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## Educational Resource Inputs as Correlates of Learning Effectiveness in Senior Secondary Schools in Adamawa State, Nigeria

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### ABSTRACT

This study investigated how educational resource inputs correlates of learning effectiveness in senior secondary schools in Adamawa State Nigeria. Four research questions were raised to guide the study while three hypotheses were formulated and tested at 0.05 level of significance. The study adopted survey research design. The population of the study was 6,668 academic personnel. The sample for this study comprised of 667 senior secondary school personnel (i.e., 634 teachers and 33 principals) that were selected using multistage sampling technique. The instrument for data collection were questionnaire titled “Resources Availability, Access and Utilization Questionnaire (RAAUQ)”, while the second questionnaire was titled “Learning Effectiveness Questionnaire (LEQT)”. The data collected were analyzed using mean and standard deviation to answer the research questions; while Pearson Product Moment Correlation (PPMC) was used to test the hypotheses. One of the findings of the study indicated that the available educational resources in senior secondary schools in Adamawa state, Nigeria were at a low level (with grand mean of 2.39). Similarly, it was found out that students’ access to school resources in senior secondary schools in Adamawa state, Nigeria was at a high level (with grand mean of 2.52). The result of the hypotheses showed that there was a strong positive relationship between the three variables (i.e., resource availability, access to resources and resource utilization) and learning effectiveness. The study concluded that educational resource inputs have positive correlation with learning effectiveness in senior secondary schools in Adamawa state, Nigeria. The study recommended among others; that government and other stakeholders should invest more on the provision of the key educational inputs for the improvement of learning effectiveness in schools and also that teachers and students need to be encouraged more by the school principal on the need to utilize and maintain properly the available educational resources such as classroom equipment, library, laboratory, computers and instructional materials.

**Keywords:** Educational Resource; Educational Resource Availability; Access to Resources; Resource Utilization; Students’ Learning Effectiveness

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### Journal Reference Format:

Adetula, Adekunle (2022): Educational Resource Inputs as Correlates of Learning Effectiveness in Senior Secondary Schools in Adamawa State, Nigeria. *Humanities, Management, Arts, Education & the Social Sciences Journal*. Vol. 10. No. 2, Pp 39-54. [www.isteams.net/humanitiesjournal](http://www.isteams.net/humanitiesjournal)  
[dx.doi.org/10.22624/AIMS/HUMANITIES/V10N2P4](https://doi.org/10.22624/AIMS/HUMANITIES/V10N2P4)

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## 1. INTRODUCTION

Education shall continue to be highly rated in the national development plans because education is the most important instrument of change; any fundamental change in the intellectual and social outlook of any society has to be preceded by an educational revolution (Federal Republic of Nigeria, FRN, 2014). Education, both formal and informal, is viewed as a vital medium to nurture individual understanding and to prepare youth for active engagement in the country's economy. As such it is vital that educators provide the highest quality teaching and learning environment possible for the students they serve (Crawford, Ferre & Weist, 2012). According to Woodhall (2004) opined that education is a form of investment in human capital that yields economic benefits and contributes to a country's future wealth by increasing the productive capacity of its people. In Nigeria, the National Policy on Education stipulates that education is to foster the worth and development of the individual; for each individual's sake and for the general development of the society (FRN, 2013). This means that for an individual to develop himself and become self-reliant, thereby contributing positively to the economy of the nation have been taught very well and learn effectively the true character, morals and attitude that has been inculcated into the Nigerian educational system. In other words; learning effectiveness; resources availability; access to resources; resources utilization was very vital for achieving the aims and goals of education in any nation.

