

# RESOURCE INEQUALITY AND QUALITY OF SECONDARY EDUCATION: A STUDY OF UNEVEN POLICY IN RURAL SCHOOLS OF SOUTHWESTERN NIGERIA

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## Abstract

Recent Studies have investigated the influence of the resource factor on the quality of secondary education (QSE) in Nigeria. However, the research on the resource factor as a predictor of quality of secondary education in rural communities of Southwestern Nigeria remains scanty. This study, therefore, investigated the contributions of the resource factor (RF: Resource Adequacy-RA and Resource Utilization-RU) to QSE in rural communities of Southwestern Nigeria (RCSN). The study was located within a pragmatic paradigm that incorporated the convergent parallel design in the collection, analysis and interpretation of the qualitative and quantitative data. The multi-level mixed methods sampling technique was adopted in selecting 467 secondary school graduates, while total enumeration technique was adopted in selecting 134 teachers. Six participants for the Key Informant Interviews comprised three principals and three senior officials from the Teaching Service Commission and Ministry of Education from three selected states in southwestern Nigeria. Two research questions were raised, and one hypothesis was formulated for the study. Two research instruments, namely, the Secondary School Graduate Aptitude Test (SSGAT) and Resource Factor Teachers' Questionnaire (RFTQ), with reliability coefficients of 0.715 and 0.853, respectively, were used for the study. Quantitative data were analyzed using descriptive statistics and Pearson Product Moment Correlation, while qualitative data were analyzed with content analysis. The resource factor with resource adequacy ( $\bar{x} = 2.50$ ) and resource utilization ( $\bar{x} = 2.77$ ) influenced QSE. The resource factor ( $r=0.75$ ) had a negative significant relationship with QSE. The study affirmed that addressing resource inequality in rural communities is urgently required to stem the ebbing tide of quality secondary education in Nigeria.

**Keywords:** resource adequacy, quality secondary education, resource utilization, rural communities.

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## 1. Introduction

Educational resources are a great contributing factor to the success of education across the globe. It is pivotal to teaching-learning processes. Its roles can be likened to the importance of blood in a human body system. Material, financial and human resources are all crucial to the survival of an educational system and in producing a desired outcome. Department for International Development [1] maintains that the importance of school facilities in relation to quality education cannot be downplayed. It is crucial to effective teaching and learning processes. The difference in school infrastructures has a direct bearing on the difference in educational achievement. The facilities that impact education are classrooms, libraries, students' hostels, clinics, toilets and laboratories, among others.

Osaat [2] contends that delivering quality education will be hard to attain without a conducive and lively environment where the learners are emotionally prepared and enthusiastic to learn. In other words, quality education is dependent on the quality and quantity of facilities in a school. The Central Bank of Nigeria [3], too, affirmed it that several secondary schools in Nigeria suffer from inadequacy of facilities, such as laboratories, classrooms, textbooks, chairs and tables, which deprive students of comfortable infrastructure to learn. Unfortunately, financial and resource allocation to the education sector has been consistently low despite its fundamental role in human resource development in Nigeria. Nigerian budgetary allocation to education compared to some African countries like Angola, South Africa, Malawi, Kenya and Botswana, is grossly inad-

equates [3–5]. Resources are critical to the realization of quality education at secondary level. Yet, as [6] observed, the dearth of facilities in Nigerian secondary schools include learning infrastructure, inadequate classroom and laboratories. Many schools lack access to water and other essential facilities for effective teaching and learning.

Moreso, while the supply of educational resources is the responsibility of the state and may appear intangible, its acute shortage in the school system severely influences the performance of both the teachers and students. Thus, the quality of input (human and material resources) in the educational system determines the attainment of educational goals, which are the output [7]. Okeke and Okoye [8] also noted that inadequacy of qualified teachers with pedagogical training is the bane of the current state of education as those assigned to teach some course contents that require certain practical skills only delivered it on a peripheral scope. Olelewe, Nzeadibe and Nzeadibe [9], too, contended that the realization of educational objectives is directly proportional to the extent of availability and utilization of educational resources in schools.

