



ANALYSIS OF COST IN PUBLIC SECONDARY SCHOOLS IN ABIA STATE: A QUANTIFICATION APPROACH

BY

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Abstract

The study analysis of cost in public secondary schools in Abia State: a quantification analysis adopted a descriptive survey design with total population of 4568. This comprises of 303 teachers and 4265 students' from 12 public secondary schools in the three education zones in Abia State. The sample size for this study is 600 subjects which was selected through quota sampling technique. This comprising 155 teachers' and 445 SS3 students. Two research questions and two null hypotheses guided the study. The instrument for data collection is as documentary data such there were no need for validation and reliability test for the study. The researcher collected the required data for this study from the accounts department, exams and record department and personnel administration department of Secondary Education Management Board, Umuahia. Only the documentary information collected by the researcher stood the bases for the analysis of the study. Data generated for this study were analyzed using quantification analysis, mean and standard deviation, percentage and graph to answer the research questions that guided the study. The study in its findings revealed that least average cost incurred by government in public secondary school in umuahia education zone for providing classroom per student is N2, 053.33k while the highest cost incurred by government in providing classroom per student is N18, 333.33k per session with 1.9% and 22.1% respectively. Based on the findings of the study the following recommendations were made among others; that Government at all levels should increase subventions and budgets made in educational sector so as to meet with UNESCO 26% budget recommendation. This will help reduce cost and encourage access to quality education by all citizens irrespective of their socio-economic status.

Introduction

Education is a fundamental right for everyone and a key to the future of any nation. Education in various countries of the world has its price; hence its funding may appear expensive. Cost remains critical

factor in any school operation. The provision of education therefore remains one of the most important duties of any government. Joshi (2010) aptly said that education is rightly considered as an important component for enhancing the



lives of the deprived and the disadvantaged groups of the populations in developing countries and also a part of anti-poverty programmes. This makes education the foundation for sustainable economic development. Supporting this idea, Nyakunga (2011) rightly said that knowledge is an important factor for economic development.

Educational cost remains an impending factor to the quality in education and its access by students in most public secondary schools in developing nations. This factor was what led to the shared responsibility of education cost leading the government to introduce free secondary education by taking care of the tuition fees as parents and guidance take care of other cost in education including recruitment of part time teachers. Karemes (2010) observed that cost such as examination fee, salary top ups, textbooks, teaching materials, school uniform, feeding, transportation and sports are major constraints to achieving Universal Basic Education Programme.

Costs of education in this study are used to signify direct school expenditure incurred by the government and families. Akangbou and Adeyemi in Okunamiri (2015) agreed that direct social cost of education implies the actual financial expenditure on

education by the government which includes teaching and non-teaching staff salaries and allowances, expenditure on books, equipment, stationeries, and transportation, imputed rents on educational building, maintenance cost and other expenditures on goods and services. Looking at the cost in its broader sense, it connotes all resources including human, material and financial resources used at the process of running an enterprise. This means that cost in education represents real resources in terms of money, workforce and sacrifices that are used up to produce quality educated persons.

This cost is made up of both the direct and indirect cost. Direct Cost comprises social and individual cost in education. Social cost involves such items such as salaries of teaching and non-teaching staff, books and stationeries, other goods and services, imputed rents which is referred to the cost of building. Social costs of education are cost borne by the society represented by the federal, state and local governments in the process of providing education for its citizens while individual or private costs include tuition fee, books, uniform, examination fee, laboratory fee, recruitment and payment of part-time teacher and travel etc. Indirect Cost is made up of social cost



and individual or private cost. Indirect social costs are pre-tax earnings foregone. This is measured by the contributions or marginal productivity the student or pupil have made to the society or economy by their decision to stay on at the school rather than join the labor market.

However, since education is the responsibilities of both private and public sector, cost of education thus will address in the dimensions of social and private cost borne by private individuals in education. It therefore becomes essential for us to distinguish between the costs borne by the public in education and the cost borne by individual in education. Cost of education therefore is the real resource used in the process of producing educational services to the society (Okunamiri, 2010). This means that cost in education is more than mere monetary expenditure on schooling; such cost include free input like students time, intellectual capacity, patience and building among others. That the school does not pay for but services the building renders, part of the cost of such building over the years that were used.