Learning effectiveness is not a contemporary word in today's educational system as it has been used to refer to the changes in knowledge, skills and attitude of the learners after the completion of teaching. Lyons (2012) stated that learning is a complex activity that involves a lot of interplay, such as students' motivation, physical facilities, teaching resources, skills of teaching and the curriculum demands as far as the evaluation of learning effectiveness is concerned, whether the learning effectiveness is good can be determined from students' school grades, the ability to obtain professional certificates, and performance in various external examinations. Therefore, the conceptual definition of learning effectiveness in this study is to use the three explicit variables, such as the achievements of students' school grades after studying in school, professional skills demonstrated, and the capability to participate in various external exams as the indicators of the measurement for learning effectiveness.

Abayomi and Olukayode (2006) stated that learning is something students do not, something that is done to students. The researcher further agreed that learning requires student's direct and active involvement and participation. Ibe-Bassey (2002) agreed that learning is an altered disposition in an individual as a result of instruction; it is distinguished from motivation, growth and needs. An effective learner requires good thinking skill for a productive study. Gettinger and Seibert (2002) asserted that knowledge of the processes or thinking associated with bits of knowledge, adds a metacognitive component to it, increasing the network of connections made in the brain. The ability to ask questions, synthesize the new information with previous knowledge to provide answers is inevitable for a successful study. Academic competence is associated with the knowledge and application of study skills in the learning process (Gettinger & Seibert, 2002). While those experiencing academic difficulty are said to be lacking in effective study skills, students who have learnt with the available resource and utilize to effectively imply the knowledge of study skills to their learning experience are regarded as academically competent (OECD, 2013).



NOUN (2016) also stipulates that educational resource inputs include the teachers in the school, human beings in the community, real objects, specimen or models, chalk and display boards, school buildings and layout, the community at large and other fundamental materials like pencils, pens and exercise books which the learners are expected to have at any point in time to facilitate learning. (Jegade, 2011) also opined that educational resource inputs are vital keys for effective goals achievement of educational sector including secondary education. In the context of this study therefore, resource availability, access to resources, resource utilization was studied as resources used for the purpose of attaining the objectives and goals of senior secondary schools' education, which majorly is to produce quality learning effectiveness in all their subjects.

Resource availability constitutes a vital vein of any institution. These resources in the school system includes teachers, materials, equipment, support staff in the school, students, parents, community members and a host of other interest and social groups (NOUN, 2016). Human resource is responsible for planning, organizing, coordinating, controlling, manipulating and maintaining other forms of resources, its administrative and forecasting ability place it ahead of other forms of resources (NOUN, 2016). In terms of the support materials available for the teaching and learning in secondary schools selected for the study, the number of each kind of facility or resource that one would normally expect to find in secondary school: financial allocation.

The availability of human, library, materials and physical resources is not only required in secondary school administration, but their quality and quantity should be considered, if effective and efficient teaching and learning process is to be guaranteed. (Okendu, 2012) asserted that human and material resources are to be assembled together by educational administration, within the school system for effective teaching and learning may not be over emphasized. Hence, for proper learning effectiveness to be enhanced in secondary schools, the human, materials and non-materials resource are not just to be available in ample size but judiciously used in regard to their strength and constant training for optimal performance. (FRN, 2014), opined that all materials and non-material factors that are necessary are contributors to the attainment of goals in any institution are regarded as resources. The human component of resources interacts with certain facilities and equipment at certain time to bring about production of output (Okendu, 2012). The quality and quantity of this output are to a greater extent dependent on the quality and quantity of resource input and the manner of processing. By implication therefore input and output are significantly responsive to administration (NOUN, 2016).

Access to educational resources on the other hand are at the center of the academic excellence of all educational system as they help to provide the relevant information resources necessary for sustaining the teaching, learning and research functions of any institution (Okiy, 2012). We live in a time of rapid technological advancement, with innovations in education holding great promise for improving teaching and learning, particularly for students learning with unique needs, the library, ICT, textbooks and other materials, is an information resource that provides and enhances personal learning and national development, and more so influence learning effectiveness (SETDA Policy, 2014). Adeoye and Popoola, (2011) opined that accessibility, effectiveness and availability of textbooks, ICT and library resources improve teaching and learning. The researchers explained that, for effective learning process, learners should have access to necessary information materials and resources.



