



GEOGRAPHICAL LOCATIONS OF SECONDARY SCHOOLS AND EFFECTS ON STUDENTS' DISTANCE TRAVELLED FROM HOME TO SCHOOL IN FIVE URBAN LOCAL GOVERNMENT AREAS OF IBADAN METROPOLIS, OYO STATE, NIGERIA

Adeyuyi Gbola Kehinde^{1*} and Sanni Tawakalitu Bolanle²

¹Department of Surveying and Geoinformatics, Faculty of Environmental Studies, The Polytechnic, Ibadan, Nigeria.

²Industrial Liaison and Placement Office, The Polytechnic, Ibadan, Nigeria.

*Corresponding E-mail: adeyuyismart@yahoo.com

Cite this article:

Adeyuyi G.K., Sanni T.B. (2022), Geographical Locations of Secondary Schools and Effects on Students' Distance Travelled from Home to School in Five Urban Local Government Areas of Ibadan Metropolis, Oyo State, Nigeria. African Journal of Environment and Natural Science Research 5(1), 34-54. DOI: 10.52589/AJENSR-ROEBIWDQ.

Manuscript History

Received: 27 March 2022

Accepted: 15 April 2022

Published: 9 May 2022

Copyright © 2022 The Author(s). This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

ABSTRACT: *This study presents the spatial location distribution of private and public secondary schools and assesses the effects of distance travelled from home to school in five urban local government areas of Ibadan metropolis, Oyo State, Nigeria. Field survey methods were adopted by obtaining the geographic coordinates of schools using a handheld Global Positioning System (GPS Garmin 78s) and a structured questionnaire consisting of fifteen (15) questions and interviews to assess the effect of distance travelled from home to school from selected private and public secondary schools and from selected students in the study areas. Data were processed using ArcGIS 10.4 (Arcmap 10.4) to show the spatial locations of schools, and IBM SPSS (statistics 20) to assess the effects of distance travelled from home to school on students. The result of geographic locations of schools showed a cluster spatial distribution pattern in the North-eastern part of Ibadan southwest, south-western part of Ibadan Northeast and North-western part of Ibadan Northwest and few schools are located in the south-western part of Ibadan Southeast and Ibadan Southwest local government areas. However, the result also showed that students' distance travelled had significant effects on students' mental ability, academic participation and academic performance, communication between teachers and students', students' insecurity to and from, and stoppage along the travel route. The result of the correlation coefficient showed that there is a positive and negative association between questions and answers from the respondents.*

KEYWORDS: Geographic Locations, Schools, Distance Travelled, Significant Effects



INTRODUCTION

School is known to be one of the institutions that are responsible for the development and training of the mind and skill of man (Joe Project store, 2018). However, Oredein (2016) define school as a social and learning agent that provides the environment in which a child may be formally educated in order to attain educational goals (Oredein, 2016). School location is a particular place, in relation to other areas in the physical environment (rural or urban), where the school is sited (Okorie and Ezech, 2016). Considine and Zappala (2002) studied students in Australia and found out that geographical locations do not significantly predict outcomes in school performance, and the reverse is the case in most of the African countries and the five urban local government areas of Ibadan metropolis are not exempted. Ogunleye and Adepoju (2011) opined that the location of a school has an important role to play in the educational attainment of students in the school. However, most studies on school location have been carried out with a focus on urban and rural locations (NCERT, 2006). The study areas consist of both less privileged and rich people living together and it is known that it is only the rich people's children that can attend private schools and less privileged children attended the public schools.

In developing African countries, long distance seems to be a major challenge in many countries. For instance, in Zimbabwe, students often travel more than 20kms to reach the nearest secondary school (Chinowaita, 2015). Long distance to and from school has been a topic of interest to scholars in various countries such as in America, Europe, and Africa as such may affect students' academic progress and performance (Melack, 2014; World Bank report, 2019). And this is similar in the five urban local government areas of Ibadan metropolis, Oyo State, Nigeria. In most African regions countries, students' long-distance schooling challenges have been experienced (Lilian and Daniel, 2021) while in European countries, the issue of long-distance schooling is also experienced although it is not strongly related to students' performance due to socioeconomic differences in such countries like Finland, Germany, Sweden, the Netherlands, Belgium, Greece, Iceland, Ireland, Israel, Poland, the United Kingdom, Serbia, Russia and Dubai (OECD, 2011) as compared to African countries. Reviewing the distance from home to school as suggested by Sabeen (2007) for learners of secondary schools is a maximum distance of 3 kilometres.

Long distance to school reduces student concentration in class as some of them get stressed, and sweaty feel depleted physically and mentally when they reach the school, thereby affecting learning as reported by Bashaiza (2016). Melack (2014) established that long walking distances made students reach school very exhausted which resulted in a poor concentration on the subject being taught and sometimes dozing in class hence failing to learn effectively. Muhia (2015) established that long distance to school decreases the quality of communication between teachers and students, something which may affect the academic progress of the learners. In a study conducted by Mhiliwa (2015), it was found that school location determines the distance in which students have to get to school. It was further observed by Williams (2010) that, many students have to travel for many hours to get to school due to long distances, which in turn influences irregular attendance at school. (Arubayi 2005) compared distances travelled to school by pupils and students in Edo and Delta states and from his finding, he discovered that the location of a sizable number of primary and secondary schools in both Edo and Delta states were far away from the residences of the pupils or pupils. These long distances travelled to school were seen as a major reason for the high school dropout rate in primary and secondary



school in Nigeria which also had some effects on the school attendance (Arubayi, 2005; Duze, 2005).

Duze (2010) looked at the average distance travelled to school by primary and secondary school students in the following Nigerian states thus Anambra, Enugu and Ebonyi which are among the top ten densely populated and educationally advantaged states in the country and discovered from his findings that, the schools were located at afar distance from the children's houses and resulted in 1km maximum stipulated long-distance travel. Geographical proximity may have a dramatic effect on children's academic participation, attendance and performance, therefore, the distance travelled to school in educational planning should be a basic requirement for the approval and location of the school to enhance children's performance (Ogoro *et al.*, 2018) Adepoju and Akinkunmi (2001) stated it in their study that Oyo State education remains the largest industry and government continues to ensure that enough funds and personnel are provided. Most of the secondary schools in Oyo, Ogun, Ondo, Lagos and Kwara states are arbitrarily located and distributed. This has resulted in the poor performance of students and the high cost of secondary education as observed by (Adeyemo 1984; Obadan, 1978; Onokerhoraye, 1975; and Omoyemi, 1982). School location in Oyo State had a significant effect on their performance and there was a significant difference in performance between rural schools and urban schools (Ojoawo, 1989).

A range of methods have been used in high-income countries to measure the distance from home to school; Geographical Information Systems (GIS) (Dalton, 2011; Panter *et al.*, 2010); Geographical Positioning Systems (GPS) (Duncan, 2007); travel time (McDonald, 2008); or the 'straight-line' between school and home (Bringolf-Isler *et al.*, 2008; D'Haese *et al.*, 2011). Distances have been calculated using the shortest route possible along with the road network (Timperio *et al.*, 2006) or by asking children to draw their routes to school on image maps which were then digitised and measured, using GIS (Faulkner *et al.*, 2013). Prasetyo *et al.* (2018) integrated a spatial approach in planning access to education, developing a model for selecting school lands using multi-criteria decision analysis and a public participatory approach. Samad *et al.* (2012) integrated AHP and GIS methods to conduct a land suitability analysis on existing and potential school locations in the Perlis area, Malaysia, using three levels of suitability values. Many of the students of private and public secondary schools in Oyo state have been complaining about the distance travelled from their home to school in which the five urban local government areas are not excluded. For the public schools in Oyo State, the Oyo State government implemented free education for both the primary and secondary schools students in the last eight years. However, students' distance travel to school from home in the study area is needed to understand the effects of distance from home to school. Therefore, this necessitated this study at mapping the spatial location of private and public secondary schools and assesses the effects on students' distance location from home to school and also if the stipulated maximum distance travel distance of 1km by many schools in Nigeria was followed in five urban local government areas, Ibadan.