Despite resources being pivotal to achievement of quality education, the resource allocations are not evenly distributed. This was reported by the [10] in a study on provision of textbooks and physical resources in secondary schools in sub-Saharan African countries. Meanwhile, rural secondary schools have an acute shortage of facilities and textbooks compared to urban schools. Lewin [11] maintained that learning materials, despite being central to the achievement of educational outcomes, vary widely in terms of both availability and quality. This suggests inadequacy of supply of quality learning resources to schools. Hoop [12] also maintained that education in most Sub-Saharan countries is in dire need of educational resources. The problem of adequacy and utilization of educational materials and facilities, such as textbooks, toilets and instructional materials continuously, appear to be affecting the quality of secondary education in rural communities. Hence, school libraries and other infrastructural facilities should not be ignored if quality education is to be attained [13]. Thangeda, Baratiseng and Mompaty [14] affirm that teachers are fundamental to quality education, and to ensure effective teaching, the necessary facilities should be put in place to achieve educational goals. However, Rice and Schwartz [15] noted that despite the progress that has been made in the study of productivity in education, much remains to be learned in education production functions about what quantities of resources are needed, and under what circumstances such resources will lead to productive learning. Meanwhile, availability, adequacy and utilization seem to be the tripod in educational resources, on which several research projects have been conducted. An example is [16] who conducted a study on availability, adequacy and utilization of resources for effective teaching of Physical Education in secondary schools in Enugu State. Another study, conducted by [17], examined availability, adequacy and utilization of educational resources in the teaching of Physics. However, this study focuses on the adequacy and utilization of educational resources.

This study, therefore, seeks to investigate the relationship between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria. To achieve the purpose of this study, two research questions were raised; and one hypothesis was formulated and tested at the 0.05 level of significance as follows:

1. What is the extent of adequacy of resources available for the quality of secondary education in rural communities of Southwestern Nigeria?
2. To what extent are the resources being utilized for the quality of secondary education in rural communities of Southwestern Nigeria?
3. There is no significant relationship between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria.

### **1. 1. Literature Review**

#### **Educational Resources**

Educational resources include human and material resources, drawn or photographed, built but manually or electrically operated, books and other useful materials that ensure effective teaching and learning in schools. These materials help to facilitate school administration [18]. Educational resources include the teachers, specimen or models, chalk and display boards, school buildings and other materials like exercise books, pens and pencils, which learners are expected to

have [19]. Educational resources were classified by Agabi [20] into four categories, namely, human, material, physical and financial resources [21] and the [19] provide the following explanations:

A) Physical Resources: These are the tangible resources, provided to an educational institution. They include classrooms, staff offices, health centres, machines, vehicles, laboratories, libraries and so on, which can contribute to the achievement of educational goals. It is a key determinant of educational outcomes.

B) Material Resources: These include resources, such as textbooks, maps, charts, video tapes, radios and televisions. Other educational material resources are consumables, such as writing and printing papers, crayons, pencils, erasers and so on [9]

C) Financial Resources: These are funds, needed for the running of school administration, and are seen as core ingredients that are indispensable to the running of the school system. It is necessary for procurement of facilities, acquisition of assets, payment of staff salaries and allowances and meeting other financial obligations, so as to attain educational goals.

D) Human Resources: This is very critical to the success of an educational system because of the indispensable role, played by humans. Human resources within an educational institution include teachers, support staff and host of other interest groups that perform crucial functions at a school.

#### *Resource Adequacy and Quality of Secondary Education*

The adequacy of educational resources for the educational system remains a major issue in Nigeria. Adequacy of human resources means having the right quantity and quality of education personnel. The quantity means the total number of workforce, while quality refers to competency of personnel, engaged in the educational system [22]. The secondary school system in Nigeria bears semblance to the picture of how rural schools appear in poor countries as painted by [23]; they are deprived of educational resources because they are remote from central administration where decisions for allocation are taken and which impacts poorly on the quality of education delivery.

