. The author stressed further that the availability of these facilities determines the quality of instruction and performance of students in the school. Bal, Bryde, Fearon and Ochieng,

(2013) classified school facilities into site, buildings and equipment which includes permanent and semi-permanent structures such as machines, laboratory equipment, the chalkboard and office assistant's tools such as brooms and cleaning materials. Schools building is said to have positive impact on the comfort, safety and academic performances of students.

Nwosu, (2007) sees school facilities as those physical environments of the school that give reasonable level of comfort and help to concretize the instructional contents in order to make teaching and learning effective. According to the author, the problem of inadequacy of facilities in our school system demands that school heads become more resourceful and creative in the provision and maintenance of school facilities. In congruent with USAID/WHO, Peter (2000), in this study on measuring poverty in third world countries, the author stated that as a result of poverty in most of the developing countries in the world, the provision and maintenance of school building, other infrastructural facilities and equipment are little recognized problems which has a direct bearing on educational quality and standard. This also determines the various levels of wastages in their educational systems.

School Laboratories and Wastage

Science and technology are very fascinating subjects because they relate our experiences of the physical world around us with the theoretical and scientific knowledge. The outcomes of good scientific education have large content of practical skills including that which makes it possible for students not only to know science but also to do sciences.

In this vein, Wilbanks and Wilbanks, (2010) posited that laboratories are educational resources when they argued that "hands – on – activities include both laboratory work and other activities". These activities they projected as;

1. Provision of patterned components of the skills and congruities of learning objectives of science education.
2. Having essentially effective outcomes, for examples, it reduces the fear of technology and motivates students to pursue carriers in science and technology-based fields.
3. Hands – on – activities in science education involve the use of practical work scale experiment to explain scientific concepts. According to them, hand – on – science activities (teaching) in both primary and secondary schools are almost intuitively and strongly supported by majority of scarce educators, who agree that science instrument must include both content and processes in learning as well as effective perspective.

In agreement, the National Academics (2008) opined that science laboratories provide students opportunities to learn through direct observation, aimed at experimentation. They engage students

in experiencing not simply to confirm the right answers but to investigate the nature of things and to arrive at explanations that are scientifically correct and satisfying to young adolescents. A laboratory offers students opportunities to experiment productively, to ask questions and find their own answers as well as confidence in their ability to check and resolved problems.

The implication is that where a standard space for scientific enquiries is not provided alongside with proportional distribution of the equipment, personal and individual investigations, which build confidence in scientific prediction, cannot be built in the students. However, the disturbing aspect of science resources provision in secondary schools in Ikom education zone is that it is below standard. Where science laboratories are provided and equipped, the costly laboratory equipments are sometimes removed by the laboratory attendants because of students and unreliable science teachers. Similarly, some facilities are allowed to decay due to underutilization. This diminishes the limited resources on ground due to insincerity of interest to their security.

A laboratory is a type of classroom or an environment outside the classroom that provides practical work environment to give first hand experiences to the learners. To Baird, (2009), “the laboratory must be large enough to have a certain freedom of movement and rectangular shape of at least 7.3m x 12.2m that is, 24ft by 40ft to give a total floor area of about 960 square feet”. However, the laboratories cannot be functional on their own; there require skillful and general personal attention. The University science laboratory demands that the plasticity scientist or trance scientist should be able to work with or manipulate the relevant tools and materials practically in the field. Indeed, there is occasional need for more specialized equipment and the increasing need for it for those students who reach the higher stages of secondary education which must be mastered.

School Libraries and Wastage

A room or building containing books that can be looked at or borrowed is called a library. There is the public library and private library. Public libraries and National, State or Local Government owned libraries. Privately owned libraries are those established by private individuals, proprietors or companies, while public libraries are those owned by institutions, schools and professional organizations.. As viewed by Longman (2003), a library is a group of books, records etc collected by one person. Nwafor (2005) sees libraries as an educational resource; the researcher defined the library as the heartbeat of the school, containing several volumes of subjects’ areas. The understanding is that a library can be a public, college, departmental or a custodian volume of books on different subjects and research materials to researchers.