MATERIALS AND METHODS

The study area

Ibadan North, Ibadan Northeast, Ibadan Northwest, Ibadan Southeast and Ibadan Southwest are the five urban local government areas that make up the Ibadan metropolis. The entire study area lies at approximately Longitude $3^{\circ} 52' 47.65''\text{E}$ to $3^{\circ} 52' 55.85''\text{E}$ and Latitude $7^{\circ} 23' 55.89''\text{N}$ to $7^{\circ} 23' 48.96''\text{N}$. The five local government areas are known as the inner/core area of the Ibadan metropolis. The areas are dominated by commercial activities where people buy and sell goods. Important markets are located within the study area such as Bodija market, Oje market, Agbeni market etc. Also, two major tertiary institutions; the University of Ibadan and The Polytechnic, Ibadan are located in the study area.

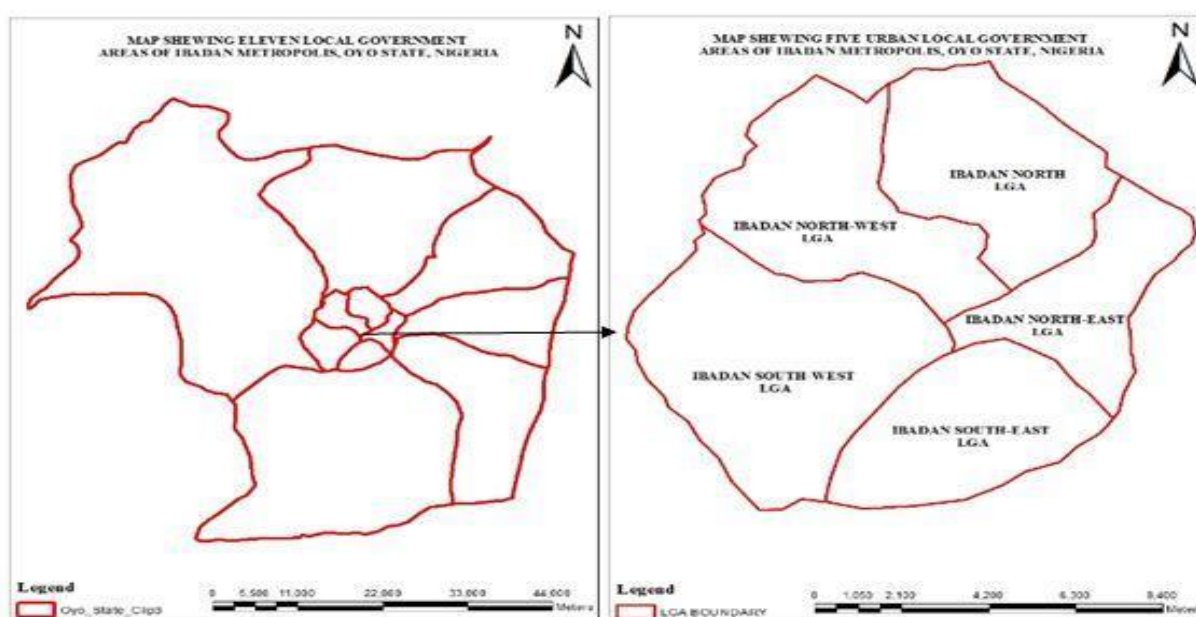


Figure 1: Map of the study area

METHODS

Instrument Used/Data Source

Primary and secondary data were used for the study. The primary data were sourced through the field method using a handheld Global Positioning System (GPS Garmin 78s) to acquire the geographic locations of private and primary schools in the study area. Other primary data was also from a questionnaire consisting of fifteen (15) questions administered and interviews conducted on the effects of distance travelled from home to school by the private and public secondary schools to better help understand the effects of distance travelled from home to school.

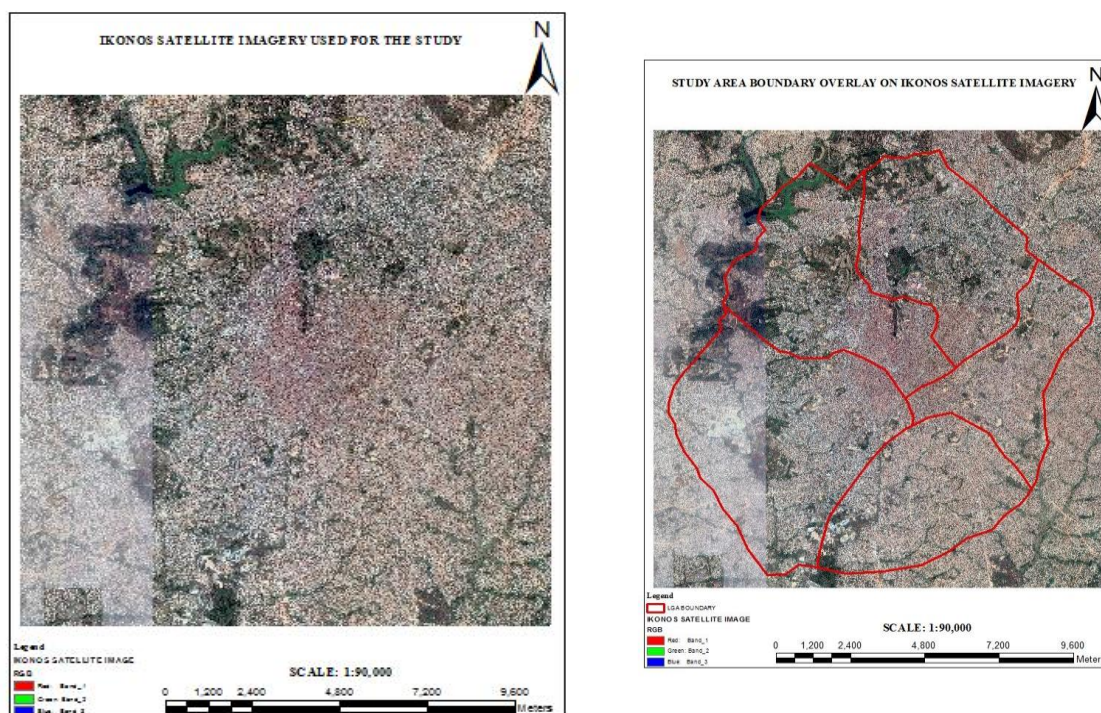


Figure 2: IKONOS image used and study area boundary overlaid

Sample and Sampling Technique

Five (5) of the eleven local government areas that make up the Ibadan metropolis were sampled. It is known as an urban area and consists of Ibadan North, Ibadan North-east, Ibadan North-west, Ibadan South-east and Ibadan South-west.