These resources might be in tangible (i.e., printed resources) and intangible (i.e., electronic resources) format. They express that librarian is responsible for providing the right information to the right person at the right time. Regarding the accessibility of library resources, authors explained that the more accessible information sources that require the least effort to access. A library, ICT and Textbooks is a collection of sources, resources, and services, and the structure in which it is housed. Ogbemor (2011) explained that ICT, textbooks and library as an organized collection of published and unpublished materials and audio-visual materials with the aid of services of staff who are able to provide and interpret such material as required, to meet the informative research, educational and recreational needs of students. In the same view Adeoye and Popoola (2011) said access to educational resources can be in both printed and electronic formats including textbooks (instructional materials), journals, indexes, abstracts, newspapers, magazines, reports, CD-ROM databases, internet, email, video tapes/cassettes, diskettes, computers and microforms.

Resources utilization is the process of managing and organizing resources, resources utilization in teaching brings about fruitful learning as such it stimulates students' senses as well as motivating them (NGEX, 2017). Resources utilization in every institution is as paramount as the attainment of goals and objective (FRN, 2014). Learning effectiveness is not likely to be known or seen without using the appropriate resources actively and correctly. Learning effectiveness could be seen to be completely changed in the behaviour of the learner. Learning is what students do; therefore, it needs student's direct and active participation. Learning is an altered disposition in an individual as a result of instruction; it is difference from motivation, development and needs. Based on the definitions above, it could be seen that resources availability, access and utilization encourage individual students to learn by completely participating in critical thinking and participating actively in a given task. The appropriate utilization of resources helps teachers make the shift in their approach to facilitating learning rather than delivering teaching.

From the discussion so far, good utilization, maintenance, modern systems, and flexible designs can be noticed to be important because the physical structure can limit the learning experience, hence, school facilities should be flexible enough to accommodate changing learning patterns and methods. Over the years and more especially in different facets of life; laymen, parents, clergy the recent years, people from the educational sector have been very much concerned about the relationship between educational resource inputs and learning effectiveness in senior secondary schools, the opinion that educational resource inputs have direct relationship with learning effectiveness thus inadequate educational resource can have adverse effect on learning effectiveness (FRN, 2014). The precise consequence was what is unclear and as a result, this instigates the researcher to design this study for the purpose of determining educational resource inputs as correlates of learning effectiveness in senior secondary schools in Adamawa State, Nigeria.

### **1.1 Problem Statement**

It is a common knowledge today in Nigeria that students' performances in both internal and external examinations at the senior secondary schools' level have been disappointing. In fact, the few students that have managed to scale through the hurdle between senior secondary schools and tertiary institution have found it challenging to cope as enrolment do not match with graduation after the end of their programme (Nwocha, 2013).



This problem has not only become an educational problem but a national one, to the point that various researchers, policy makers and other stakeholders have attributed the causes to students' inability to study hard, government's poor funding, teachers' lack of motivation, differences between private, public schools and students' reliance on examination malpractices. Learning effectiveness generally refers to the level at which students comprehend what their teacher teaches them in school. Adedeji (2015) posited that when students learn effectively during classroom instruction, then they are bound to perform very well in both internal and external examinations irrespective of the circumstances surrounding them.

In agreement, Jan and Maciej (2017) also averred that learning effectiveness is crucial to their change in behaviour and solid performances during classroom assessment. This then brings the question; why then are most students performing poorly during examinations? In an earlier opinion, Turaki (2001) in Guardian at the opening of the 44th annual congress of the All-Nigerian conference of principals of secondary schools (ANCOPSS) in Sokoto said that acute shortage of teachers in the nation's secondary schools has been adduced as one of the reasons for the poor performance of students in the final examination". NOUN (2017) stated that educational resources, which include school materials, staffing, time resources, information, library and financial resources are naturally expected to be in abundance in public schools for the achievement of school goals and objectives which also include students' learning effectiveness.