Establishment of functional libraries in the secondary schools has become imperative in order to inculcate the habit of independency at work, on the student. Olat (2004) noted that the spirit of

individual investigation is cultivated in students by the use of the library. It is understood that the main goal of education is to impact knowledge and develop the capacity to learn in the individuals. Libraries are especially important when emphases are placed on independent – life – learning, including the eradication of illiteracy. Without the cultivation of reading habits, which invariably go with the ability to use the libraries, a person cannot retain the capacity of an educated person. In schools where there are no functional libraries, students graduate without acquiring the basics very necessary skills and knowledge which could make them self reliant and employer of labour.

This is so because most secondary schools in Nigeria do not have functional libraries, and some students only buy their personal books for those who can for their studies, while others depend solely on the notes their teachers give them for their studies. Whereas, the duty of providing libraries in public secondary school should ordinarily be that of government and the school administrators and management, but this is hardly the case in most Nigerian public secondary schools.

To achieve the objectives of attending schools, library must be made accessible and should be stocked up with interesting and up to date books, and the books appropriately selected to enhance high achievements in the youths. Eliazer (2004) suggested that, one of the consistent mediators of higher achievement is the availability of textbooks and printed materials, supporting the same view, Elfors, (2006) contended that, the existing books lack examples; hence they make it more difficult for students to understand most of the ideas and principles discussed in them. This implies that, books in present day libraries should have their local background, well-articulated in order to reveal real life situation. Nwacke, (2006) observed that, the right choice of textbooks in school will facilitate the teachers work and help the students' understanding. Expressing the importance of libraries, Wong, Mui, and Hui, (2008) opined that, the school library should not only provide relevant information resources that shape and mould an individual for future leadership but also instill in him the cherished life-long learning capacity. Proper instructions at school prepares students for the use of larger libraries; public, university, special skills and guarantees for a life-long education in primary, secondary and tertiary institutions. Libraries are known to be indispensable part of the overall curriculum.

In his study, Oyetakin, (2011) found that despite the elaborate importance of the library in educational development, only a few secondary schools in urban areas of Ikom education zone have functional libraries. Most of the schools in the rural areas have either semi-functional libraries or non-functional libraries. A functional library is furnished with enough relevant books for students and there is/are library attendant(s) to help the students utilize the library effectively. In the case where you have a functional library and the capacity is too small, compare to the size of the school, it is a semi-functional library. The rooms provided are not properly furnished, there is no library

attendant and books provided are out dated or left in the cartons to become food for the rats, the educational needs of the students will not be met.

Olatoun, (2012) further posited that when there are no functional textbooks and other resources in the libraries, students are only forced to go to the libraries with their own notebooks or their personal textbooks, to read, these is also termed library wastage. Some secondary schools in the rural areas, even though some text books are provided by the government, there are no rooms for these books to be properly arrange for students usage. These books are allowed to waste in the cartons either in the stores or the principal's offices. Where rooms are provided, the seats are not there and the few provided are allowed to breakdown and the windows are not fixed properly, leaving these books at the mercy of thieves and vandal, in this case, wastage of the library will be possible.

Zepatou, et al., (2016) posited that the high level manpower produced at the tertiary level is prepared at the secondary level of education. Therefore, if this important level of education is left to decay or deteriorate due to inadequate management and execution of educational policies, it may hinder the actualization of secondary school goals.

Wilbanks and Wilbanks, (2010) observed that a recent development has shown that some students in public secondary schools do not focus on the reasons why they are in school. They rather move about during school hours and indulge in activities that will not help them educationally. This results to examination malpractices and failures. It becomes very necessary to carry out an investigation into the levels of wastages in the utilization of two major school facilities: laboratory and libraries in public secondary schools in Ikom Education zone of Cross River State, Nigeria.

The study was geared towards investigating wastages on the utilization of public secondary school facilities in Ikom Education Zone of Cross River State in Nigeria.

The study aimed at;

1. Examining the extent of wastage in the utilization of secondary school laboratories.
2. Assessing the extent wastage in the utilization of school libraries.