Population

The total number of private secondary and public secondary schools sampled consists of 61 and 115 of the five urban Local Government Areas in Ibadan metropolis, Oyo State (Table 1). For the public secondary schools, twelve (10.43%) secondary schools were sampled out of 115 with five (5) students' interviewed and answering questions from the questionnaire provided. Also, eight (13.11%) secondary schools were sampled out of 61 private secondary schools with three (3) students interviewed and answered questions from the questionnaire administered in order to get their information on the distance it took them to get to school from home and its effects on them (Table 1).

**Table 1: Distribution of Secondary Schools by Local Government Areas**

S/ No.	LGAs	No. of schools visited by LGAs		No. of selected secondary schools by LGAs	
		Private Schools	Public Schools	Private Schools	Public Schools
1	Ibadan North	07	29	1	3
2	Ibadan North-east	12	18	1	2
3	Ibadan North-west	14	20	2	2
4	Ibadan South-east	12	16	1	1
5	Ibadan South-west	16	33	3	4
Total		61	115	8	12

Source: Authors' Fieldwork 2022

Table 2: Name of selected Secondary Schools and Students interviewed

S/No	LGAs	Name of selected secondary schools		No. of students interviewed	
		Private Schools	Public Schools	Private Schools	Public Schools
1	Ibadan North	Soaring Heights Academy.	Ikolaba Gramm. Sch. Agodi, Oba Akinbiyi High Sch., Methodist Gramm. Sch. Bodija,	3	5
2	Ibadan Northeast	Success High School.	Mufulahun High Sch., Olubadan Gramm. Sch.	3	5
3	Ibadan Northwest	Tobi Secondary School, Seed of Life College.	Oba Abass Aleshoimloye Junior High Sch., Ansarul Deen High School Sango Eleyele	3	5
4	Ibadan Southeast	Bolade Model College.	College of Arabic Studies	3	5
5	Ibadan Southwest	Molete Baptist College, Abayomi Intl. College, Debby Intl. School.	Oluyole Extension High School, Mufulahun High School, Oba Akinibiyi High School Oremeji, St Annes Secondary School Molete	3	5

Source: Authors' Fieldwork 2022

RESULTS AND DISCUSSION

Figure 3 presents the result of spatial locations of private and public secondary schools, figure 4 describes the buildings surrounded by both private and public schools and figure 5 describes the private and public secondary schools that are within 1km and 500m buffer zone distance to buildings. Table 3 presents the database created, and data processing and table 4 and 5 present the results of the effects of distance travel on students from home to school. Tables 6 and 7 present the correlation coefficient analysis that showed the relationship/association between questions answered by the respondents.