Ojoade [24] affirmed that inadequacy of funding in secondary schools remains the main problem in Nigeria. Maduwesi [25] also established that the adequate availability of educational resources and their proper utilization have been positively correlated with good performance in examination, while poor performance has also been attributed to inadequacies of facilities. Bert [26] used descriptive statistics to carry out research on the impact of school facilities on the learning environment. The results indicated that the quality and adequacy of educational facilities are predictors of student performance, and as a result, poor school facilities negatively affected student learning.

Ogba and Odo [27] adopted a survey research design to examine the availability, adequacy and utilization of learning facilities for teaching of entrepreneurship education in secondary schools in Ebonyi State, Nigeria. A sample of 495 teachers and 90 principals was selected as respondents through a stratified sampling technique. Checklists were employed for data collection and descriptive statistics, used in the analysis of research questions, while hypotheses were tested through multiple regression. The result showed that out of 46 items, listed for the teaching of entrepreneurship education programme in secondary schools, only 21 were available. Hypotheses tested showed that the availability and adequacy of learning facilities for the teaching of the entrepreneurship education programme in secondary schools was significantly dependent on location.

In Nigeria, [28], in an academic paper, which focused on the need for adequate funding of secondary education, alternative sources of funding and mitigating consequences of inadequate funding, affirmed that funding inadequacy is evident through infrastructural decay, low staff commitment and student population explosion, among other factors identified. In the same country, [29] linked the poor academic achievement in low socio-economic status communities to the types of school and facilities available in the schools. Kazeem, Jensen and Stokes [30], on their part, concluded in Nigeria that there is inadequate education and high drop-out rates in rural communities, which perpetuate the low socio class status in such communities.

Another study was carried out in Nigeria by [31] on assessment of the availability of the human and material resources for the implementation of the New Basic Education English Language Curriculum in Kaduna State. A sample of 20 teachers was selected randomly for the study from ten schools. The study revealed that 65 % (the majority) of English teachers were qualified and 35 % were not. The majority of English teachers (65 %) indicated that the required number of teachers,

needed for the teaching of English Language, was inadequate, while the rest (35 %) concurred that the available teachers were inadequate. It was also revealed, that instructional materials and facilities like libraries were in short supply in all the schools, sampled for the study.

#### *Resource Utilization and Quality of Secondary Education*

The adequacy of educational resources to the attainment of educational goals and objectives has been well established in several extant literatures. However, the extent, to which educational resources are utilized, is so crucial to the realization of educational goals and objectives. In other words, the availability and adequacy of resources are not as critical as effective utilization of resources in enhancing the learning outcomes [32, 33].

Ugwuanyi [16] conducted a study to assess the availability, adequacy and utilization of resources for effective teaching of physical education in secondary schools in Enugu, Nigeria. A descriptive survey design was used, while a proportionate random sampling method was employed in selecting 103 physical education teachers from 35 secondary schools. Data were collected through two instruments, developed by the researcher. Data were analyzed with Chi-square and analysis of variance (ANOVA). The findings showed that of all facilities, only soccer fields are found in all schools. Physical education equipment and supplies that are adequately utilized in the schools are soccer balls, volley balls, javelins, shot puts, measuring tapes and first aid boxes. Of all the factors investigated, only inadequate time allotment was found to be inhibiting utilization of physical education teaching resources in the schools.

Mutungwa and Orodho [34] in another study examined the challenges and main coping strategies in resource management and academic performance amongst primary schools in Makindu District, Makueni County, Kenya. A descriptive survey design was adopted and a sample of 250 respondents was drawn from head teachers, teachers, chairpersons of Parents Teachers Associations (PTAs) through purposive and simple random sampling techniques. Interview schedules and questionnaires were used for data collection. The study affirmed the existence of resource management issues, such as inadequate funding, overstretched school facilities and improper utilization of resources.

