Assessment of educational resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis, Rivers State

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ASSESSMENT OF EDUCATIONAL RESOURCES FOR IMPROVED TEACHING AND LEARNING IN GOVERNMENT-OWNED SENIOR SECONDARY SCHOOLS IN PORT HARCOURT METROPOLIS, RIVERS STATE

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Abstract

This study assessed educational resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis, Rivers State. A descriptive survey design was adopted. The population of the study was 55,188 (1,899 teachers and 53,289 students) in all the 39 public senior secondary schools in Rivers Port Harcourt Metropolis, Rivers State (Rivers State Senior Secondary Schools Board, Port Harcourt, 2022). The sample was 400 respondents (120 teachers and 280 students). A simple random sampling technique was used for sample selection. Assessment of Educational Resources Questionnaire developed by the researchers was used for data collection. An expert in measurement and evaluation and a public-school principal in Port Harcourt Metropolis determined the face and content validity. The Cronbach Alpha method was used to establish reliability coefficients of 0.74, 0.70 and 0.72 for the three clusters of the questionnaire. Research questions were answered with mean, frequency count, and percentage, while hypotheses were tested with Independent sample t-test at a 0.05 level of significance. Results showed that educational material resources are available to a high extent for teaching and learning, and that a greater percentage of teachers in government-owned senior secondary schools in Port Harcourt Metropolis are not qualified for teaching based on teaching qualifications. It was recommended, among others, that teachers without teaching qualifications for teaching.

Keywords: Assessment, Educational Resources, Human Resources, Material Resources, School System

Introduction

In every learning environment, educational resources occupy significant space, which makes the educational system functional. Educational resources are necessary for effective teaching and learning and the improvement of students' learning outcomes. Educational resources are materials like school buildings, equipment, classroom facilities, furniture, infrastructural facilities, audio-visual aids, information and communication technology (ICT), libraries, laboratory materials, and human resources such as teaching and non-teaching staff, which must be fully or partially provided and utilized in a school for teaching and learning to meet stakeholders expectations in terms of improving students' skills, abilities, and performances. Agabi (2010) divided educational materials into four categories: people, things, space, and money. Generally, educational materials can be classified as human resources, material resources, or financial resources (funds), but the focus here is on material and human resources.

Material resources refer to classroom facilities, furniture, infrastructural facilities, audio-visual aids, information and communication technology (ICT), laboratory materials, libraries, instructional aids, and general school materials, which are fundamental enablers of effective teaching and learning. Basic educational material resources are pivotal for teachers to drive home their lessons to the point that every student will cope with and understand the content or subject matter of the lesson. Nevertheless, there has been an outcry by some parents and school managers about the poor conditions of school buildings and teaching aids, among other materials, in Port Harcourt Metropolis, which could have affected the students' academic performance. Onyene in Adeyerno (2010) described educational resources as materials that are essential supplements to teaching and represent a body of needed teaching and learning information that reduces the workload of the teacher in the classroom. Akisanya (2010)

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explained that the purpose of any school depends on the sufficient supply and utilization of physical assets and others as they enhance teaching and learning. Faronbi (1998) noted that an affluent society will provide effective schools with top-notch lecturers and suitable learning facilities.

Human resources in the school include non-teaching and teaching staff, through whom other school or educational resources are put to effective use for the achievement of educational objectives in the school. Human resources refer to the students, teaching staff, and non-teaching staff who play various roles in the process of achieving educational goals in the school. Material resources, on the other hand, are physical assets that are utilized for efficient teaching and learning processes, such as charts, textbooks, audio-visuals, maps, and online educational materials, including computers, multimedia, radio, tape recorders, televisions, and videotape recorders. However, to increase the availability of educational resources in the educational system, efforts must be made towards routine school assessment to ascertain the extent to which the fundamental educational resources are available, accessible, sufficient, and utilized.

Assessment in a school setting can be defined as a systematic investigation and documentation of school resources, students' records, and processes for effective teaching and learning and decision-making about the quality of the school in terms of students, teachers, and management. Organizing and measuring data and transforming it into a form that can be used to make judgments (evaluations) is the procedure of assessment (Asuru, 2015). Afemikhe et al. (2016) noted that assessment encompasses the whole process of gathering data to inform judgments regarding the student, the instructor, the teaching environment, the school, the curriculum, society and educational policy in general. As a continual process, it involves a methodical approach towards acquiring, analyzing, and interpreting evidence to measure how effectively students' learning meets expectations. The information gathered from the assessment of schools might be used to enhance school administration and students' academic achievement. In this study, however, efforts are being made towards assessing the availability and utilization of material resources and teachers' quality (human resources) in Port Harcourt Metropolis, Rivers State.