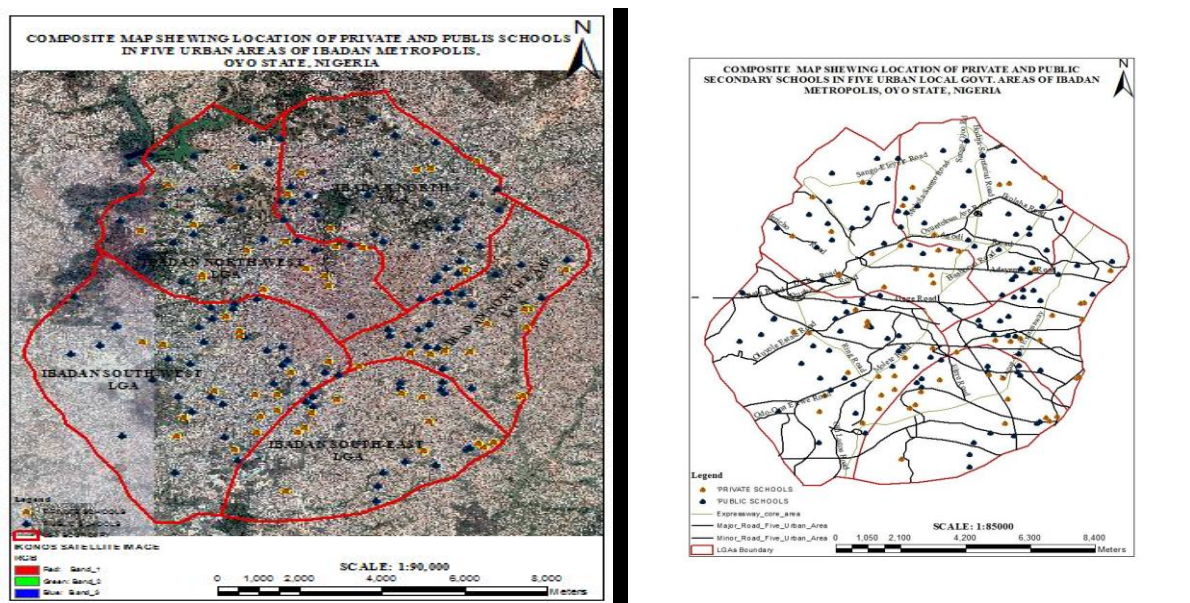


Figure 3: Composite map of the study

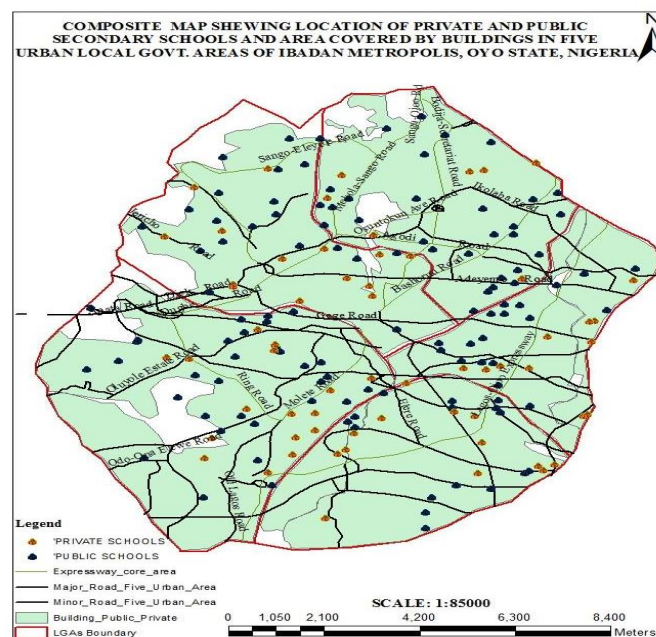


Figure 4: Composite map of the study showing area covered by buildings

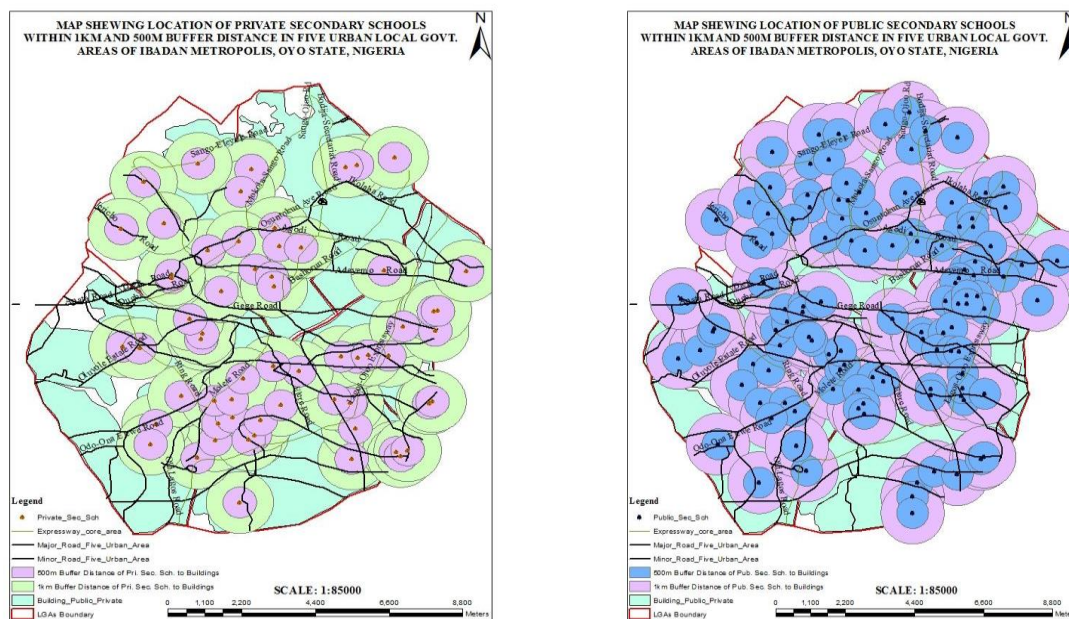


Figure 5: 1km and 500m Buffer Distance of Private and Public Secondary Schools

By visualising the map, it showed that buildings were within the school locations. The buildings are not categorised into any type since the study areas are overpopulated. Both private and secondary schools showed a cluster distribution pattern in the North-eastern part of Ibadan southwest, south-western part of Ibadan Northeast and North-western part of Ibadan Northwest. Schools are not located in the central part of Ibadan North and Ibadan Southeast local government area. Few schools are located in the south-western part of Ibadan Southeast and Ibadan Southwest local government areas of the study areas. In Figure 5 above, it showed that all private and public secondary schools in the study area are in line with the maximum distance travel of 1km stipulated by many schools in Nigeria. Though, the result may be due to the fact that the study areas are developed and populated areas.



Table 3: Database created and output results of respondents for private and public secondary school

Private School.sav [DataSet0] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

1: MOTFHTS 3.00 Visible: 15 of 15 Variables

	MOTFHTS	DYCTS...	INOOWWW	WTDYNLH...	HMMDITYGTS	WTDYNGH	GTSLAYMA	LTSAYAPAP	TFSDCBYAYT	DYGTSAADTR	DYFSWV
1	Car	No	My Parent	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	No	Y
2	Car	No	My Parent	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	No	Y
3	School bus/Van	No	With grou...	After 7am	15 minutes	By 3pm	Yes	Yes	Yes	No	Y
4	School bus/Van	No	With grou...	After 7am	15 minutes	After 4pm	No	Yes	Yes	Yes	Y
5	Car	Yes	With grou...	After 7am	15 minutes	After 4pm	Yes	No	Yes	Yes	Y
6	Car	No	My Parent	Before 7am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
7	Car	Yes	My Parent	Before 7am	20 minutes	By 3pm	No	Yes	Yes	Yes	Y
8	Car	No	My Parent	After 7am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
9	School bus/Van	No	With grou...	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
10	School bus/Van	No	My Parent	Exactly 8am	10 minutes	Before 5pm	Yes	No	Yes	Yes	Y
11	Car	No	My Parent	After 7am	5 minutes	Before 5pm	Yes	Yes	Yes	No	Y
12	School bus/Van	No	Neighbor	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
13	School bus/Van	No	My Parent	Exactly 8am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
14	School bus/Van	No	My Parent	Before 7am	30minutes	After 4pm	Yes	Yes	No	Yes	Y
15	Motorbike	Yes	My Parent	Before 7am	10 minutes	Before 5pm	Yes	Yes	Yes	Yes	Y
16	School bus/Van	Yes	Neighbor	After 7am	15 minutes	By 3pm	Yes	No	Yes	Yes	Y
17	Commercial vehi...	No	With grou...	Before 7am	15 minutes	By 3pm	Yes	Yes	Yes	Yes	Y
18	Car	No	Friend	Before 7am	20 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
19	Car	No	Alone	Before 7am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
20	Car	No	With grou...	Before 7am	15 minutes	Before 5pm	No	Yes	Yes	No	Y
21	School bus/Van	No	My Parent	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
22	Motorbike	No	My Parent	After 7am	10 minutes	After 5pm	Yes	No	Yes	Yes	Y

Data View Variable View

IBM SPSS Statistics Processor is ready

Public School.sav [DataSet1] - IBM SPSS Statistics Data Editor

File Edit View Data Transform Analyze Direct Marketing Graphs Utilities Add-ons Window Help

60: DSTTFHTSLTSD 1.00 Visible: 15 of 15 Variables

	MOTFHTS	DYCTS...	INOOWWW	WTDYNLH...	HMMDITYGTS	WTDYNGH	GTSLAYMA	LTSAYAPAP	TFSDCBYAYT	DYGTSAADTR	DYFSWV
1	Walking or cycling	Yes	Alone	After 7am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
2	Walking or cycling	Yes	Alone	After 7am	10 minutes	By 3pm	Yes	Yes	Yes	No	Y
3	Commercial vehi...	Yes	Alone	Exactly 8am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
4	Motorbike	No	Friend	Before 7am	10 minutes	Before 5pm	No	Yes	Yes	Yes	Y
5	Walking or cycling	No	Friend	After 7am	15 minutes	Before 5pm	Yes	Yes	Yes	Yes	Y
6	Commercial vehi...	Yes	Alone	After 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
7	Commercial vehi...	No	Friend	Before 7am	10 minutes	After 4pm	Yes	Yes	Yes	No	Y
8	Commercial vehi...	Yes	Alone	After 7am	10 minutes	By 3pm	Yes	Yes	Yes	Yes	Y
9	Motorbike	Yes	Alone	After 7am	15 minutes	After 4pm	No	Yes	Yes	Yes	Y
10	Walking or cycling	Yes	Alone	Exactly 8am	10 minutes	After 5pm	Yes	Yes	Yes	Yes	Y
11	Walking or cycling	Yes	Alone	After 7am	10 minutes	After 5pm	Yes	Yes	Yes	No	Y
12	Motorbike	Yes	My Parent	after 8am	5 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
13	Motorbike	Yes	Alone	After 7am	10 minutes	After 4pm	Yes	No	Yes	Yes	Y
14	Motorbike	Yes	Alone	After 7am	15 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
15	Motorbike	Yes	Alone	Before 7am	10 minutes	Before 5pm	Yes	Yes	Yes	No	Y
16	Commercial vehi...	No	Friend	After 7am	15 minutes	By 3pm	Yes	No	Yes	Yes	Y
17	Walking or cycling	Yes	Alone	Exactly 8am	10 minutes	By 3pm	No	Yes	Yes	Yes	Y
18	Walking or cycling	Yes	Alone	After 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
19	Motorbike	Yes	My Parent	After 7am	10 minutes	After 4pm	Yes	Yes	No	Yes	Y
20	Motorbike	Yes	Alone	After 7am	15 minutes	After 4pm	No	Yes	Yes	No	Y
21	Commercial vehi...	Yes	Alone	After 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y
22	Motorbike	Yes	Alone	After 7am	10 minutes	After 4pm	Yes	Yes	Yes	Yes	Y

Data View Variable View

IBM SPSS Statistics Processor is ready



The screenshot shows the IBM SPSS Statistics Data Editor interface. The 'Analyze' menu is open, and 'Frequencies...' is selected. The data table below shows variables MOTFHTS and DYCTSED, with values for Car, School bus/Van, and Motorbike.

