



Impact of Information Sources Availability on Academics Performance of Students in Senior Secondary School

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Authors' contributions

This work was carried out in collaboration among all authors. Author KEA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors OAO and OHO managed the analyses of the study. Author OMO managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

This research explored the influence of information sources availability on academic performance of secondary school students using a descriptive survey design. One hundred and fifty senior secondary school students were randomly selected from three secondary schools in Osogbo. Data was collected using a self-structured questionnaire that covers all the variables under study. Percentage was used to answer the research questions while regression analysis was used to test the hypotheses postulated. The findings indicated that information sources (library information, teachers information and textbook information) has significant influence on academics performance of student. The result of the hypotheses showed significant relationship between the independent variables (information sources) and dependent variable (academic performance). The value of F-statistic was 627.253 with $p < 0.05$ shows that the overall model was statistically significant. The

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result revealed that library information, Teachers information and Textbook information have significant combined impact on academics performance of selected senior secondary school in Osun State. It recommended that The school administration should maintain the existing information sources they have and make request to the government for the provisions of this sources.

Keywords: Information sources; academic performance and secondary school students.

1. BACKGROUND OF THE STUDY

In instructive establishments, achievement is estimated by scholarly execution or how well understudy performs. The dimension and nature of an understudy's scholastic act relies upon various components like evaluations, participation, government sanctioned test and extracurricular exercises Mushtaq & Khan [1]. Scholastic fitness is a multidimensional build made out of the abilities, mentalities, and practices of a student which add to scholarly achievement in the homeroom Demaray & Elliott [2]. Crosne and Elder (2004) referred to in Ali, Haider, Munir, Khan and Ahmed [3] saw that arrangement of offices and accessibility of assets in schools are vital auxiliary parts of the school and that entrance to data assets, for example, PCs can improve understudies' scholastic execution and instructive achievement. Scholastic execution is the exhibit of an understudy's dimension of fitness and dominance of a subject Anderson & Krathwohl [4]. For an understudy to perform well and be skillful in the field of study, it is imperative that the understudy utilize significant and appropriate data that will improve the execution.

Knoll and Yuan (1997) noticed that data is a message that changes the beneficiary's learning base, that is, data essentially improves the current information of the clients. Data as an idea has no brought together definition as there are numerous writers and essayists with various discernment and conclusion on what data is. Data can likewise be viewed as all that adds to expanding one's general mindfulness, comprehension or cognizance of a given subject. Essentially, Boakye [5] additionally characterizes it as some learning got or procured by individual, a gathering, a general public or a country around an occasion, frequency or event that adds to the general mindfulness, understanding and dimension of cognizance of the movement in question. Ajewole [6] classified definitions given for data by various creators into three: the logical and

specialized data (STI) which incorporates data found inside the logical and innovative fields or space that is for the most part produced from research exercises. Nwagwu [7] considers STI to be all data created from research endeavors in all science and innovation fields. The second class is the socio-social which saw data as learning which when exchanged or spread, guides differing human exercises. In conclusion, data was seen as an asset. It is accepted to fill in as an imperative connection between an assortment of exercises, piece or material and adjusting people, establishments and the general public at large. A number of creators, for example, Kamba [8] & Ugnagha and Samuel, concurred that data assumes a crucial job in any improvement procedure particularly by improving the general prosperity of those that use it, subsequently inferring that absence of data can imperil any formative endeavors or procedure. Then again, researchers, for example, Boon [9] contended that data is control however stays useless in any critical thinking and basic leadership limit aside from when utilized or connected successfully. Hence use of data can improve the scholarly execution of understudies. Additionally the examination work of Osunade, Ojo and Ahisu (2009) referred to in Ogedengbe [10] demonstrated a critical distinction in scholarly execution between the individuals who utilized a wellspring of data (web) and the individuals who did not.

This examination has received the last classification that considers data to be assets expected to upgrade scholarly execution. In instructive setting, beside the HR, books and other perusing materials are viewed as another significant sources being used for progressing and improving scholarly execution. Utilization of the library has likewise been found to decidedly influenced the understudy execution (Young, 1999 referred to in Mushtaq & Khan [1].