However, there are concerns that senior secondary schools in Adamawa state not only lack the resource inputs to meet the educational requirements of their students, but that most schools may have fewer resources with which to affect their students' learning effectiveness. With these assertions, the researcher designed this study to determine educational resource inputs as correlate of learning effectiveness in senior secondary schools in Adamawa State, Nigeria. The main purpose of this study was to determine how educational resource inputs correlates to learning effectiveness in senior secondary schools in Adamawa State Nigeria.

Specifically, the main objective of the study was to determine the:

1. Relationship between resources availability and learning effectiveness in Senior Secondary Schools in Adamawa State Nigeria.
2. Relationship between access to resources and learning effectiveness in Senior Secondary Schools in Adamawa State Nigeria.
3. Relationship between resources utilization and learning effectiveness in Senior Secondary Schools in Adamawa State Nigeria.



## 1.2 Research Questions

The following research questions were raised to guide the study;

1. What is the level of educational resource availability in Senior Secondary Schools in Adamawa state, Nigeria?
2. What is the level of access to resources in Senior Secondary Schools in Adamawa state, Nigeria?
3. What is the level of resource utilization in Senior Secondary Schools in Adamawa state, Nigeria?
4. What is the level of learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria?

## 1.3 Hypotheses

The following hypotheses were formulated to guide the study;

- Ho<sub>1</sub>:** There is no significant relationship between resource availability inputs and learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.
- Ho<sub>2</sub>:** There is no significant relationship between access to educational resources inputs and learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.
- Ho<sub>3</sub>:** There is no significant relationship between resource utilization inputs and learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.

## 2. METHODOLOGY

The study adopted a correlational research design. The area of the study was Adamawa state; which had five educational zones (according to the Post Primary School Management Board, PPSMB, 2018). The population of the study comprised of 6668 academic personnel that comprised of 6342 senior secondary school teachers and 326 principals in senior secondary schools from two educational zones in Adamawa state.

### 2.1 Sample and Sampling Technique

The sample for this study comprised of 667 senior secondary schools (i.e., 634 teachers and 33 principals) that were selected in two education zones in Adamawa state. The researcher used multistage sampling technique. The multistage sampling technique comprised of purposive sampling technique and stratified sampling technique. The method was chosen to give the study population equal chance of being represented. This sampling technique was considered appropriate because there are two different categories of elements that made up the sample – teachers, principal and by zones



## 2.2 Instrument for Data Collection

Two questionnaires titled “Resources Availability, Access and Utilization Questionnaire (RAAUQ)”, while the second questionnaire was titled “Learning Effectiveness Questionnaire (LEQT)” were used as the instruments for data collection in this study. The instrument was structured into section A – F and rated on a 5-point Likert like response scale of; “VHL” for Very High Level, “HL” for High Level, “ML” for Moderate Level, “LL” for Low Level and “VLL” for Very Low Level. These letters were assigned values as 5,4,3,2, and 1 respectively with five (5) as the highest score, standing for VHL and one (1) as the lowest score representing VLL. The RAAUQ instrument had 18 items while LEQT had 30 items overall seeking to obtain responses from the respondents based on the research questions.

## 2.3 Validation and Reliability of the Instrument

The instruments were validated content validation by three experts (who are Senior Lecturers and above) from the Department of Physical Science Education, School of Technology and Science Education, Modibbo Adama University of Technology, Yola. The reliability of the instrument was obtained using Cronbach’s Alpha statistic formula. The computed result of the trial test data confirmed a reliability coefficient of 0.973 was gotten for RAAUQ and 0.981 for LEQT.

