

**Adequacy of Resources and Students' Academic Performance in Selected Subjects in Senior School Certificate Examination in Akoko-Edo Local Government Area, Edo State, Nigeria**

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**Abstract**

*This Study investigated adequacy of resources and students' academic performance in selected subjects in Senior School Certificate Examination in secondary schools in Akoko-Edo Local Government Area of Edo State, Nigeria. The non experimental design involving descriptive research of the survey type and ex-post facto were used for the study. All public secondary schools' principals in Akoko-Edo Local Government Area of Edo State formed the population. The random sampling technique was adopted to select a small size of 10 principals because of the similarity of condition of Schools in the Local Government Area. "Adequacy of Resources and Students' academic performance Questionnaire" was designed to elicit information from the respondents. Data were analyzed using percentage and mean scores. The analysis of the research questions revealed that the higher the index of availability and adequacy of resources the higher the academic performance of students of Akoko-Edo Local Government Area in WASSCE. Based on the findings of this study, it was recommended that government, parents and old students' association should play a collaborator role in ensuring the adequacy of resources in public secondary schools across Akoko-Edo Local Government Area and Edo State in general.*

**Keywords:** Adequacy, resources, inputs, consumables, non consumables

**Introduction**

The concept of education as a source of investment in human capital is as old as the classical economist in education enterprise. In the 18th Century for instance, Adam Smith justified investment in education on the ground that resources expended is a process of preparing people with greater capabilities for higher productivity in a later life. Concept of education could also be seen therefore as a national investment and a means of producing more wealth for economic growth.

Resource factors are enhancing elements that can be used to achieve institutional goals. Education inputs consist of human and material resources such as teachers, buildings, furniture, texts, funds, libraries, laboratories, and computers. On the other hand, output is the goals and outcomes of education process in form of academic performance of students.

Madumere-Obike and Afangideh (2010) said that resources in general include anything in the environment that can be used to enhance the achievement of institutional goals. Hanson (1975) defines resources as anything used to meet an educational end. Flowing from above there must be effective and appropriateness of use of resources to achieve students' learning outcome. Adesina (1980) reported that the indices for measuring the standard of education have a bearing with the adequacy of the resources for learning. In other words, educational system like any other system requires certain inputs, for instance, students, teachers, funds, facilities and equipment which essentially must undergo transformation and then released as products or outputs to the society. The converse would result where there is a short fall in the output component and society would be negatively impacted upon.

Educational resources can be compressed into categories as postulated by Okeke (1985), he categorized educational resources into finance, personnel and facilities, Enaohwo (1999) delineated education resources into physical, liquid and human resources, and information while external aid also seems to be one of educational resources. Education in contemporary Nigeria can be regarded as been in a state of flux with all kinds of disruptive manifestations on the society such as the Covid-19 Pandemic, malpractices, cultism, teachers and students' strike, certificate racketeering, prostitution, truancy, drug abuse, conflicting policies between federal and state governments. Performance is an extremely important criterion that relates to outcome and success. Performance seems to have been examined as an individual level variable. It is something a single person does. Furthermore, performance is behaviour elicited. Academic performance is behaviour elicited, which means also the students' level of attainment in the Senior School Certificate examination as it relates to the study.

The government of Nigeria in its attempt to create changing society changed the educational system from its old theoretical oriented system 6-5-2-3 system to a new practical oriented 6-3-3-4 system. However, there have been hiccups in the implementation of the educational system for instance, the 6-3-3-4 system was designed to enable the junior secondary school graduates acquire further knowledge on pre-vocational courses and develop human skills. These skills are relevant to the demand of a changing society such as wood work, metal, electronics and mechanics, home economics and business studies. Added to the above, not long ago, the government put in place a new curriculum that would have reflected and solved some current and contemporary problems where in Senior Secondary School Candidates are now compulsorily to add entrepreneurial subjects such as carpentry, electrical installation, Computer, hair dressing and other skill subjects.

It is observed that the implementation of the above is heavily defeated especially schools in Akoko-Edo Local Government Area of Edo State, Nigeria. Nwankwo (1981) looked at

adequacy of resources generally as one of the most crucial aspects of impacting on the academic performance of students. School resources that are of particular importance in the study refer to consumables and non-consumables. Consumables items include chalk or marker pens, electricity, water, chemicals, sanitizers, gas, face masks, hand gloves, first aid box materials, funds. Non-consumables on the other hand include school buildings, classrooms/offices, laboratories, workshops, land, library, equipment e.t.c. It is important to have sufficient and adequate human resources in terms of qualified teachers. In another dimension, school performance could be underpinned into two areas: Socio-economic background of students and school based factors. On the other hand, Duyilemi and Duyilemi (2001) claimed that school factors affect students' performance more than socio-economic factors.