#### *Policies of Unequal Allocation of Resources in Rural Communities*

Meanwhile, rural space varies in meaning and definition, depending on nations. Some countries employ population criteria with different borderlines, for example 2,500 in Mexico compared to 10,000 in Nigeria [35]. Rural communities are characterised by low quality of life. The quality of accommodation, health care service delivery, education and transport facilities are grossly inadequate. Access to modern services, such as telecommunication or banking services, are either non-existent or very poor. The majority of the rural populace is predominantly farmers and petty traders. Major commercial activities and trading occur at 'farmers' markets' that are mostly held every five days at designated places [36]. Rural communities are less densely populated than the cities because villages or hamlets are spread in large geographical areas, and as a result, secondary schools are located in such a way that students and teachers have to travel considerable distances daily to get to schools. In other words, rural areas are places, fraught with locational disadvantages.

However, access to education opportunities is scanty in rural areas of African countries owing to socio-cultural and economic impediments, and compounded by urban-rural differences, which drive away qualified teachers [37]. The rural-urban disparity is further affected by development policies, which have always favoured urban areas at the expense of rural development. In several instances, rural development policy has fallen victim to the lack of an institutional framework [38].

To date, attempts by various governments in Nigeria to stem the tide of inequalities in rural areas through policies and interventions have not been able to yield desired results; as a consequence, social development and education have both suffered untold neglect, which continually leads to rural-urban drift. Against this backdrop, development and policy makers have argued recently that true development will continue to elude the nation until gaps of development are closed in rural communities [39]. Policy is needed that can optimize education opportunities for all in respect of backgrounds or locations. Education is inversely related to poverty and remains a great weapon for improvement of earnings and enhancement of living standard. This is because the higher the level of education, attained by individuals, the higher the tendency to escape human poverty, which is more pronounced in rural communities [40]. This suggests that both the national and

sub-national governments' rural development interventions are needed, particularly in education and training among the rural dwellers and, most importantly, the youths who will help ameliorate the poor living standard of their parents if given quality education.

### **1. 2. Theoretical Framework**

This study is informed by the general systems theory (GST) based on the observation that some schools improve in learning outcomes, while others do not [41]. Fred and Allan (2008) see a system as a set of interrelated elements working together as a unit to achieve a particular purpose, which includes input, transformation process, output, feedback and the environment. According to Mele, Pels & Polese [43], systems theory is a theory that focuses on interactions of parts in order to understand a whole entity. In essence, it gives insight into dialogue between holism and reductionism. Fred and Allan [42] classify the system into two major types that comprise open and close systems. A close system involves interacting elements without dependence on the outside environment for its survival, while an open system is dependent on the outside environment for its survival. Chandan [44] corroborates it that a system cannot exist independently and must take inputs from other systems, while its outputs become inputs to other systems. The school system falls into open systems, as it always depends on the outside environment for resources and feedback. The raw material for the running of the school is derived from the outside environment. Schools transform inputs from the environment into outputs [45].

In the context of this study, as [46] posits, principals in secondary schools as government representatives have a responsibility to promote the welfare of society and use the inputs that include resources, policies and equipment to produce outputs in the form of learning achievements from students. The GST remains relevant on how inputs could undergo the transformation process to produce output in the form of educated citizens. Feedback is a derivative of output, in other words, the output determines the feedback. The quality of secondary school graduates will determine the feedback from the environment or society. Thus, this theory provides an insight into how inputs (resource factor) influence the quality of secondary education.

## **2. Materials and Methods**

### **2. 1. Study Design**

This study employed a convergent parallel design in the collection of data to get useful information about the contributions of resource factors to the quality of secondary education in rural communities of Southwestern Nigeria. This design enabled the researcher to have access to multiple sources of information that help in having clear insights into phenomena being studied. In this study, the researcher used both quantitative and qualitative methods in order to be able to confirm, disconfirm, cross validate or corroborate the research findings. Hence, multiple data sources helped in getting robust views of the participants in this study.