## 2.4 Method of Data Collection and Analysis

Firstly, a letter was collected from the Head of Department of Physical Science Education of Modibbo Adama University of Technology to introduce the study. The data was collected through administration of the structured questionnaire by the researcher with the help of three research assistants in the sampled three education zones of Taraba State. The data that was obtained in this study were analysed using mean ( $\bar{X}$ ), standard deviation (SD) to answer the research questions, while Pearson Product Moment Correlation (PPMC) was used to test hypotheses 1 – 3 at a significant level of 0.05.

The decision rule for the research questions were determined using the real limits of numbers as follows; 4.5 – 5.00 was accepted as “VHL”, 3.0 – 4.49 was accepted as “HL”, 2.5 – 2.99 was accepted as “ML”, 1.5 – 2.49 was accepted as “LL” and 0 – 1.49 was also accepted as “VLL”. While the decision rule for the null hypotheses was that; if  $p \leq 0.05$  the null hypothesis was rejected, but if  $p \geq 0.05$  then we do not reject the null hypothesis.

## 3. RESULTS

Descriptive statistic of Mean and Standard Deviation were used to answer the research questions as shown in the tables below.

### Research Question 1:

What is the level of educational resource availability inputs in senior secondary schools in Adamawa state, Nigeria?



**Table 1: Mean and standard deviation on the level of educational resource availability in Senior Secondary Schools in Adamawa state, Nigeria**

S/No	Items	n	Mean	S.D.	Remark
1.	The school has well-qualified teachers	667	2.86	0.95	HL
2.	The teachers have all the recommended textbooks for teaching all the subjects.	667	2.55	0.91	HL
3.	The general ratio of teaching aids to students in your school e.g., charts.	667	2.10	0.84	LL
4.	The school has functional physical facilities.	667	2.82	0.96	HL
5.	The school has a well-equipped library.	667	1.86	0.93	LL
6.	The materials and non-material for learning process in the school enough.	667	2.17	0.88	LL
<b>Overall Mean</b>			<b>2.39</b>	<b>0.91</b>	<b>LL</b>

Key: SD = Standard deviation; LL = Low Level; HL = High Level

Table 1 above shows the responses of the respondents on the level of educational resource availability in senior secondary schools in Adamawa state. This means that adequate human; facilities; library; materials and non-material objects have not been fully provided for enhancing students' learning effectiveness in senior secondary schools in Adamawa state.

**Research Question 2:**

What is the level of access to resource inputs in senior secondary schools in Adamawa state, Nigeria?

**Table 2: Mean and standard deviation on the level of access to resources in senior secondary schools in Adamawa state, Nigeria**

S/No	Items	n	Mean	S.D.	Remark
7.	Indicate the level of access to the following resources by students e.g., ICT and chart.	667	2.42	0.99	LL
8.	Students have access to the teachers during the school hours.	667	2.67	1.00	HL
9.	Students have access to e-library services through the use of a computer and internet services every day.	667	2.19	1.03	LL
10.	Classes are open for teachers or students even after closing hours.	667	2.83	0.95	HL
11.	There is a healthy access within the school library to aids new and vital information.	667	2.43	0.92	LL
12.	The materials and non-material for learning process in the school is accessible.	667	2.61	1.12	HL
<b>Overall Mean</b>			<b>2.52</b>	<b>1.00</b>	<b>HL</b>

Key: S.D = Standard deviation, LL = Low Level; HL = High Level





Table 2 above reveals the responses of the respondents on the level of access to resources in senior secondary schools in Adamawa state with overall mean of 2.52. This means that students sometimes have access to school resources such as library and school materials for improving their learning effectiveness in senior secondary schools in Adamawa state.

**Research Question 3:**

What is the level of resource utilization inputs in senior secondary schools in Adamawa state, Nigeria?