Case #	MOTFHTS	DYCTSED
1	Car	N
2	Car	N
3	School bus/Van	N
4	School bus/Van	N
5	Car	Ye
6	Car	N
7	Car	Ye
8	Car	N
9	School bus/Van	N
10	School bus/Van	N
11	Car	N
12	School bus/Van	N
13	School bus/Van	N
14	School bus/Van	N
15	Motorbike	Ye
16	School bus/Van	Ye
17	Commercial vehi...	N
18	Car	N
19	Car	N
20	Car	No
21	School bus/Van	No
22	Motorbike	No

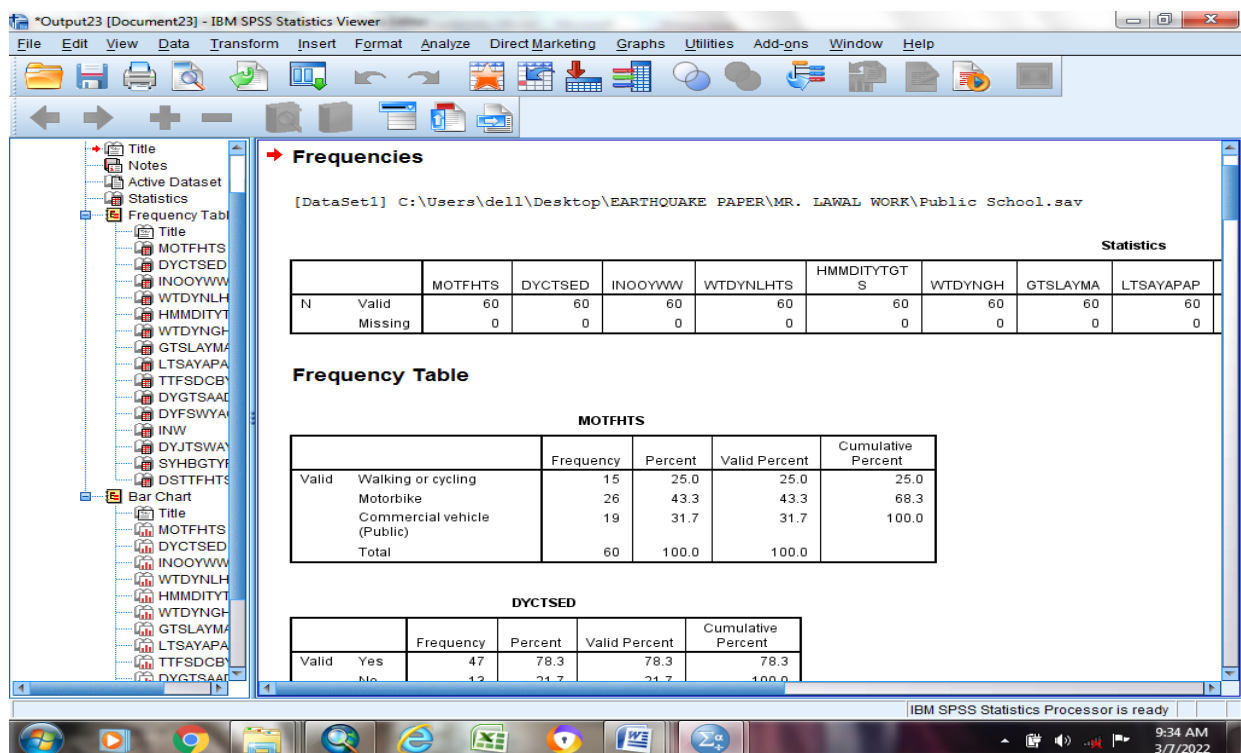
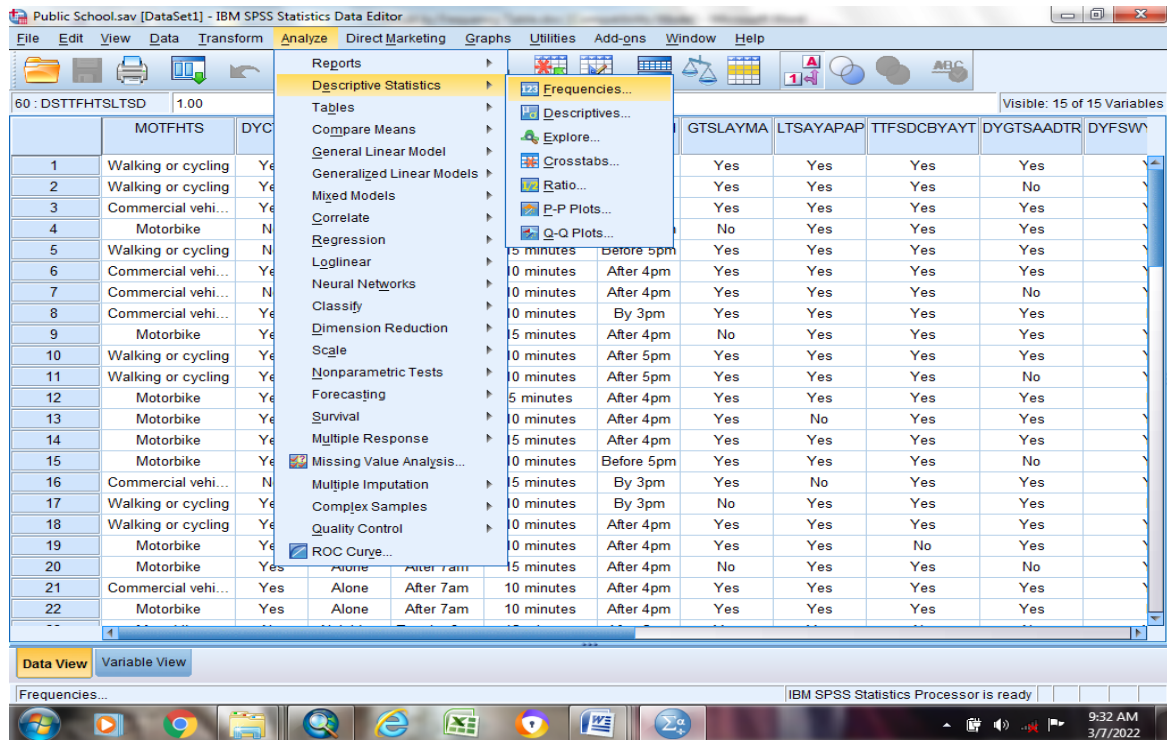
The screenshot shows the IBM SPSS Statistics Viewer output for the 'Frequencies' command. It includes a list of variables, a statistics table, and a frequency table for the variable MOTFHTS.