If the academic performance of students' in senior secondary school certificate examinations in Akoko-Edo Local Government Area of Edo State in particular and Nigeria in general is to attain a higher success, school resources must be adequate. It must be noted that resources are sine-qua-non to learning effectiveness and to help in achieving a just and egalitarian society as spelt out in the National Policy of Education. Knezerich (1975) supported the above view when he opined that to raise the quality of education its efficiency and productivity, adequate and qualitative resources are needed. Ozigi (1980) affirmed the above when he said that any institution that lacks essential and adequate resources should not expect to reasonably reach its desired goals.

Contemporary Nigerian Society is faced with the problem of falling standard of education generally. Population explosion of candidates in the senior secondary section has outweighed school resources in its entirety. This is the crux of the matter that is affecting the academic performance of students of senior secondary schools in Akoko-Edo local government area in Edo State, Nigeria. The study investigated adequacy of resources available in senior secondary schools in Akoko Edo local government area of Edo-State, Nigeria with the aim to examine the inventory of resources available in Senior Secondary Schools in Akoko-Edo local Government Area of Edo State, Nigeria. Evaluate the average performance of students in the senior secondary school certificate examination in 2014/2015, 2015/2016, 2016/2017 sessions.

### **Research Questions**

For this study, some research questions were raised.

1. What is the level of adequacy of human resources and students' academic performance at the senior secondary school certificate Examination?
2. What is the level of material resources and students' academic performance in the senior secondary school certificate Examination in Akoko-Edo Local Government Area of Edo State, Nigeria?

## **Methodology**

The research design for the study was the non experimental type involving descriptive research of the survey type and the ex post facto studies. The survey design assisted in capturing large sample size of the population to enable describing the existing situation of the adequacy of resources and academic performance of the students in Akoko Edo Local Government Area of Edo State and making generalization from the sample about the population. Ex post facto was used to gather data on academic performance of the students because the data cannot be manipulated nor given treatment since they already exist in their primary source. There are thirty (30) public senior secondary schools in Akoko-Edo Local Government Area of Edo. All the schools have been registering students for the West African School Certificate Examination (WASSCE). A sample of 10 (Ten) public senior secondary schools were selected through the simple random sampling technique. This method involved writing out all the names of public secondary schools into slips of paper and they got folded and put in a container and thoroughly shoveled. One strip of paper was taken out at a time without replacement. The names of the schools taken out were then listed. The schools automatically qualified such principals as respondents.

The research instrument used for this study was titled “Adequacy of Resources and Students' Academic Performance Questionnaire” (ARSAPQ). The questionnaire was made of two parts; section A was based on demographic data of the school and respondents, while section B consisted of information on the facility available in the school and the adequacy of such facilities and their relevance to the subject areas during 2014/2015, 2015/2016, 2016/2017 Sessions. The data collected was analyzed using simple percentages and mean scores.

## **Results**

**Research Question 1:** What is the level of adequacy of human resources and students' academic performance at the WASSC Examination?

In order to answer the above question, the number of art teachers available in each of the sampled schools and the students' average performance for three years were calculated

**Table 1: Index of availability of art subject teachers and the number of art teachers on ground**

Personnels	Sch 1	Sch 2	Sch 3	Sch 4	Sch 5	Sch 6	Sch 7	Sch 8	Sch 9	Sch 10	Total
Art Subject Teachers	1	-	5	1	-	1	7	-	-	2	11
Index of Availability	1	-	5	1	-	1	1	-	-	2	11
No. of Total Teaching Staff											
Index of availability	3	2	3	4	2	4	3	2	2	3	28
<b>Total</b>	<b>4</b>	<b>2</b>	<b>8</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>39</b>

As a follow up to Table 1, the analysis of students academic performance is shown in Table 2.

