**Research Article** 

# Types and Levels of Resource Wastages in Public Secondary Schools in Rivers State

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Abstract: This study examined the types and levels of resource wastage in Rivers State public secondary schools. The researcher formulated two research questions and two hypotheses to guide the study, while descriptive survey was adopted for the study. A sample size of 124 principals was drawn through a stratified random sampling technique, representing 50% of the total population of 247 public secondary schools in Rivers State. The instrument used was a 12 item questionnaire titled Managing Wastages for Quality Educational Delivery Assessment Questionnaire (MWQEDAQ). Mean (X), standard deviation (SD) and Rank order statistics were used to answer the research questions while Ztest was used to test the hypothesis at 0.05 level of significance. The reliability was calculated at 0.89 using Crombach Alpha. The major findings of the study revealed that high number of students repeated classes yearly, and over staff in some subject areas contributed to resource wastage. It was therefore recommended that school administrators should ensure that all the types of wastages that have been identified in this study, especially overstaff in some subject areas should be avoided. School administrators should ensure that only the adequate number of students needed in their school are admitted per term in other to enhance students interest in learning in public secondary schools in Rivers State.

Keywords: Resource Wastages, Public Secondary Schools types and levels.

# Introduction

Education is the means by which any society reproduces itself or even gets its citizenry better equipped to fit in and contribute their quota to the development of such society. It is a veritable tool in the hand of every successive government. The task of ensuring that societal value, culture, skills and knowledge are passed on from one generation to another is an onerous task which entails so much, therefore every government takes it very seriously. Educational resources are necessary for enhancing effective teaching-learning process and the entire functioning of the secondary school system. Available literature in this area has indicated that the quality of teaching and learning (quality delivery) is determined greatly by the level of educational resources not just made available but also managed properly by the school. It therefore becomes imperative for the School management to ensure that these educational resources that have been made available to the School are monitored to ensure that they are not wasted. Educational resources in the modern societies constitute the first proof that a school exist, hence it is of paramount concern to all levels of the educational system- national, state and local levels. Education uses a combination of human and nonhuman resources of many different types. The non-human resources which it requires include physical plant (grounds and buildings) utilities (water and electricity supply), in many cases food, catering and medical supplies while the human resources which a modern educational

system requires include not only teachers with various skills and knowledge, but also administrative and auxiliary staff and supporting personnel.

It is obvious that resources such as human capital, finances, materials, management, time and information are limited in supply and serve as input into educational system. Since the supply of these resources are limited and not directly proportional to the demand, it is a thing of concern to see how the limited resources supplied to secondary schools can be utilized effectively so as to check the menace of wastage. Successive governments have always come up with different educational policies since independence in 1960 to date but due to poor planning and implementation procedures, these programmes have not been able to tackle the issue of mass illiteracy, collapsed educational infrastructure, poorly trained and motivated teachers, increasing rates of dropout and poor quality of educational products. There is therefore the urgent need to confirm these reason for the poor state of the educational product delivery in our Secondary Schools due to wastages of the limited resources.

Ebong (2006) posited that the quest to meet the social demand for education has been frustrated by limited educational resources and this has resulted in a lot of educational imbalances and maladies among which is educational wastage. Education is a production system, and like all production systems it has four characteristic components, which are; the input, the process, the output and the feedback.

Educational input constitute the various resources that are fed into the educational production process to guarantee production. These educational resources have to be adequate in order to produce quality output, which is the objective of any production function. In the case of education production process, the output is the quality delivery of educated individuals that are not only useful to themselves but also relevant to the economic development and growth of the society.

Educational resources found in educational institution are designed to attain educational goals, which may be used directly or indirectly to achieve educational purpose. The optimal utilization of these resources will directly affect the quality delivery of such educational product. If these resources are otherwise mishandled due to carelessness, lack of supervision or non-maintenance, it will adversely affect the quality of students that will be produced in the long run. Therefore the management of resource wastage must be put in place adequately in order to attain quality educational delivery. Wastage is the act of destroying things especially if it has been dealt with carelessly. Educational wastage can therefore be described as loss of educational resources in terms of under utilization or over utilization of resources. This means that when the human capital, financial, material and time resources are not optimally utilized, then wastage has occurred and it will definitely tell on the educational output, which is the students. Ebong (2006) described educational wastage as the total number of student years spent by repeaters and dropouts. A repeater according to her is a student or pupil who in a given school year remains in the same class as in the previous year, while a dropout is a student or pupil who leaves school before the end of the final year of an educational cycle in which they are enrolled.