The availability of educational instructional facilities and equipment encourages student motivation, improves teaching effectiveness, and fosters teacher productivity. According to Onyejiemezie (2002), learning that takes place in an environment devoid of pertinent activities and practical experiences would not result in any meaningful education or transfer regarding what has been learnt. Thus, educational resources are not only expected to be available in the school but should be utilized by teachers and learners (students) for improved teaching and learning. Sheu and Ijaiya (2016) examined the impact of resource accessibility on the performance of teachers in preschool instruction and found that resource accessibility and utilization of educational materials by high school economics instructors in Kwara State, Nigeria, and found that there were differences between teachers' and students' perceptions of the accessibility of educational resources for the teaching of economics in Kwara State's senior secondary schools (Okendu, 2012). Akinsanya (2010) observed that both material and human resources were lacking and where they were satisfactory they were not all around used in those two sorts of schools. Suleiman (2014) found that senior schools in Kaduna State Government ought to lay out a reading material and instructive assets dissemination strategy to guarantee equivalent dispersion proportion to each understudy across the State.

In the establishment of a school, adequate planning and development of human resources are essential ingredients for its survival to ensure that a specific number of employees with the required skills needed for the job are made available and placed on the right job at the appropriate time (Ogunsaju, 2000). The quality of teaching staff (teachers) matters a lot in the utilization of material resources for effective instructional delivery and improvement of students' learning outcomes. A quality teacher in this digital world must be ICT-driven, knowledgeable in his/ her field of study, skillful, committed, resourceful, student-friendly and goal-oriented in addition to possessing teaching qualifications to attain the educational goals in the classroom. For the targets or objectives of teaching and learning to be reached, Anderson (2012) opines that a good teacher must have the information and abilities necessary to do so, as well as the ability to apply them correctly. It is obvious from the foregoing that educational system can be said to be functional. The educational resources which encompass financial, material and human resources are supposed to be well mobilized and put into use for effective teaching and learning. Educational or school resources es play a pivotal role in the school system because according to Owoeye (2011), they serve as potent factors in quantitative and qualitative education. Also, educational resources help to facilitate teaching and learning, as well as enhance students' learning outcomes.

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It is unfortunate to note that despite the importance of educational resources in the school system, there seems to be an obvious challenge in the provision of school material resources in various Local Government Areas in Rivers State as some of the public schools are left with dilapidated buildings, lack of library and laboratory facilities among others. Some schools might also have a shortage of teachers because, since 2013, there has not been the employment of teachers in the state while the old ones retire every month without replacement. This situation could affect the teachers' productivity and the level of success of the students in academics which are based on the extent of accessibility, sufficiency, and use of current educational resources (Mgbor, 2005). This research aimed to ascertain whether educational resources are available and utilized for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis, Rivers State. Specifically, the study sought to:

- a. Find out how many material resources are available for improved teaching and learning in governmentowned senior secondary schools in Port Harcourt Metropolis.
- b. Examine material resources utilization for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.
- c. Find out how qualified the teachers are for teaching in government-owned senior secondary schools in Port Harcourt Metropolis based on teaching qualification.

Research Questions

The study was led by the following research questions:

- 1. To what extent are material resources available for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis?
- 2. To what extent are material resources utilized for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis?
- 3. To what extent are the teachers qualified for teaching in government-owned senior secondary schools in Port Harcourt Metropolis based on teaching qualification?

Hypotheses

The following null hypotheses were tested at a 0.05 level of significance:

- 1. Teachers and students do not differ in their mean ratings on the availability of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.
- 2. Teachers and students do not differ in their mean ratings on the utilization of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