Social and private cost is seen as expenditure incurred by both the government and individual respectively in running the system. Okunamiri (2010) asserted that direct social cost is made up of

salaries of teaching and non-teaching staff, purchase recurrent goods and services (Construction of buildings, payment of overheads, salaries, wages, purchase of goods and services), expenditure on books and the imputed rent on educational buildings. To him, private education cost is made up of tuition fees, book and non-book materials, school uniform, recruitment and payment of part-time teachers and travel by pupil.

It is worth saying that the indirect cost of education is measured by the earnings that the students forego as a result of their decision to stay in school (retention) rather than join the labor force; this is referred to as opportunity cost. Social direct cost therefore is pre-tax earnings foregone. It is measured by the contributions or marginal productivity the students have made to the society or economy by their decision to stay on rather than to join the labour market while the private indirect cost is the post-tax earnings foregone. Kumar (2004) is of the opinion that the cost of education is divided into institutional and private cost. He further said that private cost could be likened to the part of expenditure or investment which is made by the students' or the parents or both in a year for acquiring education. Deducing from the above view point, private cost of education



entails any expenditure made by the parents/students' towards assessing quality education in a given year. This investment or expenditure in education may include tuition fee, boarding fee, textbooks, transportation, examination fee, medical fee and uniform etc. this shows that private cost of education is very essential in determining the access to education. Supporting this idea, Muindi (2009) observed that irrespective of government grant per student per year in 2008, parents and head teacher still complain of the unbearably high cost arising from increased price of school uniform, stationery, and food.

It seems that in many countries, education is viewed as a good investment in national development. The reason is that it is expected that the educational system will produce quality and quantity of human resources to match input (cost) for economic growth using the right mix of input (Olatoun, 2012). In Nigeria, educational system is consuming, as such requires a large proportion of the annual budget because expenditure in the sector is largely regarded as an investment. But the assailing problem with the system remains the inability to earnestly access the cost of education in relation to the quality of

education rendered. This assessment is necessary because the exact input (cost) in education needs to be critically examined, if it actually influence the quality need for the output. This when done intermittently will go a long way to check and avoid wastage of input resources in education while efficiency is assured. This means that continuous appraisal of the system should be done to ensure that cost-effectiveness and prudence is appropriated as regards to commercial and industrial sector.

Premium Times (2017) recorded the educational budget of Nigeria for 2017 to be N448.01 billion (6%) of the 7.30 trillion budget which is below UNESCO recommendation of 26%. In 2016, it has the budget of N367.73 billion (6.01%). In 2015 it has N492.34 (10.70%), 2014 with N493 billion (10%), 2013 with N509.039 billion (10.21%), 2012 with N468.385 billion (9.86%), 2011 with N393.810 billion (9.86%), 2010 with 339.634billion (7.37%), 2009 with 252.204 billion (8.79%), 2008 with 250.144 billion (10.04%), 2007 with 221.071 billion (9.75%), 2006 with 195.693 billion (10.43%), 2005 with 147.835 billion (8.21%) and 2004 with 93.767 billion (5.24%). From the above budgetary allocation to the education system, it is worth saying that there is a decline in education funding which may cause low



quality education, as result to poor productivity. This decline in education funding could be viewed as a global issue. Wamalwa and Odebero (2014) assert that notwithstanding the decline in the endowment and appropriations in the United States of America, school expenses and enrollment increases. Shikanda, Odebero and Byaruhanga (2013) uphold the view that grants made available by government is erratic and as such seems not to be adequate to sustain the targeted vote heads such as tuition fee, exercise books, laboratory equipment, teaching aids, internal examination, electricity, water, conservancies and students activities.

The secondary school education lays foundation for university education; this entails that facilities for better preparation of students to meet with the demands of higher education should be made available. Otter and Villalobo (2009) opined that schools with better infrastructure perform better in their academic achievement. Supporting this view, Glewwe (2013) asserted that the availability of basic furniture (chair, tables, and desk), electricity, school library, good classroom with ventilation and good environment has a positive impact on learning. From the view above, it is notable that good

infrastructure in the schooling system enhances quality educational outcome.