### **2. 2. Sampling and Sampling Procedure**

The multi-level mixed methods sampling technique was used. Firstly, the researcher used the purposive sampling technique to select three states with the most rural demography that make up 50 % of the six states in the region, namely, Oyo, Ekiti and Osun. At the second stage, a cluster-sampling method was used to select each local government area with the most rural demography across the three senatorial districts of each state from the zone. At the third stage, simple random sampling was used to select a secondary school from each local government area of the senatorial district. Lastly, the proportionate sampling technique was used to select 467 (90 %) of the secondary school graduates from each of the selected schools. The participants for qualitative data, which comprised principals and senior officials from the Teaching Service Commission/Ministry of Education, were purposively selected due to their knowledge of the phenomena under investigation. Hence, six participants were engaged in Key Informants Interview (KII).

### **2. 3. Data Collection Instruments and Procedures**

This current study employs a mixed methods approach to collect both qualitative and quantitative data through questionnaires and key informant interviews. The tools used include Secondary



School Graduates' Aptitude Test (SSGAT), Resource Factor Teacher Questionnaire (RFTQ) and Key Informant Interview guide. Quantitative data were analyzed using descriptive statistics and Pearson Product Moment Correlation, while qualitative data were analyzed with content analysis.

#### 2. 4. Ethical Consideration

The current study followed all the ethical requirements as contained in the Postgraduate Guide of the University of Fort Hare. Thus, the researcher sought ethical clearance from the University of Fort Hare's Research Ethics Committee (UREC). The ethical certificate number HEN011SOKU01 was issued and signed on 13<sup>th</sup> November, 2019 for the study. The researcher further sought and obtained permission from the Teaching Service Commission and Ministry of Education of Ekiti, Oyo and Osun States in Nigeria. In addition, an informed consent was obtained from all the participants in the study.

### 3. Results

#### 3. 1. Research Question 1

What is the extent of adequacy of resources available for the quality of secondary education in rural communities of Southwestern Nigeria?

To answer this research question, **Table 1** presents the summary of data, collected on the adequacy of resources available for the quality of secondary education in rural communities of Southwestern Nigeria.

**Table 1**

Extent of Adequacy of Resources on Quality of Secondary Education

SS/N	Resource Factor	Very Adequate	Adequate	Not Adequate	Mean $\bar{x}$	Std. Dev.
11	Laboratory	7 (5.2 %)	66 (49.3 %)	61 (45.5 %)	2.46	0.801
22	Library	15 (11.2 %)	47 (35.1 %)	72 (53.8 %)	2.51	0.773
33	Block of Classrooms	6 (4.5 %)	34 (25.4 %)	94 (70.2 %)	2.19	0.748
44	Instructional Materials like Charts/Diagram/Pictures	10 (7.5 %)	14 (10.4 %)	110 (82.1 %)	1.91	0.862
55	Toilets	17 (12.7 %)	47 (35.1 %)	70 (52.2 %)	2.49	0.865
66	Textbooks	20 (14.9 %)	50 (37.3 %)	64 (47.7 %)	2.60	0.823
77	Computers	23 (17.2 %)	52 (38.8 %)	59 (44 %)	2.57	0.953
88	Workshop	40 (29.9 %)	56 (41.8 %)	38 (28.4 %)	2.99	0.822
99	Furniture	14 (10.4 %)	34 (25.4 %)	86 (64.1 %)	2.15	0.985
110	Staff offices	22 (16.4 %)	59 (44 %)	53 (39.5 %)	2.60	0.950
111	Boreholes/Well	11 (8.2 %)	68 (50.7 %)	55 (41.1 %)	2.56	0.800
122	Qualified teachers	10 (7.5 %)	58 (43.3 %)	66 (49.3 %)	2.46	0.810
133	Librarian	28 (20.9 %)	83 (61.9 %)	23 (17.1 %)	3.00	0.715
14	Administrative staff	7 (5.2 %)	73 (54.4 %)	54 (40.3 %)	2.54	0.752
	Weighted Average	230 (12.3)	741 (39.5)	905 (48.2)	<b>2.50</b>	<b>0.833</b>

Note: mean value decision range from 1.0 – 2.6 (NA), 2.7 – 4.3 (A), 4.4 – 6 (VA)

**Table 1** shows the extent of adequacy of resources on the quality of secondary education in rural communities of Southwestern Nigeria. Based on the weighted average score of 2.50, which can be rated as 83.3 %, the result confirms that school resources are not adequate in the rural communities of Southwestern Nigeria. This implies that school resources are not adequate in secondary schools in rural communities of Southwestern Nigeria judging by the overall mean value of resource adequacy.