Materials and Methods

The research design for the study was a descriptive survey. According to Dike (2017), "a descriptive survey study design aims to collect and analyze data on a social institution, an occasion, a group, or an". This study's research design is ideal since it evaluated the availability and use of resources for enhancing teaching and learning in senior secondary schools in Port Harcourt Metropolis. The population was 55,188 (1,899 Teachers and 53,289 Students) across the 39 public senior secondary schools in Port Harcourt Metropolis. 400 respondents (280 Students and 120 Teachers) participated in the study. Taro Yamane's sample formula was used to obtain a sample of 397 but the researchers purposely increased it to 400 for better representation of the target population. 10 schools in Port Harcourt Metropolis were randomly chosen for the study (5 in Obio/Akpor and 5 in Port Harcourt Local Government Areas). The 120 teachers (12 in each of the 10 schools) and 280 students (28 in each of the 10 schools) were chosen using a sample random technique. The researchers developed an instrument titled: Assessment of Educational Resources Questionnaire (AERQ) for data collection. The instrument has sections A, B and C. Section A focuses on demographic data, Section B on materials resources availability and Section C centres on the utilization of material resources. Sections B and C consisted of 30 items (15 items each) answered by both teachers and students. The instrument was developed using a modified four-point Likert scale with a Very High Extent receiving four points, a High Extent receiving three points, a Low Extent receiving two points, and a Very Low Extent receiving one point. The instrument was handed to a principal of a public senior secondary school in Port Harcourt Metropolis and a measurement and evaluation specialist who checked the items for clarity, relevance, quality, and appropriateness to determine the face and content validity. This procedure is appropriate because face validity is assessed through an examination of the items rather than through the use of statistical analyses (Obilor, 2018). Through the Cronbach Alpha method with the aid of SPSS software, the instrument yielded reliability

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coefficients of 0.74 and 0.72 for Availability of Material Resources and Utilization of Material Resources with 0.73 for the entire instrument.

Results

Research Question 1: To what extent are material resources available for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis? **Table 1: Mean Ratings of Respondents on Extent of Availability of Material**

DIC 1.	Mean Katnigs of Kespondents on Extent of Availability of Material
	Resources for Improved Teaching and Learning in Government-Owned
	Senior Secondary Schools in Port Harcourt Metropolis

S/N	Items	Teac	Teachers						
		(n = 120)			(n = 280)				
		\overline{X}	SD	Remarks	\overline{X}	SD	Remarks		
1.	Computer room	2.02	0.62	Low Extent	2.06	0.67	Low Extent		
2.	School Library	2.51	0.74	High Extent	2.59	0.80	High Extent		
3.	School Laboratory	2.74	0.60	High Extent	2.79	0.66	High Extent		
4.	Counselling office	2.21	0.62	Low Extent	2.25	0.57	Low Extent		
5.	Audio-visual materials	2.65	0.60	High Extent	2.58	0.54	High Extent		
6.	Whiteboard/marker	3.54	0.74	High Extent	3.50	0.69	High Extent		
7.	School bell	3.87	0.52	High Extent	3.80	0.50	High Extent		
8.	Sports facilities	2.87	0.63	High Extent	2.92	0.68	High Extent		
9.	School farm	2.58	0.60	High Extent	2.62	0.66	High Extent		
10.	Classroom furniture	2.30	0.52	Low Extent	2.37	0.56	Low Extent		
11.	Staff room/ furniture	2.64	0.64	High Extent	2.57	0.61	High Extent		
12.	Blackboard/chalk	2.75	0.54	High Extent	2.81	0.60	High Extent		
13.	Toilet facilities	2.65	0.76	High Extent	2.71	0.81	High Extent		
14.	School registers	3.90	0.80	High Extent	3.87	0.76	High Extent		
15.	Good classroom block	2.64	0.65	High Extent	2.67	0.69	High Extent		
	Grand Mean	2.79	0.64		2.81	0.65			

Source: Field Data, 2023.

* Criterion Mean = 2.50

Data in Table 1 reveals the average assessments of respondents on availability of material resources for improved teaching and learning in Port Harcourt Metropolis Results in Table 1 shows that items 1, 4 and 10 had mean ratings of the respondents below the criterion mean (2.50), while the rest 12 items (items 2, 3, 5, 6, 7, 8, 9, 11, 12, 13, 14 and 15) had mean ratings higher than the mean criterion (2.50) and remarked as high extent. With the grand mean of 2.79 for teachers and 2.81 for students on all the listed items (material resources), it was deduced that material resources are highly available for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

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Research Question Two: To what extent are material resources utilized for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis?