Classroom on the other hand remains one of the most needed infrastructures in the school system as its role in teaching and learning transaction cannot be ignored. Its condition remains an important aspect of learning process. The quality and adequacy of physical facilities and equipment's has a direct bearing on quality education. A school with adequate classroom will accommodate students and create a conducive atmosphere for teaching and learning transaction to take place. Agreeing to this fact, Nwosu (2014) asserts that learning takes place better and faster in an environment that is richly provided and endowed with physical resources. Supporting this view, Eheazu (2016) right highlighted that the presence of good desk, chairs, electricity, buildings and various types of audio-visual aids have created a motivating conducive learning environment. Ogedi and Obionu (2017) aptly said that un-conducive learning environment is one that is not sustainable for carrying out educational transactions of teaching and learning process. They further said that it could be likened to acrimony, rancor, poor seating, dilapidated and nearly collapsed buildings, inadequate manpower



and conflict oriented environment which may hinder teaching and learning activities.

Statement of the problem

There is this view on decline in the infrastructural resources in the education system of Nigeria especially at the lower levels of education system, secondary schools inclusive. The ideal situation should incorporate availability of conducive learning environment for educational workforce, increase in percentage of education budget to meet with the UNESCO recommendation, provision of adequate learning facilities, standard classroom with desk and chairs, good and functional library facilities, quality and accessible laboratory equipment, adherence to standard teacher pupil ratio of 1:39 and prudent utilization of human, material and financial resources to effect quality output in terms of quality in education system.

However, the problem of inadequate fund for manpower recruitment, under-budget for education system, poor manpower and material resources utilization, poor state of educational quality caused by repeat of class, poor retention caused by educational cost, poor infrastructure, poor library state, poor classroom management, unwilling attitude of students to learn, high rate of special examination centre leading to

examination mal-practice, inadequate chairs and desk, dilapidated and nearly collapsed buildings remain a challenging problem to public secondary school education in Nigeria. The problem of this study therefore puts in a question form is; what extent is the cost of providing education in public secondary schools in Abia State?

This study therefore is designed to analyze educational costs in public secondary schools in Abia State such shall be of benefits to the education planners, officers, Government, educational managers, teachers and students.

Purpose of the study

The purpose of this study is to analyze educational cost in public secondary schools in Abia State. The specific objectives are to determine the:

- i. Analysis of cost in providing classroom in public secondary schools in Abia State.
- ii. Analyse of cost of in providing computer facilities in public secondary schools in Abia State.

Research questions

The following research questions are posed guided this study:

1. What is the cost of providing classroom in public secondary schools in Abia State?



2. What is the cost of providing computer facilities in public secondary schools in Abia State?

Methodology

The study adopted descriptive survey design. Descriptive design is a form of research design which seeks to describe events, conditions and occurrences as they are without any manipulation of what caused the event been described. Ali (2006) opined that any study that seeks to find out what is and describes it is descriptive. The area of this study is Abia State. The population of this study is 4568. This comprises of 303 teachers and 4265 students' from 12 public secondary schools in the three education zones in Abia State.

The sample size for this study is 600 selected through quota sampling technique. This comprising 155 teachers' and 445 SS3 students. Johnson and Christensen (2000) opined that in quota sampling, the researcher determines the appropriate sample size or quotas for the groups identified as the important and take

convenience sample from those groups. The instrument for data collection is as documentary data. Alum and Nwakodo (2010) assert that documentary data are collected for the purpose of present research but are considered important for research problem under investigation.

Since the researcher employed a documentary data or evidence for the study, there was no validation of the instrument by any expert. There was no reliability test for the study considering the fact that the study employed documentary data or instrument. The researcher collected the required data for this study from the accounts department, exams and record department and personnel administration department of Secondary Education Management Board, Umuahia. Only the documentary information collected by the researcher stood the bases for the analysis of the study. Data generated for this study were analyzed using quantification analysis, mean and standard deviation, percentage and graph to answer the research questions that guided the study.

RESULTS

Research Question One

What is the cost of providing classroom in public secondary schools in Abia State?



Table 2:1 Cost per student incurred by government for classrooms.