**Table 3: Mean and standard deviation on the level of resource utilization in senior secondary schools in Adamawa state, Nigeria.**

S/No	Items	n	Mean	S.D.	Remark
13.	Students use library regularly	667	2.05	0.98	LL
14.	Students regularly use equipment in the classroom	667	2.64	1.13	HL
15.	Students make use of classroom regularly	667	3.31	0.74	HL
16.	Students utilize laboratory apparatus for experiments.	667	2.11	0.99	LL
17.	Students utilize computers to carry out their assignments.	667	2.38	0.93	LL
18.	The student seating arrangement improves learning process.	667	3.07	0.93	HL
<b>Overall Mean</b>			<b>2.59</b>	<b>0.94</b>	<b>HL</b>

Key: SD = Standard deviation; LL = Low Level; HL = High Level

Table 3 above indicates the responses of the respondents on the level of resource utilization in senior secondary schools in Adamawa state with overall mean of 2.59. This means that some of the students are utilizing some of the available school resources like library, laboratories and computers for improving their learning effectiveness in senior secondary schools in Adamawa state.



**Research Question 4:**

What is the level of learning effectiveness in senior secondary schools in Adamawa State, Nigeria?

**Table 4: Mean and standard deviation on the level of learning effectiveness in senior secondary schools in Adamawa State, Nigeria**

S/No	Items	n =	Mean	S.D.	Remark
	<b>667</b>				
1.	Students pay a close attention in the classroom.		2.99	1.08	HL
2.	Students prefer working exercises in the textbooks		3.01	1.01	HL
3.	Physical facilities are enough to accommodate the students.		2.47	0.95	LL
4.	Library resources efficient for students learning.		2.45	1.13	LL
5.	Available resources enough for teaching in the class		2.60	1.12	HL
6.	School has well ventilated and spaced classrooms.		2.68	1.08	HL
7.	Does your student access the library often?		2.81	1.09	HL
8.	There is a healthy relationship between teachers and students in the classroom.		2.10	1.03	LL
9.	The school offer e-library to students.		2.21	1.00	LL
10.	What is the relationship between the students and the school library?		2.36	1.11	LL
11.	Student uses the school facilities regularly.		2.65	1.07	HL
12.	The classroom accessible to students during group discussion.		2.39	1.06	LL
13.	There is a computer room to practice typing in the school.		2.10	1.04	LL
14.	The students used laboratory apparatus.		2.63	1.15	HL
15.	The learning process involves qualified teachers.		2.40	1.07	LL
16.	School has current materials for learning and teaching.		2.64	1.06	HL
17.	School environment conducive for learning process.		2.24	1.17	LL
18.	There is functional administrative block for parent, teacher and student enquiry.		2.10	1.04	LL
19.	The materials and non-material for learning process in the school is enough.		2.33	1.08	LL
20.	The classroom equipped with instructional material for teaching and learning process.		2.58	1.14	HL
21.	The student seating arrangements improve learning process.		2.19	1.09	LL
22.	The time allocation for teaching improves students learning.		2.64	1.07	HL
23.	The numbers of students in a class improve teaching and learning.		2.68	1.07	HL
24.	The numbers of subjects per day improve learning process.		2.58	1.11	HL
25.	Students test results improve effectiveness in learning.		2.77	1.06	HL
26.	Classroom control and management has effect on student learning process.		2.08	1.03	LL
27.	The school has a well-equipped library.		2.76	1.06	HL
28.	Classes are open for teachers or students even after.		2.67	1.07	HL
29.	Every classroom has a functional black board for effective teaching and learning.		2.31	1.02	LL
30.	School has well ventilated and spaced classrooms.		3.00	0.96	HL
	<b>Overall Mean</b>		<b>2.51</b>	<b>1.06</b>	<b>HL</b>

Key: SD = Standard deviation; LL = Low Level; HL = High Level



Table 4 shows the responses of the respondents on the level of learning effectiveness in senior secondary schools in Adamawa state. With overall mean of 2.51 and standard deviation of 1.06, the Table shows that students' learning effectiveness in senior secondary schools in Adamawa state is at a high level. This means that some of the students in senior secondary schools in Adamawa state are slightly learning effectively in the school.