Kimeu, Tanui & Ronoh [11] finished up from the investigation because of instructional assets on understudies' scholarly execution that under studies' scholastic execution relied upon

instructors' reference books and aides, understudies' and educators course readings, diagrams, writing slates and chalk, study halls, and research facility mechanical assembly and synthetic compounds as educating and learning materials. This investigation has investigated sort of data sources accessible to auxiliary school understudies in Oyo state and how regularly are these sources are been utilized to impact the scholarly execution of students. Information use is verifiably incorporated into a few data conduct either dependent on psychological or constructionist approaches. Data use is a piece of data looking for conduct decided as physical and intellectual exercises taking a shot at the consideration of the reserve data into the current information base of human Wilson [12].

In light of examination of friend looked into papers in library and data science, Keri conceptualizes data use as far as the results of data. This is usage of these results to settle and fulfill the client's need. Two classifications of result speak to the utilization; the dynamic result which are disguise of data and peddles use and the impacts detached results which are the impacts of data in the activity. Information use in association is clarified by Choo [13] as a dynamic, intuitive social procedure of request that may result in development of significance or deciding. This examination asked the accompanying inquiry: how accessible are data sources in optional schools? how available are the data sources and what amount of the data sources are being utilized by optional school understudies?

While recognizing the way that few examinations have been done on the different variable that can influence understudies' scholarly execution next to zero work has been done on the apparent impact of data sources accessibility and use on scholastic execution of optional school understudies, along these lines, this investigation has evaluated the impression of auxiliary school understudies on how data sources accessibility and use impact their scholarly execution.

1.1 Research Objectives

The main objective of this study is to examine the impact of information sources availability on academics performance of students in Senior Secondary School in Osun State. The specific objectives of this study are to

1. Ascertain the impact of library information source on academics performance of senior secondary school students in Osun state.
2. Examine the impact of teacher's information source on academics performance of senior secondary school students in Osun state.
3. Evaluate the impact of textbook information source on academics performance of senior secondary school students in Osun state.
4. Evaluate the combine impact of information sources on academics performance of senior secondary school students in Osun state.

1.2 Research Hypotheses

Based on the objectives stated above, the following hypotheses were tested in this study.

- H₀₁** :Library information source has no significant impact on academics performance of senior secondary school students in Osun state.
- H₀₂** :Teacher's information source has no significant impact on academics performance of senior secondary school students in Osun state.
- H₀₃** :Textbook information source has no significant impact on academics performance of senior secondary school students in Osun state.
- H₀₄** :Information sources have no significant impact on academics performance of senior secondary school students in Osun state.

2. LITERATURE REVIEW

The Internet is an indistinguishable piece of the present instructive framework. The scholastic progressively relies upon the Internet for instructive purposes [14]. It was watched as of late that lion's share of scholastic and research establishments give Internet administration to understudies, instructors, and scientists (Kaur, 2008). Advancement in innovation is likewise another factor that expedites real effects training [15]. Many tertiary organizations around the globe are growing their interest in data innovation (IT), particularly the Internet, and are effectively advancing Internet use in tertiary training [16,14].

The utilization of the Internet for learning is viewed as a way to improve openness,

productivity and nature of learning by encouraging access to assets and administration just as remote trades and joint effort [17]. Inside the Nigerian setting, numerous individuals have ascribed understudies' non-challant disposition to perusing which comes full circle in mass disappointment of understudies in examinations to the utilization of the Internet [18]. Web's apparently unbounded data offers access to forward-thinking research reports and worldwide learning so it has turned into a critical segment of electronic administrations in scholastic establishments. In this manner, the Internet has turned into a profitable instrument for getting the hang of, instructing and examine (counting communitarian explore) in Nigeria (Nwokedi, 2007).

Ogedebe [19] in his investigation found that 79% of the respondents acknowledged that their scholarly execution has been improved by utilizing the web, while 13% accepted something else, 8% made no reaction to that question. The investigation likewise uncovered that 65% of the respondents were PC educated, while 29% were not, 6% of the respondents dismissed the inquiry. The investigation further uncovered that 8% of the respondents trusted that their GPA has been improved strikingly because of the web, 6% concurred that their GPA has been declining, 28% reacted that it helps them in planning better for CA and semester examination while 22% were uninterested about the choices and hence did not react.