Interviews, held with the Secondary School Principals (**SSP**) and Teaching Service Commission officials (**TCO**), also complement the quantitative data above. The participants provided information on the adequacy of resources and its impacts on the quality of secondary education in rural communities. Their responses are as follows:

**SSP1 commented:**

*In this school and others where I have taught, no adequate resources, very few schools can boast of a standard laboratory. What they ought to see and handle, hardly exist. They only see them in textbooks. This is my sixth year in this school; government has not given me a single science equipment. I don't know if big schools are getting them. No adequate classrooms as well. They are crowded and about 80 students in a classroom. Not enough qualified teachers. The Physics teacher takes Basic Technology/Science. The Christian Religious Studies (CRS) teacher teaches History, Social Study and Civic Education. Generally, teachers do not like to be posted to rural schools. They will go to their political godfathers to influence their posting to town.*

**SSP2 commented:**

*The government is trying in terms of provision of resources. We must be sincere government is really trying in Ekiti State. Government is supplying equipment and computer. I have examples here. There is no way, by which what the government supplies will go round everyone. Even in the universities, they do group work to solve the problem of inadequacy of resources. I recall my day at Obafemi Awolowo University, Ife. It was like that. Due to inadequacy of personnel, teachers who studied related courses are seconded to be teaching related subjects. For instance, Physics or Chemistry teachers can take Integrated Science. It is a common phenomenon. This implies the need for more hands in teaching service.*

**SSP3 noted:**

*Both human and material resources that are available, are put into use, but the resources are not adequate. Educational resources are not adequate. Both human and material resources must be provided both in right quality and quantity. Because we do not want students to suffer, the Physics teacher is helping, especially where we do not have enough Mathematics teachers. Success of secondary education depends on so many factors, such as teaching force, infrastructural facilities, staff motivation, students' motivation/conducive environment.*

**TCO1 revealed:**

*The State Government needs to improve the schools by providing more educational resources and teaching aids for teachers. Teachers are not willing to go to rural schools, but they are being compelled. If government can provide staff quarters and meal allowances, they will be encouraged. Inadequacy of teachers is real. In 2015, we had about 17,000 teachers but now it is about 15,000. That is why Government is proposing to recruit 7,000 teachers and 2,000 non-teaching. The problem of inadequacy led to Physics teachers teaching Mathematics and the reason for planned recruitment in this Oyo State, to put a round peg in a round hole.*

**TCO2 remarked:**

*The resources are not adequate to meet challenges of secondary education. Teachers were ready to stay then when rural allowance was being paid to teachers who were posted to rural schools. There is inadequacy.*

**TCO3 revealed:**

*The major issue is that we have the structure (building) but the facilities/equipment are not adequate. The books in library are outdated, while there are no facilities in laboratory. Due to all these, teachers prefer to stay at the State Capital than being posted here in rural areas.*

It was established from the findings from different participants, that inadequacy of materials and personnel is real. Teachers do not want to be posted to remote and rural communities. They

lobby politicians to get posted to the cities. Even the newly employed only accept to be posted for the time being until they are able to influence their postings back to towns/cities. Teachers' inadequacy is evident in core subjects like Mathematics, Physics and Chemistry. These subjects are handled by those who studied related courses as a means to mitigate the shortages. This is a common phenomenon across the rural schools investigated.

### 3. 2. Research Question 2

To what extent are the resources being utilized for the quality of secondary education in rural communities of Southwestern Nigeria?

To answer this research question, **Table 2** presents the summary of data, collected on the extent of utilization of resources available for the quality of secondary education in rural communities of Southwestern Nigeria.