Schools	Cost per Month	Cost per Year	depreciation Rate of 10%	Cost %	No. of Students	Unit Cost (N) X
Govt. college	N16,000	N576,000	N528,000	3.3%	150	N3,520
Ibeku High School	N16,000	N576,000	N528,000	12.3%	41	N12,878.04k
Amuzukwu Girls1	N15,000	N540,000	N495,000	11.3%	42	N11,787.71k
Olokoro Girls	N10,000	N360,000	N330,000	5.2%	60	N5,500
Alaoma sec.tech Aba	N8,000	N192,000	N176,000	9.8%	17	N10,322.94k
Okigwe Rd Sec. School	N7,000	N168,00	N54,000	5.1%	10	N15,400
Alaiyi Com. Sec. School	N6,000	N72,000	N66,000	7.9%	8	N8,250
Ndiegoro Girls Sec.School	N6,000	N72,000	N66,000	2.7%	23	N2,869.56k
Snr. Science Sch. Alayi	N6,000	N72,000	N66,000	10.5%	6	N11,000
Ututu Sec. com Sch. Arochukwu	N5,600	N67,200	N61,000	1.9%	30	N2,053.33k
Ohafia Com. Sec School	N6,000	N144,000	N132,000	2.3%	25	N2,400
Girls Sec. sch. Uzoakoli	N5,000	N60,000	N55,000	17.5%	3	N18,333.33k

1.2 Graph presentation of unit cost incurred by the government in providing classroom per students in public secondary schools in Abia state.

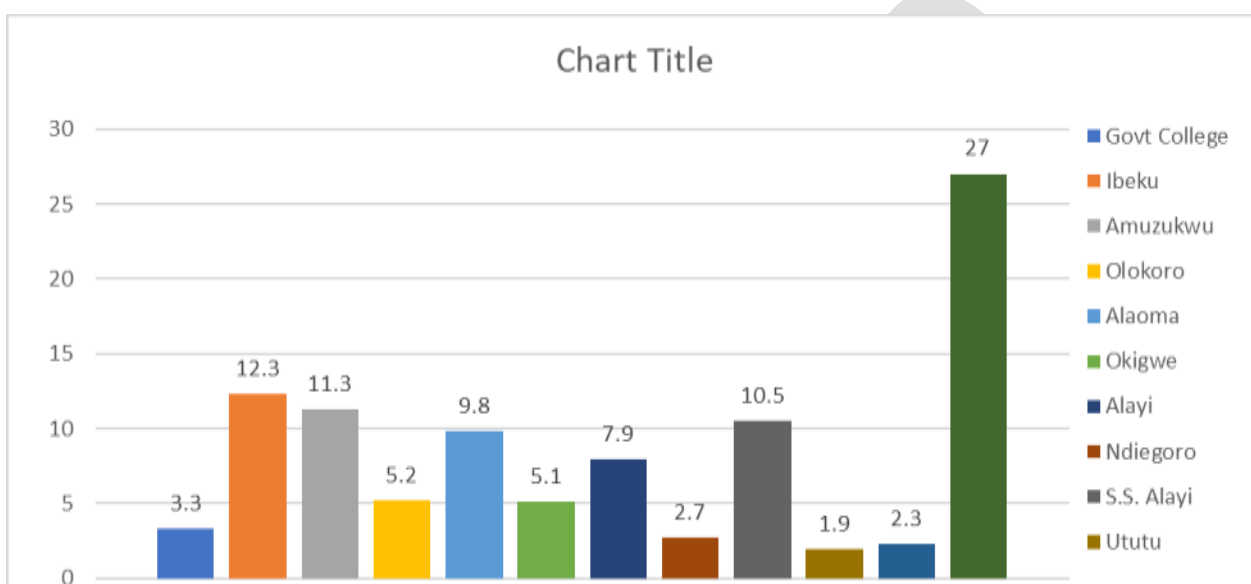


Table 1.2 above shows that the yearly unit mean cost per student in SS3 as regards to classroom provision follows: Government college has unit cost of N3,520, with 3.3% of the unit cost incurred by the government in providing classroom; Ibeku high school 1 has unit cost of N12,878.04k with 12.3% of the unit cost incurred; Amuzukwu girls has unit cost of N11,787.71k with 11.3% of the unit cost incurred; Olokoru girls has unit cost of N5,500 and 5.2% of the unit cost incurred for schools in Umuahia education zone; Alaoma Sec Tech School Aba has unit cost N10,000 with 9.8% unit cost incurred; Okigwe Road Secondary School has unit cost N15,400 with 5.1% of the unit cost incurred; Alaiyi Com Sec School Ugwunagbo has unit cost N8,250 with 7.9% of the unit cost incurred and Ndiegoro Girls Sec. Sch. Has unit cost of N2,869.56k with 2.7% of unit cost incurred for Aba education zone; The table also shows that government invest higher in Senior secondary school Alayi with unit cost of N18,333.33k with 10.5% of the unit cost incurred; Ututu Sec. Com. Sch. Arochukwu has unit cost of N2,053.33k