Wastage in education means wastage of time, effort and finance in addition to the school resources spent on pupils either by the government or the parents. Students who do not complete their education at the right time who drop out of school turn out to be unskilled in the society thereby negating the objective of the system. They eventually turn out to be useless to themselves and to the society at large. Because Educational resources are generally

scarce in supply relative to the various uses, the ones provided have to be prudentially and judiciously used in order to avoid wastages. According to Abraham and Adiele (2005), the resources of an organization can simply be presented as three M<sup>s</sup> replicating, man, material and money. Therefore in the public secondary school system which comprises the junior secondary 1-3, and senior secondary 1-3, the issue of resources wastage has been a menace that needs urgent attention.

The causes of wastage in Educational resources in the public Secondary Schools in Rivers State are not far-fetched. These causes include lack of instructional supervision, poor maintenance culture, non-performance of assigned duty by non-teaching staff, vandalism of school facilities by students, lack of checks and balances in the various departments by the Heads of Department (HOD), the school management and lack of proper accounting system amongst others.

The Junior Secondary Schools under the platform of the Universal Basic Education and the Senior Secondary Schools have the main aim of delivering quality education for all the students within the stipulated age. The achievement of quality education lies in the success of these two educational programmes (Junior and Senior Secondary Schools). The issue then is, how can we effectively manage our scarce resources in the education sector especially in the Public Secondary Schools, so as to attain the objective of quality Educational delivery?

When these educational resources are not optimally utilized, the products will turn into a shadow of what they ought to be, thereby being treated with contempt by the outside world. When the products of the secondary school system fall short of the expected standard, it then implies that the resources may have been underutilized, not used at all or over utilized. It becomes very necessary to adequately employ and maximally utilize the available educational resources so as to produce quality Secondary graduates that will contribute their quota to national development.

## **Types of Educational Resource Wastage**

Educational wastage occurs in all the different educational resources; among students, educational wastage occurs when students withdraw prematurely from school at any stage or class before the completion of their course of study, which can be in two forms namely repetition and drop-out.

This can also be referred to as a form of human resource wastages, which has to do with the students. Failing once or more before gaining promotion into the next class is called repetition while drop-out is when a student leaves school entirely before completing the course of study. Those students who are not able to learn a skill of their choice at the end of their J S 3 (Basic 9) and are not able to continue to the senior secondary school in order to continue their education could also be regarded as wastage. Reason is that they cannot justify the educational resources spent on them from J S I to J S 3. Repetition represents inefficiency and wastage of resources for any society. From the societal economic perspective, schooling is most efficient if every student moves up to the next class.

Each student that repeats a class has an economic effect of adding a new student to the class. This translates into larger class sizes and the need for additional class furniture and other material supplies. If many students repeat each year the school will need more classes as well as more man power (teachers). Classes that have significant number of repeaters present more serious student motivations and classroom management challenges to teachers.

Another type of wastage, include students who complete the senior secondary school and never gain access to the tertiary institution either as a result of poor performance in their West African Examination Council (WAEC) result or the Joint Admission Matriculation Board Examination into the University, the Polytechnic or Colleges of Education. They all end up becoming nuisance by roaming the street as hawkers without any skills, thereby constituting a tragic waste of the human, social and economic potential to the development of the nation.

Duze (2011) referred to educational wastage as failure in the system. They stated that wastage in the educational system occur in five dimensions which lead to waste in resources and human learning. These five dimensions are:-

- i) When provision is not made for universal education
- ii) When the system fails to recruit children into training due to certain forms of preferential treatment.
- iii) When the system fails to achieve its objective especially if there is a lower output per unit time than that system has been designed to achieve.
- iv) When the system fails to hold the children it has admitted and prevent them from premature withdrawal
- v) The system fails to set the appropriate objective for the guidance of the educational production process and prevent the time spent in school from being meaningless and wasteful.