Statistics

	MOTFHTS	DYCTSED	INOOYWW	WTDYNLHTS	HMMDITYGT S	WTDYNGH	GTSLAYMA	LTSAYAPAP
N	Valid 24	24	24	24	24	24	24	24
	Missing 0	0	0	0	0	0	0	0

Frequency Table

MOTFHTS		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Motorbike	2	8.3	8.3	8.3
	Car	11	45.8	45.8	54.2
	Commercial vehicle (Public)	1	4.2	4.2	58.3
	School bus/Van	10	41.7	41.7	100.0
	Total	24	100.0	100.0	



Source: Authors' data processing/computations

**Table 4: Result of respondents from Private Secondary School Students**

What is your mode of travel from home to school and school to home? (A)			Does travel time from school decreases the quality of communication between teachers and students? (I)		
	Frequency	Percentage		Frequency	Percentage
Motorbike	2	8.3	Yes	22	91.7
Car	11	45.8	No	2	8.3
Commercial vehicles (Public)	1	4.2	Total	24	100.0
School bus/Van	10	41.7			
Total	24	100.0	Do you go to school at all during the rains? (J)		
Did you come to school alone every day? (B)			Yes	18	75
Yes	5	20.8	No	6	25
No	19	79.2	Total	24	100
Total	24	100.0	If Yes or No, with who? (C)		
If Yes or No, with who? (C)			Do you feel safe when you go to school and come back home? (K)		
Friend	1	4.2	Yes	16	66.7
My Parent	13	54.2	No	8	33.3
Neighbor	2	8.3	Total	24	100
Alone	1	4.2	If No, why? (L)		
With a group of students in the School Bus	7	29.2	Because of insecurity in the country	4	16.7
Total	24	100.0	Because of fear to cross the Highway	2	8.3
What time did you normally leave home to school? (D)			Because am always with my parent	8	33.3
Before 7 am	14	58.3	Because I go with the school Bus	10	41.7
After 7 am	8	33.3	Total	24	100
Exactly 8 am	2	8.3	How many minutes does it take you to get to school? (E)		
Total	24	100.0	During your journey to school and back home, what are your worries? (M)		
How many minutes does it take you to get to school? (E)			Ability to cope with what have being taught	16	66.7
5 minutes	1	4.2	Time it takes to travel	2	8.3
10 minutes	9	37.5	Punishment in school	6	25.0
15 minutes	10	41.7	Total	24	100
20 minutes	2	8.3	Have you ever had any stoppage along your route to school? (N)		
30 minutes	2	8.3			
Total	24	100.0			



School closes by 2 pm, what time did you normally get home? (F)	Yes	4	16.7		
By 3 pm	4	16.7	No	20	83.3
After 4 pm	13	54.2	Total	24	100.0
Before 5 pm	5	20.8			
After 5 pm	2	8.3	Does long-distance travel time from home to school lead to student's dropout?		
Total	24	100.0	Yes	22	91.7
Getting to school late affects your mental ability (G)	No		No	2	8.3
Yes	21	87.5	Total	24	100.0
No	3	12.5			
Total	24	100.0			
Lateness to school affects academic participation & performance					
Yes	20	83.3			
No	4	16.7			
Total	24	100.0			

Table 5: Result of respondents from Public Secondary School Students

What is your mode of travel from home to school and school to home? (A)			Does travel time from school decreases the quality of communication between teachers and students? (I)		
	Frequency	Percentage		Frequency	Percentage
Walking or cycling	15	25.0	Yes	57	95.0
Motorbike	26	43.3	No	3	5.0
Commercial vehicle (Public)	19	31.7	Total	60	100.0
Total	60	100.0			
Do you go to school at all during the rains? (J)					
Did you come to school alone every day? (B)			Yes	52	86.7
Yes	47	78.3	No	8	13.3
No	13	21.7	Total	60	100
Total	60	100.0			



If Yes or No, with who? (C)			Do you feel safe when you go to school and come back home? (K)		
Friend	10	16.7	Yes	53	88.3
My Parent	7	11.7	No	7	11.7
Neighbor	3	5.0	Total	60	100
Alone	40	66.7			
Total	60	100.0	If No, why? (L)		
			Because of insecurity in the country	46	76.7
What time did you normally leave home to school? (D)			Because of fear to cross the Highway	6	10.0
Before 7 am	11	18.3	Because am always with my parent	8	13.3
After 7 am	42	70	Total	60	100
Exactly 8 am	6	10.0			
After 8am	1	1.7			
Total	60	100.0			
How many minute does it take you to get to school? (E)			During your journey to school and back home, what are your worries? (M)		
5 minutes	10	16.7	Ability to cope with what have being taught	49	81.7
10 minutes	39	65.0	Time it takes to travel	3	5.0
15 minutes	11	18.3	Punishment in school	8	13.3
Total	60	100.0	Total	60	100
			Have you ever had any stoppage along your route to school? (N)		
School closes by 2pm, what time did you normally get home?(F)			Yes	6	10.0
By 3pm	14	23.3	No	54	90.0
After 4pm	35	58.3	Total	60	100.0
Before 5pm	8	13.3			
After 5pm	3	5.0	Does long distance travel time from home to school leads to student's dropout?		
Total	60	100.0	Yes	57	95.0
Getting to school late affects your mental ability. (G)			No	3	5.0
Yes	52	86.7	Total	60	100.0
No	8	13.3			
Total	60	100.0			
Lateness to school affects academic participation & performance					
Yes	55	91.7			
No	5	8.3			
Total	60	100.0			



From table 4 above, car by parent and school bus/van is the major means of transportation to school by the private secondary schools students in the study areas with 11 (45.8%) and 10 (41.7%) while the remaining 3 (12.5%) goes to school by commercial vehicles and motorbike while motorbike 26 (43.3%) and commercial vehicle 19 (31.7%) are the major mode of travel to school by the public secondary schools. However, the result also showed that 14 (58.4%) of private secondary schools leave home earlier before 7am to school (table 4) and 42 (70%) of public schools students' leave home after 7am. Moreover, 9 (37.5%) and 10 (41.7%) spend 10 minutes and 15 minutes to school despite the fact that they were transported by either their parents or school bus/van before getting to school and 39 (65%), 11 (18.3%) of public secondary school students' agreed that it took them 10 minutes and 9 minutes to get to school and the result is similar to the result of (Mhiliwa, 2015). However, 21 (87.5) of private secondary schools students' agreed that lateness to school late affects their mental ability and 20 (83.3%) agreed that it affects their academic participation and performance and 22 (91.7%) agreed that it decreases the quality of communication between them and their teachers while 52 (86.7%), 55 (91.7%) and 57 (95%) agreed that lateness to school late affects their mental ability (Bashaiza, 2016; Melack, 2014), academic participation and performance and decreases the quality of communication between them and their teachers in public secondary schools and the result is the similar with the result obtained by (Muhia, 2015). In private secondary schools, 16 (66.7%) agreed that they are safe when going and coming back from school since they go home by their parents and 8 (33.3%) disagreed and as well 53 (88.3%) of public schools agreed that they are safe and 7 (11.7%) disagreed. Ability to cope with what have being taught is the major worries of both the private and public secondary schools students in the study area with 16 (66.7%) private schools and 49 (81.7%) public schools while punishment is next with 6 (25%) private schools and 8 (13.3%) in public schools. Furthermore, 22 (91.7%) private secondary school students and 57 (95%) public secondary school students agreed that long distance travel time from home to school may lead to student's dropout.