To guide this study, the following research questions are posed;

1. What is the extent of wastage in the utilization of laboratories in the public secondary schools in Ikom Education Zion in Cross River State?
2. What is the extent of wastage in the utilization of public secondary schools libraries in Ikom Education Zion in Cross River State? The findings of this study may be beneficial to the students, principals, parents, educationist, government, individuals and the society at large. The principals of public secondary schools and ministry of education may benefit by

becoming aware of the implications of wastage on the product of manpower needs of the country. This study may be an eye-opener to the students, parents and government on excess financial spending on the wasted facilities and make a re-adjustment. It may also add to the existing literature on wastage for the researchers.

Methodology

The study was a descriptive survey that adopted an ex-post-factor design. This design allowed collection of data systematically in rider to determine the extent of wastage in the utilization of laboratories and libraries in public secondary schools without manipulating the variables. The target population of the study was 1,800 teaching staffs comprising 120 principals and 1680 teachers in the public secondary schools in Ikom Education Zone. The principals participated in the study because they are the internal supervisors in the secondary school.

The sample of 360 respondents representing 20% of entire population was used. The sample comprised 60 principals and 300 teachers in the public secondary schools. The study adopted an accidental sampling technique because this technique allows for choice of respondents at their disposal. Table 1 shows the distribution of the population and sample per Local Government Areas that comprise the Ikom Education Zone. Having reviewed the available literature, the wastage variable was determined as a composite of utilization of laboratories and libraries in the public secondary schools. A researcher constructed questionnaire titled: Facilities Utilization Schedule Questionnaire (SFUSQ) was design, and the data collected were analyzed using percentages rated in a linkert five points’ scale.

Table 1: Population and sample distribution

LGA	Pub. Sec. Schools Principals		Teachers		Total	
	Pop	Sample	Pop	Sample	Pop	Sample
Abi	10	15	210	50	225	60
Boki	10	31	434	50	465	60
Eteng	10	13	182	50	195	60
Ikom	10	20	280	50	300	60
Obubra	10	21	294	50	315	60
Yakurr	20	10	280	50	300	60
Total	120	60	1680	300	1800	360

Results and Discussion

Table 2: Percentage Analysis of Utilization of Laboratories in Public Secondary Schools in Ikom Education Zone

S/N	ITEMS	SD		D		UN		A		SA	
		F	%	F	%	F	%	F	%	F	%
1.	There is a laboratory in my school.	21	6	48	3.3	5	1.3	150	45	136	38
2.	The laboratory accommodates as many students as would want to use it.	165	46	97	27	0	0.0	60	17	38	11
3.	There is enough laboratory equipment for students use in the laboratory.	152		84	23.3	2	0.5	48	13.3	199	21
4.	The laboratory is well furnished for students use.	135	38	127	5.2	3	0.8	62	17.2	33	9.1
5.	Teachers/students use the laboratory for practical lessons	167		108	30	4	1.1	38	11	43	12
6.	The laboratory equipment are in good condition for usage.	115		134	37.2	8	2.2	52	14.4	51	14.1
7.	All the science subjects have their laboratories for students.	188		84	23.3	5	1.3	45	13	38	11
8.	There is a personnel taking care of the laboratory.	175	49	85	24	6	2.0	38	11	56	16
9.	The laboratory is well situated and centralized for students/teachers use.	148		124	34.4	0	0	76	21.1	12	3.3

Key:SD – Strongly Disagree, D – Disagree, UN – Undecided, A – Agree and SA – Strongly Agree