# Levels of Educational Wastages

The level of educational wastage can be done by means of "Cohort Analysis" which educational planners as well as researchers have borrowed from the field of demography. This analysis starts from a given number of students entering an educational cycle. The basis of assumption here is that at the end of each year there can be three alternative and mutually exclusive events. A student is either promoted to the next class, repeats the same for another year or drops out of the educational cycle.

Edem (1987) differed from Eleazu (1994) when he stated that there is no best way to measure levels of wastage. This is because within the system, some repetitions may be due to individual transfer from rural to urban schools. This he said could lead to under counting promotion and repetition rates, thereby over estimating drop outs in the rural areas. These wastages are only based on students dropping out and those repeating classes. Torsten (1991) in his study agreed with Undie (2012) totally when he stated that there is no stipulated best way of measuring levels of wastage because within the system some repetitions may be due to various reasons. But Tahir (2003) differed from Torsten in the measurement of levels of wastage by stating that the levels of wastage in education can be determined by measuring the efficiency in education. This is done by measuring educational output as well as quantifying the relationship between inputs and outputs.

In a more complete definition of output, the educational attainment of the student dropping out, as well as the level of educational achievement of the graduate should be taken into account. He maintained that this way of measuring output still gives us some useful insight into the function of an educational system, and that the number of student years used by a cohort of students to graduate constitute an input indicator appropriate for the measure of efficiency in education. He insisted that educational internal efficiency has two major merits, measurability and analytical capacity as a tool of educational diagnosis. In support of the reconstructed cohort method, Edem (1987) adduced that the adoption of the reconstructed cohort method is one of the best tools in measuring wastage particularly when the educational wastages are in forms of repetition of classes, withdrawal from school and unsuccessful completion of an educative process among others.

Egbedi (2012) did not differ from Edem when he stated that after the identification of the repeaters for each grade has been done, it becomes very easy to compute the actual level of wastage. This is done by subtracting the body of repeaters so identified from the total enrolment in each class up to the final class and graduation. What will be left in each class will be flow (survivors) of our sample which can then be computed to get the actual level of wastage.

William (1993) recognizes that there exist several conceptual and practical difficulties which one encounters in the computation of actual cohort wastage rate, therefore a proper knowledge of how many students are repeating each class becomes necessary. The level can be said to high, moderate or low based on the result arrived at after measurement.

## **Statement of the Problem**

There is a growing concern about the relationship between managing resource wastage and quality educational delivery. The mismanagement of these resources appear to have negative influence on education delivery even when there are available resources in the system. Over the years, the issue of meager and dwindling allocation to the education sector has been of serious concern to all stakeholders. Despite the worry expressed by individuals and groups over the level of wastages in educational resources in secondary schools, the magnitude and scope of this menace appears illusive. It is therefore the problem of study to find out:

- ✓ The types of educational wastages in public Secondary Schools in Rivers State?
- ✓ The level of educational wastages in public secondary school in Rivers State?

## Aim and Objectives of the Study

The study aim at identifying the types and levels of educational wastages in public secondary schools in Rivers State. Specifically, the objective was to identify:

- 1) The various types of wastages that hamper quality delivery.
- 2) The levels of wastages in the public secondary school.

## **Research Questions**

- 1) What types of resource wastages exist in public secondary schools in Rivers State?
- 2) What is the level of resource wastage in public Secondary Schools in Rivers State?

## **Research Hypotheses**

- 1) There is no significant difference between the mean scores of urban and rural principals on the types of resource wastages in public secondary schools in Rivers State.
- 2) There is no significant difference between the mean scores of urban and rural principals on the level of wastages in Secondary School.

## Methodology

The study adopted a descriptive survey design. The population for the study consisted of all the 247 public secondary schools in Rivers State. The 247 public (Government) secondary schools in Rivers State, are drawn from the 23 Local Government Area with 247 principals as

total population of respondents. (Source: Rivers State Senior secondary Schools Board and universal Basic Education Board, Rivers State). The sample for the study was 124 public secondary schools in Rivers State; which represents 50% of the total number of public secondary schools. The principals of these 124 public secondary schools served as the sample size of the study, the stratified random sampling technique was used.