In the investigation of Agil and Ahmad [20] it was discovered that 47 (52.64%) clients appraised the utility of Internet based data benefits as normal for their scholastic purposes, while 36 (39.56%) clients evaluated the Internet as high. Besides, 6 (6.59%) and 2 (2.19%) evaluated it as low and extremely low individually. Wagner (1998) considered web to be a gathering that advance gathering dialog which is time and separation autonomous. The World Wide Web administration given by the web more than 5 million sites enables understudies from all orders to hotspot for applicable data. Mouthpiece individuals from the gathering can really observe and hear one another. Gudimani and Mulimani [21] in their investigation uncovered that lion's share of the respondents (42) 46.46% utilize the web for Online database, (34) 37.78% use web for electronic diaries, (26) 26.89% use web online OPAC, (12) 13.33% utilize the web for distributed records, (8) 8.88% respondents utilize the web discourse gathering.

An investigation by Udende and Azeez [22] revealed that 311 (80.8%) of Students of the University of Ilorin, conceded that they generally utilize the web for scholarly reason, while 54 (14%) utilized it for the most part for sends, 19 (4.9%) utilized it most for the sake of entertainment, none for other people. 100 (26%) of the respondents concurred that they utilized the web day by day, 178(46.2%) utilized the web on week after week premise, while 107(27.8) utilized the office ones of every some time. The investigation additionally uncovered that 38 (9.9%) respondents were of the sentiment that the web does not contribute towards their scholarly magnificence, while upwards of 347 (90.1%) held an opposite view that the web help them in taking care of their scholastic issues.

2.1 Design

A descriptive survey design was used to examine the impact of information sources and use one academic performance of secondary school students.

2.2 Participants

Participants for the study include two hundred and eight (250) secondary school students randomly selected from 3 secondary schools in the South-west Local Government, Osun State.

2.3 Instruments

A self-structured questionnaire was used to collect data for this study. The questionnaire consists of four main sections A and B. They include questions on demographic data, types of information sources available to students, use of information, and the perceived impact of the information on their academic performance. The participants responded to the set of items in the questionnaire by expressing their level of agreement or disagreement based on a 5-point Likert Scale. A test-retest reliability of two weeks interval was conducted and Cronbach's alpha revealed a reliability score of .82.

2.4 Method of Data Analysis

The data collected from the questionnaire was analyzed and processed using percentage to ascertain the availability of the sources and how much of the information sources is used while Pearson product moment correlation co-efficient and multiple regressions were used to assess

the relationship between the independent variables (information sources) and dependent variable (academic performance).

2.5 Analysis of Demographic Characteristics

In this section, the study presents the general information of the respondents since it forms the basis under which the study can rightfully access the relevant information. The demographic information captured includes issues such as age, gender, marital status and religious affiliation. Analysis of demographic variables was done using percentages. Table 1 presents the information.

The data in Table 1 indicate that 44.67% of survey respondents are between 12-15 years, 35.33% of the respondents are between 16-20 years. The remaining 20% respondents are between above 21 years and above of age. As regards gender, 85 of the respondents representing 56.67% were male students and 65 respondents representing 43.33% were female respondents. In respect to religion affiliation, 58(38.67%) practiced Islam, 77(51.33%) practiced Christianity, while 15(10%) of the respondents practiced African traditional religion. Thus, majority of the respondents are Christians followed by those who are Muslims.

Restatement of Hypothesis One

H₀₁:Library information's has no significant impact on academics performance of students in senior secondary school.

In order to test the hypothesis, simple linear regression analysis was used. The data for library information and academics performance were created by summing responses of all items for each of the variable. The results of the regression are presented in Table 2.