Laboratories Utilization in Public Secondary Schools

The result of the findings as indicated on tables 2 shows that, majority of the principals and teachers 286 (79.4%) accepted that, there are laboratories in their schools, but lack the basic instruments and reagents for students to carry out practicals with their science teachers, the same group of respondents (262, 73%) further observed that the laboratories are not spacious enough to accommodate as many students and teachers who may want to use the laboratory. Majority 236 (65.5%) of principals and teachers in Ikom Education Zone were of the view that, the available laboratories are not equipped enough for the student's use. This is in line with to the suggestion of Thulstrup and Waddington, (1999) and Corgnati, Filippi and Viazzo, (2007) that a laboratory must be fully equipped with the necessary apparatuses and reagents to enable student carry out their practical demonstration of the theoretical components of the science topics. The finding is of study is in confirmation of the findings Olatoun, (2012) and Yusuf & Sofoluwe, (2014) who found that for a functional secondary school laboratory to be make meaningful contribution to the

teaching and learning of sciences, the laboratory must be large enough to have a certain freedom of movement, accommodate certain of students and the teachers including laboratory attendant and laboratory scientists.

The study further revealed that majority 249 (69.2%) of the respondents (principals and teachers) suggested that the equipment and the laboratories were not in good working conditions for the students' usage. This result also supported the National Academics (2008) results and that of Oyetakin, (2011) who at different times in their respective studies found that, where science laboratories are poorly or ill equipped or not properly used, the costly laboratory equipment's are sometimes stolen by the laboratory attendants, the science teachers themselves, the students or the principals. Some facilities are allowed to decay due to underutilization.

The result of this study is a further confirmation of Deribe, Endale & Ashebir, (2015) who found that most often than not, most schools are given laboratory and technology equipments, where they ordinarily do not have where to keep them, hence most equipments are abandoned outside in the open for rain, sun and humans to destroy, a case in point was in the early 90s where introductory technology equipments were supplied to schools with no proper arrangements for accommodation and trained personnel to handle them for student's practicals. The result was that most of these equipments were abandoned outside, most were stolen, destroyed by rain or sun, while the larger ones, that could not be carried are still lying there wasted. This position was further confirmed by Santamouris, et al., (2012) and Akinsolu, (2014). The result further shows that teachers and students sometimes do not use the laboratories for their practical lesson as indicated by majority 275 (76.3%) of principals and teachers in Ikom Education Zone. Majority 272 (75.5%) of the respondents were of the view that, the laboratories are not well situated and not centralized for teachers and students usage.

Utilization of Libraries in Public Secondary Schools

The findings of the study revealed that majority 244 (68.2) of the principals and teachers in Ikom Education Zone agreed that, there were libraries in their schools. But, majority 240 (67.1) of the principals and teachers observed that, the library equipment were not adequate. Majority 229 (64.1) of the respondents were of the view that, the library has no relevant materials for the students' use. These support the argument of Adejuwon (2000) cited in Olatoun, (2012) that, the existing books in the libraries lack local examples; hence they make it more difficult for students to understand most of the ideas and principals discussed in them. Although the study further revealed that majority 228 (63.3%) of the principals and teachers projected that the students have access to the library, majority 274 (76.2) of the respondents also argue that, the books in the library were obsolete and majority 286

(79.4) of the principals and teachers were of the view that, the library furniture were not in good condition for the students to use.

Table 3: Percentage analysis of Utilization of Libraries in Public Secondary Schools in Ikom Education one

S/N	ITEMS	SD		D		UN		A		SA	
		F	%	F	%	F	%	F	%	F	%
10	We have a library in my school.	84	23.3	27	8.0	5	1.3	128	36	116	32.2
11	The library equipment in my school are adequate.	94	26.1	146	41	0	0.0	47	13	73	20.2
12	The library can accommodate many students at the same time	125	35	134	27.2	5	1.3	67	19	29	8.0
13	The library in my school has relevant materials for teachers and student use	94	26.1	135	38	10	3.0	48	13.3	73	20.2
14	Students in my school have access to the library always.	84	23.3	45	12.5	3	0.8	156	43.3	72	20
15	Most of the books in my school library are obsolete.	40	11.1	43	12	3	0.8	127	35.2	147	41
16	My school library has a library attendant.	171	48	82	23	0	0.0	37	10.2	70	19.4
17	The furniture in my school library are in good condition.	76	21.1	210	58.3	0	0.0	34	9.4	40	11.1

Key: SD – Strongly Disagree, D – Disagree, UN – Undecided, A – Agree and SA – Strongly Agree

This is also in line with the earlier findings of Nwacke (2006) who found that, the right choice of textbooks in the school will facilitate the teachers work and help the students’ understanding. The result of this study has further aligned with the finding of Zepatou, et al., (2016) who found that in most secondary schools, students have very poor attitude towards the use of libraries, especially in secondary schools where they do not have current or modern textbooks and librarians to assist students in their use of the libraries. The use of libraries for studies can be very efficient and effective if only the right textbooks and functional libraries are in place.