**Table 2**

Extent of Utilization of Resources on Quality of Secondary Education

SS/N	Utilization of Resources	Over Utilized	Moderately Utilized	Under Utilized	Mean $\bar{x}$	Std. Dev.
11	Laboratory	14 (10.4 %)	83 (61.9 %)	37 (27.7 %)	2.79	0.672
22	Library	12 (9 %)	55 (41 %)	67 (50 %)	2.35	0.944
33	Block of Classrooms	15 (11.2 %)	51 (38.1 %)	68 (50.7 %)	2.31	1.014
44	Instructional Materials like Charts/Diagram/Pictures	16 (11.9 %)	86 (64.2 %)	32 (23.9 %)	2.82	0.713
55	Toilets	23 (17.2 %)	97 (72.4 %)	14 (10.5 %)	3.04	0.606
66	Textbooks	19 (14.2 %)	79 (59 %)	36 (26.8 %)	2.75	0.845
77	Computers	47 (35.1 %)	78 (58.2 %)	8 (6.7 %)	3.28	0.606
88	Workshop	23 (17.2 %)	89 (66.4 %)	22 (16.4 %)	2.95	0.718
99	Furniture	81 (60.4 %)	48 (35.8 %)	5 (3.7 %)	3.56	0.595
110	Staff offices	89 (66.4 %)	38 (28.4 %)	7 (5.2 %)	3.61	0.587
111	Boreholes/Well	78 (58.2 %)	49 (36.6 %)	7 (5.2 %)	3.51	0.646
112	Teachers	98 (73.1 %)	31 (23.1 %)	5 (3.7 %)	3.69	0.568
113	Other personnel	76 (56.7 %)	51 (38.1 %)	7 (5.2 %)	3.51	0.622
<b>1</b>	<b>Weighted Average</b>	<b>46 (34.4 %)</b>	<b>64 (47.7 %)</b>	<b>24 (17.9 %)</b>	<b>2.77</b>	<b>0.703</b>

Note: Mean value decision range from 1.0 – 2.6 (NA), 2.7 – 4.3 (A), 4.4 – 6 (VA)

**Table 2** shows the extent of resource utilization on the quality of secondary education in rural communities of Southwestern Nigeria. Based on the weighted average score of 2.77, which can be rated as 92.3 %, the result confirms that the respondents were of the opinion that the school resources are being utilized in the rural communities of Southwestern Nigeria. Therefore, it can be inferred, that the available school resources are being utilized across the schools in the rural communities of Southwestern Nigeria.

Interviews, held with the Secondary School Principals (**SSP**) and Teaching Service Commission officials (**TCO**), also provide complementary views for the quantitative data. The participants' responses are as follows:



**TCO3 remarked:**

*We use what we have or is provided.*

**SSP2 commented:**

*We are making use of few ones, supplied to us.*

**SSP3 noted:**

*We are able to utilize the available resources. Even N-Power Staff and Parent Teacher Association (PTA) teachers too are deployed to teach students.*

**TCO2 remarked:** *The few available resources are being used adequately.*

It is evident from the findings, that resource utilization is not a major problem in the rural communities. The adequacy of resources as shown above from the responses of the respondents, confirms this.

**Hypothesis 1:** There is no significant relationship between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria.

**Table 3**

Comparison of resource factor and functionality performance

Variable	N	M	SD	R	Sig
Resource factor	601	15.48	29.51	-0.750**	0.000
Quality performance	601	9.12	6.39		

*Note: correlation is significant at 0.01 level (2 tailed)*

**Table 3** shows the estimated mean score for the resource factor and secondary school graduates' quality performance scores, which are 15.48 and 9.12, respectively, while the S.D. are 29.51 and 6.39, respectively. The calculated R-.750 (Sig, .000) shows that there is a significant relationship between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria. Hence, the null hypothesis was rejected. The correlation was negative, which implies that an inverse correlation existed between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria, and the inverse correlation is significant.