with 1.9% of the unit cost incurred; Ohafia Model Secondary School Ohafia has unit cost N2,400 with 2.3% of the unit cost incurred and Girls Sec. Sch. Uzuakoli has unit cost N18,333.33k with 17.5% of the unit cost incurred in providing classroom for public secondary school students in Abia state.. The mean unit cost is for 1st, 2nd and 3rd term with respect to 2017/2018 academic session. Based on the graph presentation, government incurred the highest cost percentage in girls' secondary school uzuakoli in providing classroom for students while the lowest cost in providing classroom was incurred by government in ututu community secondary school with mean cost percentage of 1.9%. Government therefore incurred higher cost in some schools in providing education for the students as a result of higher in the number of students in a school, lesser the government spent in providing a given facility per student. However, the analysis indicates that government mean cost (N2,053.33k) incurred for ututu com. Sec. school for providing classroom is less while government incurred the highest mean cost (N18,333.33k) for Girls sec. school uzuakoli in providing classroom.

Research Question Two:

What is the influence of cost of providing computer facilities on students academic performance in public secondary schools in Abia State?

Table 1.3 Unit cost incurred per student by government for computer set.

Schools	cost per Month	Cost per Year	depreciation Rate of 10%(N)	No. of Computers	Cost %	Unit Cost (N) X
Govt. college	N47,000	N1,410,000	N141,000	30	1.9%	N8,600
Ibeku High School	N47,000	N1,034,000	N103,000	22	5%	N22,698
Amuzukwu Girls1	N47,000	N1,269,000	N126,900	27	6.1%	N27,193
Olokoru Girls	N47,000	N1,280,000	N112,000	24	3.5%	N16,000
Alaoma Sec. Tech Aba	N47,000	N470,000	N47,000	10	5.5%	N24,882



Okigwe Rd Sec. School	N47,000	N470,000	N47,000	10	9.4%	N42,300
Alaiyi Com. Sec. School	N47,000	N564,000	N56,000	12	14.2%	N63,450
Ndiegoro Girls Sec. School	N47,000	N658,000	N65,800	14	5.7%	N25,748
Snr. Science Sch. Alayi	N47,000	N517,000	N51,000	11	17.3%	N77,500
Ututu Sec. com Sch. Arochukwu	N47,000	N779,000	N51,700	17	5.3%	N23,970
Ohafia Com. Sec School	N47,000	N893,000	N89,300	19	3.2%	N14,613
Girls Sec. sch. Uzoakoli	N47,000	N329,000	N32,900	7	22.1%	N98,700

1.4 Graph presentation of unit cost incurred by the government in providing computer set per students in public secondary schools in Abia state.