Interpretation

Table 2 presents result of regression analysis of impact of library information on academics performance of students in senior secondary school. The results revealed that library information have positive and significant impact on academics performance of senior secondary school of selected secondary school in Osun State ($\beta = .960, t = 27.046, p = .000$). The result shows that for one unit change in library information, academic performance increases by 96%. Furthermore, the regression results in Table 2 show that the relationship between library information and academics performance was positive and significant ($R = .786, F_{(1/148)} = 731.475, p < 0.05$). With $R^2 = .618$, the model implies that about 61.8% variation in academics

Table 1. Demographic characteristics of respondents

Variables	Characteristics	Frequency	Percentages
Age	12 -15 years	67	44.67%
	16-20years	53	35.33%
	Above 20 years	30	20%
Gender	Male	85	56.67%
	Female	65	43.33%
Religious Affiliation	Islam	58	38.67%
	Christianity	77	51.33%
	African traditional religion	15	10%

Source: Field Survey, 2019

Table 2. Summary of regression analysis of impact of library information on academics performance

Model	Coefficients			T	Sig.
	Unstandardized coefficients		Standardized coefficients		
	B	Std. error	Beta		
(Constant)	.518	.857		.605	.545
Library Information	.960	.036	.786	27.046	.000

R = .786; R² = .618; F_{1/148} = 731.475

a. Dependent Variable: Academics Performance

Source: Researcher's Field Results, 2019

performance of selected school is explained by variations in library information. This means that library information positively predicts academics performance of selected school. However, the model failed to explain 38.2% of the variation, meaning that there are other factors associated with academics performance which were not fitted in the model. Since p-value < 0.05, the null hypothesis (H_{01}) which states that library information has no significant impact on academics performance in selected senior secondary school in Osun State is hereby rejected.

Restatement of Hypothesis Two

H_{02} : Teachers information's has no significant impact on academics performance of students in senior secondary school.

In order to test the hypothesis, simple linear regression analysis was used. The data for Teachers information and academics performance were created by summing responses of all items for each of the variable. The results of the regression are presented in Table 3.

Interpretation

Table 2 presents result of regression analysis of impact of library information on academics performance of students in senior secondary school. The results revealed that library information have positive and significant impact on academics performance of senior secondary school of selected secondary school in Osun State ($\beta = .845, t = 32.704, p = .000$). The result shows that for one unit change in teacher information, academic performance increases by 85%. Furthermore, the regression results in Table 2 show that the relationship between library information and academics performance was positive and significant ($R = .838, F_{(1/148)} =$

$1069.578, p < 0.05$). With $R^2 = .702$, the model implies that about 70.2% variation in academics performance of selected school is explained by variations in teachers information. This means that teacher's information positively predicts academics performance of selected school. However, the model failed to explain 29.8% of the variation, meaning that there are other factors associated with academics performance which were not fitted in the model. Since p-value < 0.05, the null hypothesis (H_{02}) which states that teacher's information has no significant impact on academics performance in selected senior secondary school in Osun State is hereby rejected.

Restatement of Hypothesis Three

H_{03} : Textbook information's has no significant impact on academics performance of students in senior secondary school. In order to test the hypothesis, simple linear regression analysis was used. The data for Textbook information and academics performance were created by summing responses of all items for each of the variable. The results of the regression are presented in Tables 4.

Interpretation

Table 2 presents result of regression analysis of impact of Textbook information on academics performance of students in senior secondary school. The results revealed that Textbook information have positive and significant impact on academics performance of senior secondary school of selected secondary school in Osun State ($\beta = .804, t = 32.407, p = .000$). The result shows that for one unit change in Textbook information, academic performance increases by 80%. Furthermore, the regression results in Table 4 show that the relationship between textbook information and academics performance

Table 3. Summary of regression analysis of impact of teachers Information on academics performance

Model		Coefficients			T	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	2.958	.606		4.880	.000
	Teachers Information	.845	.026	.838	32.704	.000

R = .838; $R^2 = .702$; $F_{(1,453)} = 1069.578$
 a. Dependent Variable: Academics Performance

Source: Researcher's Field Results, 2019

Table 4. Summary of regression analysis of impact of textbook information on academics performance

Model		Coefficients			T	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
1	(Constant)	4.577	.586		7.809	.000
	Textbook information	.804	.025	.836	32.407	.000

R = .836; R² = .699; F_{1/148} = 1050.203

a. Dependent Variable: Academics Performance

Source: Researcher's Field Results, 2019

was positive and significant (R = .836, F_(1/148) = 1050.203, p < 0.05). With R² = .699, the model implies that about 70% variation in academics performance of selected school is explained by variations in teachers information. This means that textbook information positively predicts academics performance of selected school. However, the model failed to explain 30% of the variation, meaning that there are other factors associated with academics performance which were not fitted in the model. Since p-value < 0.05, the null hypothesis (H₀₃) which states that textbook information has no significant impact on academics performance in selected senior secondary school in Osun State is hereby rejected.