Table 6: Correlation coefficient analysis using Pearson Correlation for the Private Secondary Schools

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A	1														
B	.281	1													
C	.335	.074	1												
D	.209	-.079	-.093	1											
E	-.002	-.326	.000	-.169	1										
F	-.377	.005	-.221	.198	-.105	1									
G	-.044	-.116	.273	-.098	.214	-.097	1								
H	.839	.588	.197	.650	.315	.654									



H	-.017	-.321	.000	.520*	-.136	.160	-.169	1										
	.936	.126	1.000	.009	.525	.455	.430											
I	.338	.155	.109	-.234	.381	.108	-.114	-	1									
								.135										
J	-.067	.296	.209	-.149	-.277	.089	.073	-	.174	1								
								.258										
K	-.109	.145	.064	.000	-.216	.036	-.267	.158	-.213	-.204	1							
	.612	.499	.767	1.000	.312	.867	.207	.461	.317	.339								
L	.274	-.192	-.081	.174	.309	-.042	.141	.067	.113	-.216	-	1						
											.687							
											**							
M	.131	.228	.000	.000	-.156	-.173	-.256	.086	-.029	-.056	.137	.210	1					
	.543	.284	1.000	1.000	.467	.419	.228	.688	.892	.796	.524	.326						
N	.328	.321	-.081	-.173	-.097	-.297	.169	-	.135	.000	.079	.134	.043	1				
								.100										
O	-.081	-.217	.109	.000	-.092	.108	.342	-	-.091	-.174	.107	-	-	.135	1			
								.135				.158	.204					
	.705	.309	.613	1.000	.669	.616	.102	.530	.673	.416	.620	.462	.339	.530				

***. Correlation is significant at the 0.01 level (2-tailed). The analysis is based on bivariate*

Table 6: Correlation coefficient analysis using Pearson Correlation for the Public Secondary Schools

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A	1														
B	.001	1													
	.997														
C	-.108	-.779**	1												
	.411	.000													
D	-.069	-.093	.087	1											
	.601	.481	.508												
E	-.009	.122	.066	-.045	1										
	.944	.353	.615	.730											
F	-.170	.269*	-.206	.225	.075	1									
	.193	.038	.115	.083	.570										
G	-.128	.032	-.072	-.050	.155	.000	1								
	.328	.810	.586	.705	.238	1.000									



H	.107	-.012	-.055	.026	-.110	-.080	-.118	1							
	.414	.926	.676	.846	.401	.543	.368								
I	.056	.065	-.171	.149	-.006	.203	-.090	-.069	1						
	.673	.622	.191	.255	.961	.119	.494	.599							
J	.039	.151	-.030	-.050	.238	.326*	-.010	-.118	.135	1					
	.767	.250	.818	.705	.067	.011	.942	.368	.304						
K	-.075	.061	-.023	.295*	-.010	-.069	.010	-.110	-.083	-.143	1				
	.571	.644	.864	.022	.938	.601	.938	.405	.527	.277					
L	.173	-.216	-.274*	.124	-.294*	.031	.213	.100	.314*	-.204	-.042	1			
	.187	.098	.034	.345	.023	.812	.102	.449	.015	.119	.752				
M	-.047	.110	-.063	.120	.190	.064	-.108	-.137	-.105	-.108	.059	-.033	1		
	.723	.404	.632	.361	.146	.629	.411	.295	.427	.411	.657	.803			
N	.062	.040	.014	-.028	.197	-.221	.131	-.101	.076	-.033	-.225	-.063	-.008	1	
	.640	.759	.915	.830	.131	.089	.319	.445	.561	.804	.084	.633	.952		
O	-.010	-.121	.152	.019	-.006	.102	.135	-.069	-.053	.135	.155	-.011	-.105	-.433**	1
	.941	.358	.247	.883	.961	.440	.304	.599	.690	.304	.237	.935	.427	.001	

***. Correlation is significant at the 0.01 level (2-tailed).* **. Correlation is significant at the 0.05 level (2-tailed).*

Note: A to O represents questions 1-15 (Table 4 & 5). The analysis is based on bivariate

From the responses of the private secondary school students (Table 4 and 6), it showed that the time that some of the private secondary school students normally leave home for school have a strong and positive correlation with their academic participation and performance as they correlate with each other as 'r' value (0.520) > 0.01 and significant at 99% confidence level at 2-tailed. However, how safe students are when going to school and coming back home had a negative and strong relationship as the 'r' value (-0.687) < 0.01 and significant at 99% confidence level at 2-tailed. For the public secondary school students (Table 5 and 7), the answer to students' responses on whether they come to school alone every day had a negative and strong relationship with the answer provided that they come to school alone as 'r' value (-0.779) < 0.01 and significant at 99% confidence level at 2-tailed which can be attributed to students' standard of living. Coming to school alone every day had a moderate and positive relationship with the time they get back home from school after 4 pm as 'r' value (0.269) > 0.05 and significant at 95% confidence level at 2-tailed. Going to school during the rains had a moderate and positive relationship with the time they get back home as 'r' value (0.326) > 0.05 and significant at 95% confidence level at 2-tailed.

Insecurity in the country had a weak and negative relationship with students going to school alone and the time it takes them to get to school as 'r' value (-0.274, -0.294) < 0.05 and also affects the quality of communication between teachers with a moderate and positive relationship as 'r' value (0.314) > 0.05 is and significant at 95% confidence level at 2-tailed as all these create fear in them. Moreover, the time the students normally leave home to school has a positive and moderate relationship with how safe they are when you go to school and come back home as 'r' value (0.295) > 0.05 and significant at 95% confidence level at 2-tailed. However, stoppage along students' route to school had a weak and negative relationship with students dropping out of school as 'r' value (-0.433) < 0.01 and significant at 99% confidence



level at 2-tailed. A positive correlation from table 6 and 7 above shows that one question from the questionnaire moves in the same direction as another and a negative correlation implies that as one question shows a particular quality, the other one is less in quantity.

CONCLUSION

Geographic information system application has been used as a tool to show the spatial location distribution of private and public secondary schools and IBM SPSS (statistics 20) to assess the effects of distance travel of students from home to school in the five urban local government areas of Ibadan metropolis, Oyo State, Nigeria. The findings on the distance travelled showed that mode of travel, coming to school alone every day, time they normally leave home to school, the time they get back home from school had significant effects on student's mental ability, academic participation and academic performance, communication between teachers and students', students' insecurity to and from, stoppage along the travel route. Children may be born the same way but they will have different family backgrounds leading to different home training. With different home training, they will have different mental abilities/development. Students of private and public secondary schools that have their houses close to school are not expected to face any effects of distance travel to school and any students that are affected by the results obtained may be due to student laziness, bad gang/friend, nonchalant attitude etc. Since the students' distance travel for all private and public secondary schools in the study areas are in line with the 1km travel distance stipulated by many schools in Nigeria, then the result of effects of distance travel did not affect the students in the study area. Though, the distance travelled by some of the students depends on the school choices chosen by the students or parents. The farther the geographic locations of schools, the longer the distance travelled and the closer the school location, the shorter the distance travelled and the distance travelled to school. Educational planning should be a basic requirement for the approval and location of schools to enhance children's performance (Ogoro *et al.*, 2018). It can be deduced from this study that many students coming from afar from home to school will experience the effects of distance travel from home to school obtained in this study. However, from the interview conducted, student background, Parents' and students' interest in choosing the best school of their choice are the answers given by the respondents and these are some of the key factors that they believe may affect students' distance travel to school.

Future Research

Future research will be on demographic data collection of the students and teachers, the best route and alternative route showing the shortest distance to schools to avoid lateness to school from home and other physical and mental imbalances on the students.

RECOMMENDATIONS

The following recommendations are made for future education planning in the study areas and as well as other local government areas in Oyo State.