The instrument for data collection was a questionnaire titled Managing Wastage for Quality Educational Delivery Assessment Questionnaire (MWQEDAQ). The questionnaire consisted of two sections, namely; A and B. Section A which gathered demographic data of the respondents while section B was used to elicit responses in order to answer the research questions and test the hypothesis. The responses in section B was patterned after a Likert type point scale of strongly Agree (SA), Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD), rating 4,3,2 and 1 respectively. While section B<sub>2</sub> was patterned after very High (VH) High (H), Moderate (M) and low (L) with rating 4, 3, 2 and I respectively. The reliability index (r) coefficient obtained was 0.89. Data was analyzed with mean, standard deviation for the research questions and Z-test for the hypotheses.

# Results

**Research Question 1:** What types of resource wastages in public secondary schools in Rivers State?

Items		Urban		Rural		$\overline{X}\overline{X}$	Rank	Remark
		Principals		Principals			Order	
		$\overline{x}$	SD	$\overline{x}$	SD			
1	Repetition of classes	3.10	1.17	2.78	1.15	2.94	5 <sup>th</sup>	Agreed
2	Failure in school	3.12	1.28	2.83	1.17	2.98	$4^{\text{th}}$	Agreed
3	Premature school leaving	3.14	1.29	2.83	1.17	2.99	3 <sup>rd</sup>	Agreed
4	Under performance in education	3.17	1.30	2.87	1.18	3.02	2 <sup>nd</sup>	Agreed
5	Under achievement among students.	3.10	1.28	2.67	1.13	2.89	6 <sup>th</sup>	Agreed
6	Overstaff in some subject areas	3.26	1.35	2.98	1.22	3.12	1 <sup>st</sup>	Agreed
	Total	18.89	7.67	16.96	7.02			
	Average	3.15	1.28	2.83	1.17			

Table 1. Mean  $(\bar{x})$ , standard deviation (SD), and rank order on types of resource wastages in public secondary school

From the table above, all the mean items were accepted by the respondents as the types of resources wastages in public secondary schools in Rivers State. This is because the mean items for both urban (3.15) and Rural (2.83) principals were above the criterion mean of 2.50. This implies that the respondents agreed that repetition of classes, dropout of school, lack of access to higher education, inability to prevent students from premature withdrawal, spending meaningless time in schools and over staff in some subject areas are various types of resources wastage in public secondary schools in Rivers state Also, the respondents identified

overstaff in some subject areas as the most common resource wastage seen in public secondary schools.

**Research Question 2:** What is the level of resource wastages in public secondary schools in Rivers State?

Items		Male		Female		XX	Rank	Remark
			Principals		Principals		Order	
		$\overline{x}$	SD	$\overline{x}$	SD			
6	Students dropout	3.19	1.31	2.74	1.14	2.97	3 <sup>rd</sup>	High
7	Students	3.10	1.28	2.67	1.13	2.89	6 <sup>th</sup>	Very
	premature							Low
	withdrawal							
8	Teachers attrition	3.26	1.35	2.78	1.15	3.02	$2^{nd}$	High
9	Physical facilities	3.17	1.30	2.74	1.14	2.96	$5^{\text{th}}$	Low
	abandonment							
10	Improper	3.23	1.34	2.70	1.14	2.97	$3^{\rm rd}$	High
	utilization of							
	fund allotted							
11	Lack of proper	3.14	1.29	2.98	2.98	3.06	1 <sup>st</sup>	Very
	accountability of							High
	fund.							
	Total	19.09	7.87	16.61	6.92			
	Average	3.18	1.31	2.77	1.15			

Table 2. Mean ( $\overline{x}$ ), standard deviation (SD) and Rank order on the level of wastages in
public secondary schools in Rivers State

From the above, all the mean items were accepted by the respondents as the level of resource wastages in public secondary schools in Rivers state. This is because, the entire mean items for both urban (3.18) and Rural (2.77) principals were above the criterion of 2.50. Therefore, the respondents agreed that student dropout, student's premature withdrawal, teachers attrition, physical facilities abandonment, improper utilization of fund, and Improper fund accountability are levels of resource wastage in public secondary schools. Also, lack of proper accountability of fund was accepted as the highest level of resource wastage in public secondary schools.

## **Research Hypotheses**

The null hypotheses formulated for the study were tested by means of Z-test analysis, which is a test of difference of mean

**HO**<sub>1</sub>: There is no significant difference between the mean scores of urban and rural principals on the types of resource wastage in public secondary schools in Rivers state.