The availability of current textbooks based on the new school curriculum and external examination regulatory guidelines can help students prepare very well for their external examinations and other aptitude tests. Unfortunately, most of these textbooks if they exist are archaic and outdated, hence depriving students from modern and current trend of knowledge. Little wonder, authors like Baird, (2009; Wilbanks, and Wilbanks, (2010) and Bal, et al., (2013) held that the bulk of the blame for most schools not having functional library rests wholly on the government and the school administrators who have given the library a secondary priority in their list of priority of school facilities. This has greatly contributed in the poor reading culture adopted by secondary school students in the study area.

Since most secondary schools have what is terms a shadow of a library, the students hardly go to read there, this is because they imitate their teachers who seldom make reference to the school

library when teaching the students. Little wonder Lawal, (2012), cited in Yusuf & Sofoluwe, (2014) stated categorically that teachers in all level of education, should give students assignment and tailor the students to go to the library and get materials for the assignment. By so doing, the students will be forced to go to the library to solve the assignment; hence the students will develop library study habits. Once this is done at this level, students would naturally development reading culture habit even to their tertiary levels of education. The authors further found that most times in most schools, libraries are available, but both students and their teachers hardly use such libraries, this is not because there are not good books, but because they lack the reading culture and study habits, hence, the library facility is wasted.

Conclusion

The following conclusions were arrived at, based on the findings of the study:

there exist a very high and clear evidence of wastages of facilities in the public secondary schools in Ikom Education Zone in Cross River State, this is so because both laboratory and library facilities were grossly inadequate and the available ones are poorly equipped and not put into proper use, most secondary school students lack the basic reading culture, coupled with very poor study habits. The wastages in school facilities as observed has very negative impacts on the teaching and learning process in the public secondary schools by depriving the students of the practical knowledge they would have acquired in the use of the libraries and laboratories. This study therefore concluded that the rate of wastages of school facilities in terms of laboratory and library usage, poor equipment of the laboratories and libraries are very high in public secondary schools, these therefore has seriously influenced students study habits and heir reading culture, hence the poor performance of our students in public secondary schools in most competitive national external examinations. It is proper that the government and school management should do all within their powers to provide, supply and maintain school facilities for optimum benefits of both the teachers and their students while within the school system.

Recommendations

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

1. Government and school management should as a matter of urgent public interest stock school libraries with adequate and current text books and other audio-visual materials to enable the student study well in all public secondary schools in Cross River State.
2. Government should make adequate provision through in-service and short service training programmes for technical and science education teachers on how to use the technology equipments, which should be supplied by government to all public secondary school.

3. Graduates of library sciences should be employed and deployed to public secondary schools to teach and turn students back to the reading culture that was characteristics of secondary schools of olden days.
4. The State Government and the Secondary School Education Management Boards should harmonize the number of personnel for laboratory and library attendants in urban and rural public secondary schools by making sure that all public secondary school have adequate number of teachers in the various subjects, especially in laboratory and technical sciences.
5. Corporate bodies, companies and public spirited individuals should contribute their own quota to educational advancement through the donation or contribution of books, science apparatuses, reagents, school buildings among others to public secondary schools where they reside, come from or operate their business as part of their corporate social responsibilities to their communities.
6. Government and Education stake holders should regularly monitor the use and maintenance of school facilities; this can be achieved through the formation of parent teachers association in conjunction with school management and government.
7. Educational stake-holder should employ professionals on the areas of new development subjects and ensure on-the-job training, seminars and workshops for the serving teachers on how to use the new trend subject equipment's and materials.

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