S/N	Items		ropolis Students				
		(n = 120)					
		\overline{X}	SD	Remarks	\overline{X}	SD	Remarks
16.	Computer room	2.09	0.47	Low Extent	2.16	0.51	Low Extent
17.	School Library	2.62	0.70	High Extent	2.52	0.63	High Extent
18.	School Laboratory	3.29	0.54	High Extent	3.35	0.60	High Extent
19.	Counselling office	2.29	0.68	Low Extent	2.20	0.63	Low Extent
20.	Audio-visual materials	2.60	0.55	High Extent	2.63	0.56	High Extent
21.	Whiteboard/marker	2.66	0.57	High Extent	2.82	0.63	High Extent
22.	School bell	3.94	0.58	High Extent	3.85	0.51	High Extent
23.	Sports facilities	3.25	0.65	High Extent	3.18	0.60	High Extent
24.	School farm	2.53	0.61	High Extent	2.64	0.70	High Extent
25.	Classroom furniture	2.66	0.55	High Extent	2.60	0.53	High Extent
26.	Staff room/ furniture	3.40	0.64	High Extent	3.60	0.71	High Extent
27.	Blackboard/chalk	3.54	0.50	High Extent	3.64	0.54	High Extent
28.	Toilet facilities	2.86	0.78	Low Extent	2.76	0.83	High Extent
29.	School registers	3.75	0.62	High Extent	3.90	0.71	High Extent
30.	Classroom block	2.99	0.79	High Extent	2.92	0.74	High Extent
	Grand Mean	2.96	0.62		2.98	0.63	

Table 2: Mean Ratings of Respondents on Extent of Utilization of Material
Resources for Improved Teaching and Learning in government-owned

Source: Field Data, 2023.

* Criterion Mean = 2.50

Material resources utilized for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis are shown in Table 2. According to the data in Table 2, only 3 of the 15 items (items 16, 19 and 28) regarding the use of material resources for enhancing effective teaching and learning in government-owned senior secondary schools received mean ratings below the mean criterion (2.50). However, the respondents' mean ratings on 12 items (items 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 29 and 30) are above the 2.50 criteria mean; as a result, they were noted as being of a high extent. Thus, it was deduced that the educational material resources are highly used for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis based on the high grand means of 2.96 and 2.98 for teachers and students respectively, on the items.

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Research Question Three: To what extent are the teachers qualified for teaching in government-owned senior secondary schools in Port Harcourt Metropolis based on teaching qualification?

Qualification	No. of Teachers	% of Teachers	Remarks
Bachelor's Degree in Education or PGDE	755	45	Highly Qualified
Bachelor's Degree in Arts/Science/B.Tech/HND without PGDE	934	55	Not Qualified
Total	1689	100	

Table 3: Number and Percentage of Teachers Qualified for Teaching in Government
Owned Senior Secondary Schools in Port Harcourt Metropolis Based on Teaching Qualification

Source: Rivers State Senior Secondary Schools Board, Port Harcourt, March 2023. **Note:** LGAs sampled in Port Harcourt Metropolis: Port Harcourt and Obio/Akpor

Table 3 reveals the number and percentage of teachers that are qualified for teaching in teaching in senior secondary schools in Port Harcourt Metropolis based on teaching qualification. Data in Table 2 shows that there are 1,689 teachers in government-owned senior secondary schools in Port Harcourt Metropolis. Out of the 1689 teachers, only 45% which is 755 teachers hold a Bachelor's Degree in Education or Postgraduate Diploma in Education (PGDE) which is the required teaching qualification in Nigerian senior secondary schools, while 55% (934) of the teachers hold Bachelor Degree in Arts/Science/B.Tech/HND without PGDE. This implies that out of the 1,689 teachers in public senior secondary schools in Port Harcourt Metropolis, 755 (45%) are highly qualified while 934 (55%) are not qualified for teaching in government-owned senior secondary schools in Port Harcourt Metropolis based on teaching qualification. This indicates that a greater percentage of teachers in government-owned senior secondary schools in Port Harcourt Metropolis.

Hypotheses Testing

The following null hypotheses were tested at a 0.05 level of significance:

Hypothesis One: Teachers and students do not differ in their mean ratings on the availability of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

Table 4: Independent Sample t-test Analysis on Mean Ratings of Teachers and Students on Availability of
Material Resources for Improved Teaching and Learning in Government-Owned Senior Secondary Schools
in Port Harcourt Metropolis

Respondents	Ν	Mean	SD	df	Т	Sig.	a	Decision
Teachers	120	2.79	0.64	_	_	_		
				398	0.283	0.777	0.05	H0 Accepted
Students	280	2.81	0.65					

Source: Field Data, 2023.