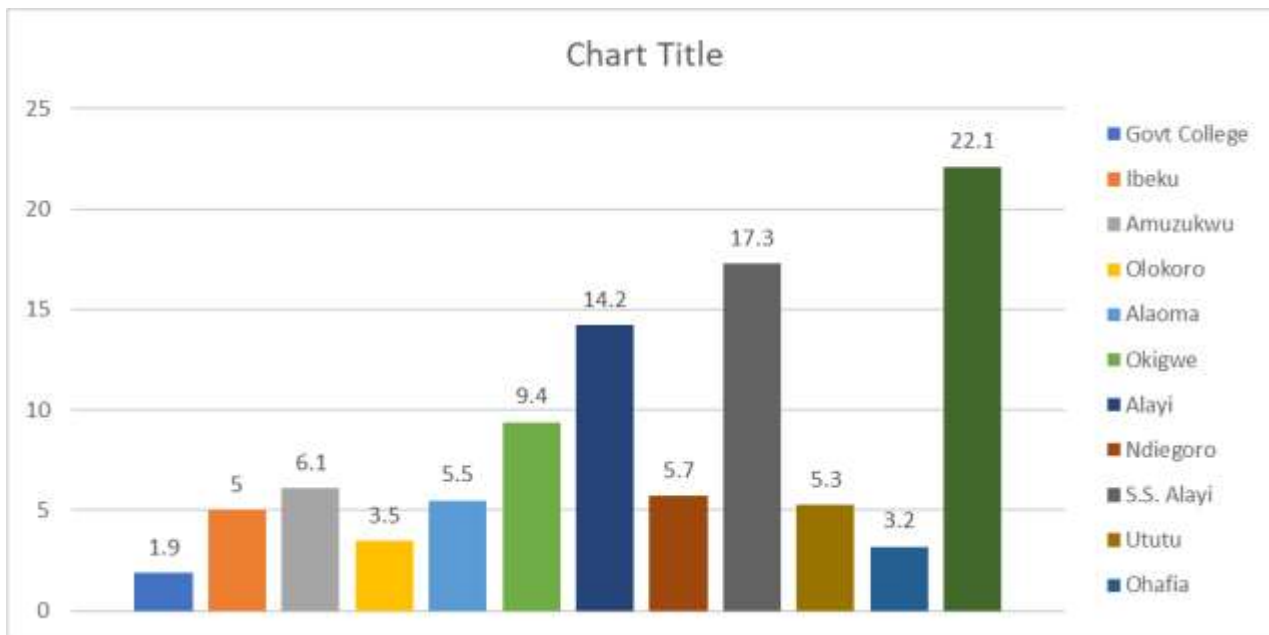


Table 4.2 above indicates that yearly unit mean cost per student in providing computer facilities by government for SS3 students is as follows: Government college N8,600 with 1.9% of the unit cost incurred; Ibeku high school 1 with unit cost of N22,698, with 5% of the unit cost incurred; Amuzukwu girls has unit cost of N27,193, with 6.1% Olokororo girls has unit cost of N16,000, and 3.5% of the unit cost incurred in providing computer facilities for Umuahia education zone; Alaoma Sec. Tech. Sch Aba has unit cost of N24,882 with 5.5% of the unit cost incurred; Okigwe Road Sec. Sch. Has unit cost of N42,300 with 9.4% of the unit cost incurred; Alayi Com. Sec. Sch. Ugwunagbo has unit cost of N63,450 with 14.2% of the unit cost incurred and Ndiegoro Girls Secondary Sch. has unit cost of N25,000 with 5.7% of the unit cost incurred by government in providing computer facilities for Aba education zone and Snr. Science Sch. Alayi has unit cost of N77,500 with 17.3% cost incurred; Ututu Sec. Com. Sch. has unit cost of N23,970 with 5.3% cost incurred; Ohafia Model Sec. Sch has unit cost of N14,613 with 3.2% cost incurred and Girls Sec. Sch. Uzuakoli has unit cost of N98,000 with 22.1% cost incurred by government for providing computer facilities for Ohafia education zone. The quantification shows that more populated a school is, less cost incurred by government in providing computer facilities per student in public school and less populated a



school is high cost is incurred by government in providing computer facilities for the students. Conclusively, government cost incurred in providing computer facilities in public secondary schools in Abia State which government spends higher in girls secondary school uzuakoli with 22.1% of its budget for education and spends less in government college with 1.9% of its education budget.

Summary of the findings

Based on the finding of the analysis, the following summary was made by the researcher

- i. The study revealed that least average cost incurred by government in public secondary school in umuahia education zone for providing classroom per student is N2, 053.33k while the highest cost incurred by government in providing classroom per student is N18, 333.33k per session with 1.9% and 22.1% respectively.
- ii. The study indicates in its findings that government in providing classroom for students incurred N3,520 and 3.3% of the unit cost for government college, N12,878.04k and 12.3% of the unit cost for ibeku high school, N11,787.71k with unit cost percentage of 11.3% for Amuzukwu girls and N5,500 with unit cost percentage of 5.2% for Olokor girls in umuahia education zone.
- iii. Government incurred unit cost of N8,600 for government college, N22,698 for Ibeku high school, N27,193 for Amuzukwu girls and N16,000 for Olokor girls in providing computer facilities per students with unit cost percentage of 1.9%, 5%, 6.1% and 3.5% respectively for umuahia education zone.
- iv. Government in providing computer facilities incurred a unit mean cost of N24,882 which is 5.5% of the unit cost incurred per student in Alaoma, N42, 300 which is 9.4% of the unit cost incurred per student for Okigwe road sec. sch., N63,450 which is 14.2% of unit cost incurred per student for Alaiyi and N25,748 which is 5.7% of the unit cost incurred per student for Ndiegoro girls with in Aba education zone.
- v. Government incurred a unit mean cost of N77,500 which is 17.3% of unit cost incurred per student for Snr. Sci sch, N23,970 which is 5.3% of the unit cost incurred per student for Ututu sec sch, N14,613 which is 3.2% of the unit cost incurred per students for Ohafia and



N98,700 which is 22.1% of the unit cost incurred per student for Girls sec. sch. in providing computer facilities per student for Ohafia education zone.