**Table 2: West African School Certificate Examination result for Art subjects for the 2014/2015, 2015/2016 and 2016/2017 sessions**

Sampled Schools	Art Subject Perf% 2014/2015 Pass	Perf% 2015/2016 Pass	Perf% 2016/2017 Pass	Student Pop	Average Pass
School 1	35	33	31	165	33
School 2	10	08	06	50	08
School 3	49	48	51	72	49.3
School 4	18	19	22	05	20
School 5	9	7	06	51	7.3
School 6	31	32	37	55	33.3
School 7	17	19	21	54	19
School 8	11	8	07	55	8.7
School 9	13	11	08	58	10.7
School 10	38	38	39	64	38.3

2014/2015, 2015/2016 and 2016 /2017 WASSCE. Clearly, from the table, it was revealed that school three had 49.3% average pass for the three years with a total of 8 personnel and with 5 art teachers. However, on the contrary schools 5 and 8 had an average pass of 7.3 and 8.7% respectively with a total of 2 personnel each without any in art subjects. Probably this must have contributed to very poor performance. The result also vividly showed that there is a link between adequacy of human resources and students' academic performance in art subjects. It indicated that the more adequate the human resources the better the academic performance.

**Research Question 2:** What is the level of adequacy of material resources and students' academic performance at the senior secondary certificate examination?

In order to answer this question, material resources for the sampled schools were surveyed as they related to science subjects.

**Table 3: Science equipments in terms of number available in selected schools and the actual number required per school**

Materials	Acceptable Standards per School	Sch 1	Sch 2	Sch 3	Sch 4	Sch 5	Sch 6	Sch 7	Sch 8	Sch 9	Sch 10
Lab tools	1 Per student	30	21	19	15	25	26	19	20	16	17
Reagents	200 and above Pieces	15	12	15	16	12	12	13	14	11	18
Hand lens	1 for 2 students	10	5	10	11	20	13	17	18	12	10
Charts	40	25	20	26	26	27	20	31	12	15	17
Acid types	At least 10 Varieties	6	5	7	6	7	5	4	4	6	8
Projectors	2	-	-	-	-	-	-	-	-	-	-
Alkaline	At least 8 Varieties	6	4	6	7	6	4	2	2	5	7
Lab Tables	1 Per student	26	20	22	12	26	27	12	10	10	8
Models	30 and above	12	14	20	21	22	24	16	12	14	12
Specimens	At least 20 types	14	16	18	12	18	16	18	17	14	12
Total		114	117	143	126	163	169	132	109	105	119

As a follow up to Table 3, the analysis of students' academic performance is shown in Table 4.

**Table 4: West African School Certificate Examination result for Science subjects for 2014/2015, 2015/2016, 2016/2017 Sessions.**

Sample Schools	Science subject Perf% 2014/2015	Perf% 2015/2016	Perfect% 2016/2017	Student Pop	Average Pass
Sch 1	51	54	53	29	52.7
Sch 2	40	41	43	27	41
Sch 3	51	52	56	30	53
Sch 4	46	48	48	32	47
Sch 5	62	60	62	32	62
Sch 6	64	68	67.9	34	66.6

Table 4 revealed the performance of students' in the sampled schools based on the adequacy and availability of material resources. School 6 had 66.6% pass, on the average probably because of the index of the adequacy of material resources in the school. On the other hand, schools 9 and 8 had 27.3% and 33% average passes due probably to inadequate material resources. This result vividly showed a link between adequacy of material resources and students' academic performance in science subjects. It indicated that the more adequate, the material resources, the higher the academic performance of students .

## **Discussion**

From the analysis of the research questions, it was found that there was a link between adequacy of human resources and students' academic performance. It indicated that the more adequate the human resources, the higher the academic performance of students. This is in line with the view of Adesina (1980), where in a finding, it was reported that the indices for measuring the standard of education have a bearing with the adequacy of the resources for learning. The view was also supported by Owolabi (1990) where he explained that adequate human resources serve as input into educational system and in effect cause an impact in the academic performance of students. Madumere-Obike and Afangideh (2010) also averred that resources in general include anything in the environment that can be used to enhance the achievement of institutional goals. This implies that both human and material resources in the school environment are very critical to the academic performance of students. In the view of Abdulganiyu (2004) in a study, came to the conclusion that for a higher academic attainment by students in the senior school certificate examinations, adequacy and availability of resources are very imperative. Contributing further, Ezike (1986) attributed the steady decline in the performance of science student in WASSCE as a result of inadequate material and human resources.

## **Conclusion**

From the study, it was deduced that for students to perform excellently well in both science and art subjects alike in the WASSCE, there must be the presence of adequate material and human resources. The human resources must also be of quality apart from the number. Specifically, it was found out that the more adequate the resources the higher the academic performance of students especially in Akoko-Edo Local Government Area of Edo State, Nigeria.

Based on the findings, it was recommended that:

- i. Government should recruit adequate number of teachers, laboratory attendants and computer operators.
- ii. Government should also show political will and commitment in the provision of adequate infrastructural and material resources.
- iii. Parents and old students association should be encouraged to partner with government in the development of schools.

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