### Hypotheses Testing

The null hypotheses were tested using Pearson's Product Moment Correlation (PPMC) and Multiple Correlations at 0 .05 level of significance

**Ho<sub>1</sub>:** There is no significant relationship between resource availability inputs and Learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.

**Table 5: Pearson's Product Moment Correlation (PPMC) analysis on Resource Availability and Learning Effectiveness**

Variables	N	$\bar{X}$	SD	df	r	sig	Remark
Resource Availability	667	2.39	0.91	1332	0.916	0.000	Reject
Learning Effectiveness	667	2.51	1.06				

Key:  $\bar{X}$  = Mean; S.D = Standard Deviation; df = degree of freedom; r = PPMC

Table 5 shows that resource availability correlate with learning effectiveness as,  $r(1332) = 0.916$ ,  $p < 0.05$ . With this result, the null hypothesis ( $H_0$ ) is thus rejected. This implies that there is a significant high positive relationship between resource availability and learning effectiveness in senior secondary schools in Adamawa state, Nigeria.

**Ho<sub>2</sub>:** There is no significant relationship between access to educational resources inputs and Learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.

**Table 6: Pearson's Product Moment Correlation (PPMC) Analysis on Access to Educational Resources inputs and Learning Effectiveness**

Variables	N	$\bar{X}$	SD	df	r	sig	Remark
Access to Educational Resources	667	2.52	1.00	1332	0.963	0.000	Reject
Learning Effectiveness							

Key:  $\bar{X}$  = Mean; S.D = Standard Deviation; df = degree of freedom; r = PPMC

Table 6 reveals that access to educational resources correlate with learning effectiveness as,  $r(1332) = 0.963$ ,  $p < 0.05$ . With this result, the null hypothesis ( $H_0$ ) is thus rejected. This implies that there is a significant high positive relationship between access to educational resources and learning effectiveness in senior secondary schools in Adamawa state, Nigeria.



**Ho<sub>3</sub>:** There is no significant relationship between resource utilization inputs and Learning effectiveness in Senior Secondary Schools in Adamawa State, Nigeria.

**Table 7: Pearson’s Product Moment Correlation (PPMC) Analysis on Resource Utilization and Learning Effectiveness**

Variables	N	$\bar{X}$	SD	df	r	sig	Remark
Resource Utilization		667	2.59	0.94			
Learning Effectiveness	667	2.51	1.06	1332	0.964	0.000	Reject

Key:  $\bar{X}$  = Mean; S.D = Standard Deviation; df = degree of freedom; r = PPMC

Table 7 indicates that resource utilization correlate with learning effectiveness as,  $r(1332) = 0.964$ ,  $p < 0.05$ . With this result, the null hypothesis (Ho) is thus rejected. This implies that there is a significant high positive relationship between resource utilization and learning effectiveness in senior secondary schools in Adamawa state, Nigeria.

#### 4. FINDINGS OF THE STUDY

The findings of the study are as follows;

1. There is a positive relationship between resource availability and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.916$ ,  $p < 0.05$ ).
2. There is a positive relationship between access to educational resources and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.963$ ,  $p < 0.05$ ).
3. There is a positive relationship between resource utilization and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.964$ ,  $p < 0.05$ ).

#### 5. DISCUSSIONS

This study found out that, the available educational resources in senior secondary schools in Adamawa state, Nigeria were at a low level, with overall mean of 2.39. This finding concurred with Macdonald and Paul (2016); Owate and Iroha (2013) and Ifeyinwa (2005)’s finding also showed that few schools had facilities above average and utilized their facilities to fair level but their students performed poorly academically; with Owate and Iroha’s (2013) study discovering that none of the secondary school studied met the prescribed standard for establishing school libraries at the secondary levels; although, the findings disagree with that of Owoeye and Olatunde (2011)’s study; whose study revealed that the necessary facilities are usually provided for schools. Hypothesis 1, which was rejected, as there was a a positive relationship between resource availability and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.916$ ,  $p < 0.05$ ). The finding was in line with Macdonald and Paul (2016) and Mubashrah and Riaz-ul-Haq (2013) who found out that available instructional resource positively correlated with the learning of English reading skills. Thus, it could be inferred from the findings that adequate educational resources such as teachers, textbooks, classrooms, desks, chairs, school libraries and instructional materials play major roles in enhancing learning effectiveness in senior secondary schools.