Conclusions

Based on the result of the analysis and the discussion of the findings of this study, the following conclusions were made:

That government incurred more cost in schools in schools than schools in urban in providing classroom, computer facilities and payment of teachers' salary per student in a session in public secondary schools in Abia State.

Government incurred a unit cost of N1,311,148.27k per session in providing quality education per student in public secondary schools in Aba education zone

Government incurred unit mean cost of N2,432,861.77k per student in providing classroom, computer facilities and payment of teachers salary in public secondary schools in rural schools Ohafia education zone of Abia State per session.

Government incurred unit mean cost of N1,311,148.27k in Umuahia education zone, N1,977,839.19k in Aba education zone, and N2,432,861.77k in Ohafia education zone respectively in providing classroom, computer laboratories and

payment of teachers salary per student in academic session.

Recommendations

Based on the conclusions drawn from the study, the following recommendations were made:

- i. Government at all levels should increase subventions and budgets made in educational sector so as to meet with UNESCO 26% budget recommendation. This will help reduce cost and encourage access to quality education by all citizens irrespective of their socio-economic status.
- ii. Government, non-governmental organizations as well as other stakeholders like old boys or alumnus of schools should help in providing required emergent facilities for teaching and learning so as to reduce cost of education access in public secondary schools. Secondary school administrators should also encourage it workforce for professional development by organizing in-house training for them.
- iii. There is need for annual assessment of funds inputted into the educational system by the government through its agents.

References



- Eheazu, B.A. (2016). The physical and social environment of education in Nigeria: *A lead Paper presented at the 22nd Annual Conference of School administrators.*
- Glewwe, P. W. (2013). *Education policy in developing countries.* Chicago: The University of Chicago Press.
- Johnson, B. & Christensen, L. (2000). *Educational research. Quantitative and qualitative approaches.* Boston: Allyn and Bacon.
- Joshi, K.M. (2010). Indigenous children of India: Enrollment, gender parity and dropout in school education. *International Journal of Sociology and Social Policy* 30 (10) 545-558.
- Karemesi, J. (2010). Universalizing primary education in Kenya, is it sustainable? Surfing the web: <http://usber.wordpress.com/nov/2010>.
- Nwosu, E. E., & Modebelu, M. N. (2016). Concepts of educational administration and educational management. In M. N., Modebelu, L. O. Eya & J. C. Obunadike (Eds.). *Educational management: the Nigerian perspective.* Anambra: SCOA HERITAGE Nigeria Limited.
- Nyakunga, R. Z. (2011). Cost sharing and academic performance: a case of Mzumbe University, Morogoro Tanzania. *Unpublished Masters Thesis submitted to University of Oslo*
- Ogedi, P.O. & Obionu, P. (2017). Unconducive learning environment as a safety threat to teaching and learning activities at basic education level in Imo State Nigeria. *Multidisciplinary journal of research and Development*, 26 (2), April, 2017 ISSN 1596-974x, indexed.
- Olatoun, A.A. (2012). Resources utilization and internal efficiency in Nigerian secondary Schools Implications for socio-economic problems of education. *International Journal of Sociology and Anthropology* 4 (1) 23-30, January 31st, 2012.
- Otter, T. & Villalobos, B. (2009). Determinant of students achievement in the primary education of Paraguay. Ibero-America Institut fur Wirtschaftsforschung Instituto Ibero-Americano de Investigaciones Economicas Ibero-America Institute for Economic Research.
- Premium Times (2017). *2017 Budget: Again, Nigeria fails to meet UN benchmark on education.* Abuja: Thursday October 5th, 2017.
- Shinkanda, F.C., Odebero, O.S. & Byaruhanga, J. (2013). Role of ministry of education sees UNDP Guideline in management of annual school budget in public secondary school in Kenya *Kenya Journal of Education Planning, Economics and Management*, 5 (1) January 2013.
- Wamalwa, S. M. & Odebero, S. (2014). The influence of cost on students academic performance in Kenya: an empirical study of Bungoma County secondary schools. *Asian Journal of Educational Research*, 2(1), 1-11