#### 4. Discussion

The study determined if the resource factor influences the quality of secondary education in rural communities of Southwestern Nigeria. The findings revealed that resource adequacy had a weighted average score of 2.50 out of a maximum obtainable score of 6.0. Based on the weighted average score, it confirms that school resources are not adequate in the rural communities of Southwestern Nigeria. The adequacy of educational resources to the educational system remains a major issue in Nigeria judging by the result of this study. The current study is therefore similar to [24] who affirmed that inadequacy of funding in secondary schools remains the main problem in Nigeria. Maduewesi [25] as well established that the adequate availability of educational resources and their proper utilization have been positively correlated with good performance in examinations, while poor performance has also been attributed to inadequacies of facilities. This study is similar to that of [26] who used descriptive statistics to examine the impact of school facilities on the learning environment. The results indicated that quality and adequacy of educational resources are predictors of student performance. This study is similar to another study, carried out in Nigeria by [31], on the availability of resources for the implementation of the New Basic Education English Language Curriculum in Kaduna State. The findings revealed that instructional materials and other facilities like libraries were in short supply in all the schools, sampled for the study. The findings from the key informant interviews also corroborate the inadequacy of educational resources in the sampled schools. SSP1 revealed as follows: "In this school and others where I have taught, no adequate resources, very few schools can boast of standard laboratory. What students ought to see and handle, hardly exist. They only see them in textbook.". SSP3, too, lent credence to the state of educational resources by revealing that the resources are not adequate in right quality and quantity.

Meanwhile, the findings showed that the utilization of educational resources had a weighted average score of 2.77 out of a maximum obtainable score of 6.0. Based on the weighted average score, the results confirm that the respondents were of the opinion that school resources were being utilized

in the rural communities of Southwestern Nigeria. The interviewees also qualified the resource utilization thus: “the few available resources are being used adequately” (Interviewees TCO2 & SSP2). The current study is in agreement with that of [47] who examined the influence of teaching and learning resources on students’ performance in Kenya in national examination in the Embakasi district. The findings showed that available educational materials were utilized in schools. However, it was established, that physical facilities and human resources are grossly inadequate. This study is also in line that of Ugwuanyi [16] who conducted a study to assess the availability, adequacy and utilization of resources for effective teaching of physical education in secondary schools in Enugu. The findings showed that physical education equipment and supplies were adequately utilized in the schools. This study is also consistent with that of [48] who investigated the impact of resource utilization in education and revealed that resources, provided in most schools in the Mathioya district and Muranga county in Kenya, were utilized. However, this result contradicts the findings of [34] who examined resource management and academic performance amongst primary schools in the Makindu District, Makueni County in Kenya, which showed challenges of resource management, such as funding inadequacy and inefficient utilization of facilities. In addition, the findings, revealed from the hypothesis, tested that the correlation was negative, which implies that an inverse correlation existed between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria and the inverse correlation is significant. This also affirmed the acute shortage of educational resources in rural communities.

**Limitations and Suggestion for Further Study.** This study had its limitations. However, measures were put in place to mitigate its negative effects on the study. The study was conducted in rural areas with bad road network. Meanwhile, motorcycle was used as a means of transportation to access these remote locations during data collection. Moreso, the study experienced administrative bureaucracy when securing approval for data collection but was solved after all the necessary procedures were followed. Based on the findings, the following areas are suggested for future research, the study could be replicated in other geographical locations other than Southwestern Nigeria.

## 5. Conclusion

This study investigated the relationship between the resource factor and quality of secondary education in rural communities of Southwestern Nigeria. The findings of the study revealed that there is a significant relationship between the resource factor and the quality of secondary education in rural communities of Southwestern Nigeria. The correlation was negative for the resource factor variable. Thus, the negative relationship indicates that the existing resources did not enhance the quality of secondary education. Based on the findings of this study, it is recommended, that government, non-governmental organizations, philanthropists and development partners should devote/donate special funds to solve the problem of acute shortage of educational resources bedevilling the rural schools. In addition, rural allowances should be introduced to motivate, attract and retain teachers and other staff in rural schools.

## Conflict of interest

The authors declare that there is no conflict of interest in relation to this paper, as well as the published research results, including the financial aspects of conducting the research, obtaining and using its results, as well as any non-financial personal relationships.

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## Data Availability

Data will be made available on reasonable request.

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