This study also found out that students' access to school resources in senior secondary schools in Adamawa state, Nigeria was at a high level, with overall mean of 2.52. This finding concurred with Akintola and Oyeboade (2009) and Agwubike and Ogbouma (2010)'s study that more than 60% of students studied in had access to school resources such as classroom equipment, computers, laboratory facilities and library resources. However, the findings disagree with that of Ede and Olaitan (2010)'s findings that there is a healthy relationship between the available school materials and students' usage and access to it; as sometimes students are not granted access to school resources like ICT tools and equipment. Although, the study showed that there was a positive relationship between access to educational resources and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.963, p < 0.05$ ).

The finding was in line with Akintola and Oyeboade (2009)'s study who found out that there is a significant relationship between accessibility to school resources and students' academic performance. But it disagrees with Iheonunekwu (2014) findings that showed there was no significant relationship between students' utilization of laboratories and students' learning. The consequence of this findings is that granting students' access to the available educational resources in schools is that it aids the actualization of the school goals and objectives requires; as adequate provision of resources and maximum utilization by students helps to avoid wastages and improve the quality of students' learning effectiveness in the academic environment.

This study also found that the utilization of educational resources in senior secondary schools in Adamawa state, Nigeria was at a high level, with overall mean of 2.59. This finding concurred with Akinsolu (2012); Owate and Iroha (2013) and Ifeyinwa (2005)'s findings that available school resources (such as microscope, magnifying glasses, preserved specimen, models, quadrat and aquarium etc.) are often used by teachers for positively affecting the teaching and learning process while Olagunju and Abioma (2008) study revealed that some teachers even improvise materials for teaching the students. However, the findings disagree with that of Mucai (2013) whose study revealed there is a poor utilization of resources in senior secondary schools, which is usually caused by the unavailability of materials.

Mubashrah and Riaz-ul-Haq (2013) study also revealed that educational resources like libraries are underutilized despite teachers and students expressed willingness to use libraries. The findings also revealed that there is a positive relationship between resource utilization and learning effectiveness in senior secondary schools in Adamawa state ( $r(1332) = 0.964, p < 0.05$ ). The finding was in line with Akinsolu (2012) and Owate and Iroha (2013) that there was a strong relationship between the utilization of school educational resources and learning effectiveness, which is also essential for ensuring good relationship between students' performances in both internal and external examinations. Hence, it is essential that school resources are provided has availability ensures utilization of them.



## 6. CONCLUSION

Based on the findings of this study, it was concluded that all the variables of educational resource inputs (such as resource availability, access to resource and resource utilization) have positive correlation with students' learning effectiveness in senior secondary schools in Adamawa state, Nigeria.

Based on the findings of this study, the following recommendations were made;

1. Government and other stakeholders should invest more in provision of the key educational inputs in senior secondary schools in Adamawa state for the improvement of learning effectiveness in schools.
2. Teachers and students need to be encouraged more by the school principal on the need to utilize and maintain properly the available educational resources such as classroom equipment, library, laboratory, computers and instructional materials.
3. School principal officers should ensure that the required number of materials such as textbooks, charts, instructional aides are provided in the needed quantities for the effective impartation of knowledge in senior secondary schools in Adamawa state.
4. School authorities should make adequate provision for school library services in senior secondary schools in Adamawa state for improvement in the standard of students' learning.

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