 Table 3. Result of urban and rural principals on the types of resource wastages in public secondary schools.

Principals	Ν	$\overline{X}$	SD	DF	Level of sig	Z –cal	Z- critical	Decision
Urban	78	3.15	1.28	1.22	0.05	1.42	1.96	Accept
Rural	46	2.83	1.17					$H0_1$

The result from the above table revealed that the z-calculated (1.46) value is less than Zcritical (1.96) at 0.05 level of significant from the decision (z- cal< z-critical) the null hypothesis is accepted. Therefore, there is no significant difference between the mean scores of urban principals and rural principals on the types of resource wastages in public secondary schools in Rivers state.

**HO<sub>2</sub>:** There is no significant difference between the mean scores of urban and rural principals on the level of wastage in secondary schools.

				schools.				
Principals	Ν	$\overline{X}$	SD	DF	Level	Z –cal	Z-	Decision
					of sig		critical	
Urban	78	3.18	1.31	1.22	0.05	1.82	1.96	Accept
Rural	46	2.77	1.15					$H0_2$

Table 4.	Result of urban an	d rural principals on	the level of	wastage in secon	dary
		schools.			

The result from the above table revealed that the z-calculated (1.82) value is less than zcritical (1.96) at 0.05 level of significance. From the decision (z-cal < z-critical), the null hypothesis is accepted. Therefore, there is no significant difference between the mean scores of urban principals and rural principals on the level of wastage in secondary school.

# **Discussion of Findings**

# **Types of Resource Wastages in Public Secondary Schools**

From the study, the respondents agreed that repetition of classes, failure in school, premature school leaving, underperformance in education, underachievement among students and over staff in some subject areas are various types of resources wastage in public secondary schools in Rivers state Also, the respondents identified overstaff in some subject areas as the most common resource wastage seen in public secondary schools.

Duze (2011) referred to educational wastage as failure in the system. They further stated that educational wastage occurs in five dimensions and it includes; when provision is not made for universal education, when the system fails to achieve its objectives, when the system fails to children into training, when the system fails to hold the children it has admitted and when the system fails to set the appropriate objective for guidance.

Enaohwo (1990), agreed with the findings of this study when he identified that inadequate number of trained and qualified manpower, lack of continuity caused by retirement of teachers and inefficiency and ineffectiveness among teachers who were supposed to have mastery of their subject area and be role models. He further emphasized that educational wastage occurs when students withdraw prematurely from school, repeat classes, etc. This is in line with the findings of the present study. This implies that, when all the wastages identified in this study are managed, quality delivery in education becomes feasible.

# The Level of Resource Wastage in Secondary Schools

From the study, the respondents agreed that student dropout, students premature withdrawal, teachers attrition, physical facilities abandonment, proper fund allotted utilization, and proper fund accountability are levels of resource wastage in public secondary schools. Also, improper fund accountability was accepted as the highest level of resource wastage in public secondary schools, Tahir (2003) agreed with the outcome of this study, he revealed the

measurement of wastage by stating that the levels of wastage in education can be determined by measuring educational output as well as quantifying the relationship between inputs and outputs. Edem (1987) supported the findings of Hyderabad by saying that it is one of the best tools in measuring wastage particularly when educational wastages are in forms of repetition of classes, withdrawal from school and unsuccessful completion of an educative process among others. Eleazu (1994) did not differ from Edem when he stated that after the identification of repeaters for each grade has been done, it becomes very easy to compute the actual level of wastage. The implication of the findings is that the efficiency and the output from students will determine the level of wastage of resources in education.

# Conclusion

The study therefore concludes that identifying the types of wastage and the level of wastages will enhance the overall management of resource wastage for quality educational delivery in public secondary schools in Rivers state.

## Recommendations

Based on the findings of this study, the following were recommended.

- i) School administrators should ensure that all the types of wastages that have been identified in this study, especially overstaff in some subject areas should be avoided.
- ii) School administrators should ensure that only the adequate number of students needed in their school are admitted per term in other to enhance students interest in learning in public secondary schools in Rivers State.

# **Conflicts of interest**

The authors declare no conflicts of interest.

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