- i. Strategic planning methods should be put in place by the government and private school owners before new schools will be established in Oyo State.



- ii. In order to make home to school distance convenient for the students, the government and school owners should take geographic proximity as a matter of concern.
- iii. Parents should enlighten/educate their children on the importance of education in human life and how they should make it their priority.

REFERENCES

- Adepoju, T. L & Akinkunmi, F. S. (2001). Location of Secondary Schools as a Factor in Determining Academic Performance of Students. *Ibadan Journal of Educational Studies*. 1(2) 2001 410.
- Adeyemo, D. (1984) Psychological Characteristics of Secondary Education in Nigeria. In Adesina, S. & Ogunsaju, S. (Eds.) *Secondary Education in Nigeria*. Ile-Ife: University of Ife Press Ltd.
- Arubayi, E. (2005). Comparing Average Distance Travelled to school by students in Primary and Secondary Schools in Delta and Edo state and its Effects on Attendance, *Delsu J. Educ. Res. Dev*, 4(10), 1-9.
- Bashaiza, J. (2016). Performance: Why distance to school matters. Available from <http://www.newtime.co.rw/section/read/201440/>
- Bringolf-Isler, B., Grize, L., Mader, U., Ruch, N., Sennhauser, F. H., & Braun-Fahrlander, C. (2008). Personal and environmental factors associated with active commuting to school in Switzerland. *Prev Med*. 2008;46(1):67–73.
- Chinowaita, M. (2015). Rural teachers, and pupils suffer in silence. Zimbabwe: associated newspaper of Zimbabwe (PVT).
- Considine, G. & Zappala, G. (2002). The influence of social Economic disadvantage in the academic performance of school students in Australia. *Journal of Sociology*, 38, 127-148.
- Dalton, M.A. et al. (2011). Built environment predictors of active travel to school among rural adolescents. *Am J Prev Med*. 2011;40(3):312–9.
- D'Haese, S. et al. (2011). Criterion distances and environmental correlates of active commuting to school in children. *Int J Behav Nutr Phys Act*. 2011;8:88.
- Duncan, M. J., M. W. (2007). GIS or GPS? A comparison of two methods for assessing route taken during active transport *Am J Prev Med*, 2007. 33: p. 51–53.
- Duze, C. O. (2010). Entrepreneurship Education in Nigeria: Funding Mechanisms. *African Research Review*, 4(4).
- Faulkner G. S. M. (2013). Buliung R, Wong B, Mitra R (2013). School travel and children's physical activity: a cross-sectional study examining the influence of distance. *BMC Public Health*, 13: p. 1166.
- Joe Project Store, (2018). Effect of School location on the academic performance of secondary school students (A case study of onward secondary school, mbiokporo). Online: Education (<https://iproject.com.ng/education/project-topics.html>). Retrieved on 29/05/2018.
- Lilian, Oneye & Daniel, Onyango (2021). Perception of School Stakeholders on the Effect of School- Home Distance on Students' Academic Performance among Community Secondary Schools in Rorya District, Tanzania. *East African Journal of Education and Social Sciences EAJESS*, January-March, 2021, Vol. 2, No.1, pp. 76-81.



- McDonald, N. C. (2008). Children's mode choice for the school trip : the role of distance and school location in walking to school. *Transportation*. 2008;35(1):23–5.
- Melack, D. N. (2014). Determinants of the poor academic performance of secondary school students in Sumbawanga district (Master's thesis). Sokoine University of agriculture, Tanzania.
- Mhiliwa, A. J. (2015). The effects of school location on learner's academic performance (master's thesis). The Open University of Tanzania. Available from http://repository.out.ac.tz/1296/1/Dissertation_Joseph_Mhiliwa.pdf.
- Muhia, N. (2015). Who would have thought the distance to school had such an impact on the quality of education? Available from: <http://aphrc.org/post/6016>.
- NCERT, (2006). Position Paper: National focus group on teaching of science. National Council of Educational Research and Training. Sri Aurobindo Marg. New Delhi.
- Obadan, M. E. (1978). School Locational Planning as Tools for Structural Reform of Secondary Educational System: A Case study of Owan Local Government Area of Bendel State. Unpublished M.Ed. Project, University of Ibadan, Ibadan.
- OECD, (2011). "Does where a student lives affect his or her reading performance?" in PISA 2009 at a glance, OECD Publishing.
- Ogoro, Mark Aristolin, Nkwocha, Bartholomew, Ogoro, Mark. (2018). Geospatial Proximity of Students' Homes to School in Relation to Academic Performance. *International Journal of Social Science and Humanities Research* ISSN 2348-3164 (online) Vol. 6, Issue 3, pp: (651-661), Month: July - September 2018, Available at: www.researchpublish.com
- Ogunleye, B. O. & Adepoju, O. F. (2011). An everyday phenomenon in Physics Education: Impact on male and female students' Achievement, Attitude and practical skills in urban and peri-urban settings in Nigeria. *Pakistan Journal of Social sciences*, 8(6), 316-324.
- Ojoawo, A. O. (1989). Effects of Differential Distribution of Resources on Schools Performance in WASC Examinations in Oyo State Secondary Schools (1984-1987). Unpublished Ph.D. Thesis, University of Ibadan, Ibadan.
- Okorie, E. U. & Ezech, D. N. (2016). Influence of Gender and Location on Students' Achievement in Chemical Bonding. *Mediterranean Journal of Social Sciences*. 7(3), 309-318.
- Omoyemi, S. O. (1982). School Mapping as a Tool for Rationalisation of Spatial Distribution of Secondary Schools in Ondo State of Nigeria. Unpublished Ph.D. Thesis, University of Ibadan, Ibadan.
- Onokerhoraye, A. (1975). The Planning Implication of Existing Spatial Structure of Primary Schools in Kwara State, Ibadan: NISER.
- Oredein, O. (2016). Effects of school variables on student's academic performance in Calabar. Municipal Area of Cross River State. Online. Retrieved 29/05/2018.
- Panther, J. R. et al. (2010). Attitudes, social support and environmental perceptions as predictors of active commuting behaviour in school children. *J Epidemiol Community Health*. 2010; 64(1):41–8.
- Prasetyo, D. H., Mohamad, J., & Fauzi, R. (2018). A GIS-based multi-criteria decision analysis approach for public school site selection in Surabaya, Indonesia. *Geomatica* 2018, 72, 69–84. [[CrossRef](#)]
- Sabean, C. (2007). Students walking distance review for Nova Scotia department of education. available from <https://www.ednet.ns.ca/docs/studentwalkingdistance.pdf>.



- Samad, A. M., Hifni, N. A., Ghazali, R., Hashim, K. A., Disa, N. M., Mahmud, S. (2012). A study on school location suitability using AHP in GIS approach. In Proceedings of the 2012 IEEE 8th International Colloquium on Signal Processing and its Applications, Malacca, Malaysia, 23–25 March 2012; pp. 393–399.
- Timperio, A. B. K., Salmon J, Roberts R, Giles-Corti B, Simmons D, et al. (2006). Personal, family, social, and environmental correlates of active commuting to school *Am J Prev Med*, 2006. 30(1): p. 45–51.
- Williams, D. T. (2010). *The Rural Solution: How Community Schools can Reinvigorate Rural Education*. Washington DC: Center for American progress.
- World Bank, (2019). Benin: the multiple benefits of school lunch. Available from <http://worldbank.org>.