From the outcomes in Table 4, it can be seen that at 0.05 and df = 398, t-value = 0.283 and P-value = 0.777 indicating that the t-value of 0.283 is less than the P-value 0.777. Since at 0.05 level of significance, the t-value (0.283) < P-value (0.777), the null hypothesis was retained (accepted). Therefore, teachers and students do not differ in their mean ratings on the availability of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

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Hypothesis Two: Teachers and students do not differ in their mean ratings on the utilization of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

Schools								
Respondents	Ν	Mean	SD	df	t	Sig.	a	Decision
Teachers	120	2.96	0.62					
				398	0.292	0.770	0.05	H0 Accepted
Students	280	2.98	0.63					
Source: Field Da	ata 2023							

Table 5: Independent Sample T-test Analysis on Mean Ratings of Teachers and Students on Utilization of Material Resources for Improved Teaching and Learning in Government-Owned Senior Secondary

Source: Field Data, 2023.

Table 5 shows that at a 0.05 level of significance and degree of freedom (df) of 398, the t-value = 0.292 is less than the P-value = 0.770. Since at 0.05 level of significance and df = 398, the t-value (0.292) < P-value (0.770) the null hypothesis which states that teachers and students do not differ in their mean ratings on utilization of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis was therefore accepted. This implies that the respondents (teachers and students) agree on the utilization of material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.

Discussion

Results for research question one as presented in Table 1 showed that material resources which include a library, laboratory, audio-visual materials, school farm, sports facilities, and classroom building among other basic educational material resources are to a high extent, available for improved teaching and learning in governmentowned senior secondary schools in Port Harcourt Metropolis. This finding could be because all stakeholders in education attach special importance to educational material resources because they can easily capture the attention of learners as well as facilitate teaching. To corroborate this result, Mmari (2008) had earlier emphasized that material resources such as classroom facilities, furniture, infrastructural facilities, audio-visual aids, Information Communication Technology (ICT), library, laboratory materials, instructional aides, etc are meant to be available for teachers' use, and for the improvement of students' skills, ability to reason and make informed decision about what is going on in the global village. However, Usman (2016) asserted that "there is a significant gap between teachers' and students' perceptions of the accessibility of educational resources for teaching in senior secondary schools in Kwara State, Nigeria".

From the results in Table 2 for research question two, it was found that the available educational material resources are highly utilized for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis. Hypothesis two further showed that teachers and students do not differ in their mean ratings on utilization of educational material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis. This result could be because of the significant role which educational materials play in not only facilitating teaching and learning but also in registering content and getting the learners involved in active learning. School resources according to Akinsolu (2012) are vital for educational system production function. Olagunju and Abiona (2008) reiterated the need for the resources that are available in the classroom should be used in a way that helps students develop the desired learning skills. In addition to assisting the student in learning and achieving successfully, educational materials also assist the instructor in carrying out their duties (Burkley et al., 2004).

From the data for research question three, as shown in Table 3, it was observed that a greater percentage of teachers in government-owned senior secondary schools in Port Harcourt Metropolis are not qualified for teaching based on teaching qualifications. Contrarily to this finding, Oladimeji and Ogunyebi (2019) carried out a study on evaluation of the Universal Basic Education (UBE) programme implementation in South-West, Nigeria and indicated that the programme's effectiveness is enhanced by the appropriate supply of competent instructors. Anderson (2012) stated that a successful teacher must have the knowledge and abilities required to achieve the goals and must be able to apply those abilities effectively. Aggarwal (2015) listed the criteria used for assessment of teachers' effectiveness as "teachers' content knowledge, teaching skills and communication skills among others".

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Conclusion

The study has clearly shown that the place and impact of educational resources in the school system cannot be overlooked if the system must produce products that will meet the demands and expectations of society. However, this study showed that despite the importance of education resources for improved teaching and learning, a greater percentage of available teachers are not qualified for teaching based on teaching qualification which contributes to their ineffectiveness in teaching and driving students to learning. With regular assessment of educational resources, there is bound to be improvement in teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis, Rivers State.

Recommendations

The following recommendations were made:

- 1. There should be improvement in the provision of quality educational material resources for improved teaching and learning in government-owned senior secondary schools in Port Harcourt Metropolis.
- 2. Available material resources should be properly utilized to achieve improvement in teaching and learning.
- 3. Teachers without teaching qualifications should be encouraged to attend in-service teacher education programmes to obtain the requisite qualification for teaching in government-owned senior secondary schools in Port Harcourt Metropolis.

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