Restatement of Hypothesis Four

H₀₄: There is no combine impact of library information, teacher's information and textbook information on academics performance of students of selected senior secondary school in Osun State.

To test hypothesis four, the researcher used multiple regression analysis. Questions related to library information, teachers information and textbook were combined independently. Questions related academics performances were combined. The results of the regression are presented in Tables 5.

Table 5. Summary of multiple linear regression analysis of impact of library information, teacher's information and textbook information on academics performance

Model		Coefficients ^a			T	Sig.
		Unstandardized coefficients		Standardized coefficients		
		B	Std. error	Beta		
	(Constant)	68.055	5.757		11.822	.000
	Library information	.510	.096	.280	5.311	.000
	Teachers Information	.534	.085	.325	6.272	.000
	Textbook Information	.740	.155	.226	4.763	.000

R = 0.780; R² = 0.711; Adj. R² = .683; F(2,146) = 627.253

a. Dependent Variable: Academics Performance

Source: Researcher's Field Results, 2019

Table 6. Summary table of hypotheses tested

S/N	Statement of Hypotheses	Remarks
1.	Library information source has no significant impact on academics performance of senior secondary school students in Osun state.	Rejected
2.	Teacher's information source has no significant impact on academics performance of senior secondary school students in Osun state.	Rejected
3.	Textbook information source has no significant impact on academics performance of senior secondary school students in Osun state.	Rejected
4.	Information sources has no significant impact on academics performance of senior secondary school students in Osun state.	Rejected

Source: Researchers Findings, 2018

Interpretation

According to the results in Table 5, the R value for the overall relationship of library information, Teachers information, Textbook information and Academics performance of selected companies in Osun State was .780 meaning that there is a strong relationship between library information, Teachers information, Textbook information and Academics performance of selected school in Osun State. Furthermore, the value of coefficient of determination (R^2) was 0.683, implies that 68.3% variation of the academic performance is due to the variations (improvement) in library information, Teachers information and Textbook information. Also, the value of F-statistic was 627.253 with $p < 0.05$. This shows that the overall model was statistically significant. The result implies that library information, Teachers information and Textbook information have significant combined impact on academics performance of selected senior secondary school in Osun State. Based on this finding, the null hypothesis (H_{04}) which states that there is no combine impact of library information, Teachers information and Textbook information on academics performance of selected schools in Osun State is hereby rejected. Therefore, it can be concluded that library information, Teachers information and Textbook information have significant combine impact on academics performance of selected school in Osun State.

2.6 Summary of Hypotheses Testing

This section present the summary of hypotheses tested for this study. Five hypotheses were tested using various statistical techniques. The findings from the analysis and interpretations of results are presented in Table 6.

3. CONCLUSION AND RECOMMENDATIONS

This study examines the impact of information sources on academics performance among secondary school students in secondary schools in South-west Local Government, Osun State, Nigeria. Based on the analysis of the study it can be concluded that library information, Teachers information and Textbook information have significant impact on academics performance of selected senior secondary school in Osun State. Inadequate information sources especially library and internet facilities were also observed in this study and therefore impact the academic performance of the students

understudy. The result of this study has implication for the government, school administration, teachers and counselors. Therefore the following are recommended:

- The government should make adequate provision of sources of information especially the ones that are germane to the improvement of students' academic performance such as the library with current and useful books, internet access, etc. and also employ school counselors and post them to secondary school.
- The school administration should maintain the existing information sources they have and make request to the government for the provisions of this sources.
- The teachers counsel and encourage the students to make use of the available sources.
- The school counselors should provide educational information services to students through orientation, group and individual counseling. Counseling them on the need to make good use of the existing facilities.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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