INFLUENCE OF SCHOOL TYPE, OWNERSHIP AND LOCATION ON ENVIRONMENTAL KNOWLEDGE, ATTITUDE AND FRIENDLY PRACTICES AMONG SECONDARY SCHOOL STUDENTS IN EDO SOUTH SENATORIAL DISTRICT

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Abstract

The paper investigated influence of school type, ownership and location on environmental knowledge, attitude and practice of secondary school students in Edo South Senatorial District. Three hypotheses were formulated to guide the study and were tested at 0.05 level of significance. The study adopted the descriptive survey design of correlational type. The population of the study comprised 21,222 students in both public and private schools in Edo South Senatorial District. The sample size consisted of 1,202 students. The study made use of two research instruments for data collection – an achievement test and a questionnaire. Data was analysed using frequency count, mean, standard deviation and Wilks' Lambda F-statistic. Based on data analysed, all hypotheses were rejected. Findings of the study showed that there was a significant difference in environmental knowledge, attitude and friendly practices among students based on school type, ownership and location. It was recommended among others, that teachers should get more interested in the

cleanliness of boys as this would help them become conscious of the need for personal cleanliness and this will further translate into their involvement in environmental friendly practices.

Keywords: Knowledge, Attitude, Practice, School ownership, School location, School type.

Introduction

The interconnections between environmental knowledge, attitude, and practices are complex and reciprocal. Environmental knowledge can influence environmental attitude which in turn can shape environmental behavior. Equally, environmental behavior can also influence environmental attitude and knowledge, as individuals learn and adapt through their experiences. These interconnections are crucial for developing effective environmental education, communication, and policy strategies that promote pro-environmental behaviors and foster a culture of sustainability.

Environmental knowledge encompasses the cognitive aspects of environmentalism, including knowledge of ecological systems, conservation, and sustainability. Environmental attitude refers to the emotional and evaluative aspects of environmentalism, including values, feelings, and beliefs about the environment. It encompasses the affective and conative components of environmentalism, influencing how individuals perceive and respond to environmental issues. Environmental practice refers to the actions that individual(s), groups, and organizations take to protect or harm the environment. It encompasses the behavioral aspects of environmentalism, including conservation, sustainable practices, and environmental activism. Environmental behavior is influenced by a combination of factors, including environmental knowledge, attitude, social norms, and institutional policies (Erhabor & Don 2016; Erwinsyah 2022; Sharma & Verma cited in Odia & Odia, 2019).

Environmental knowledge, attitude and practices among students can be influenced by school type, ownership and location (Odia 2017). School ownership is the management of schools either directly by the government or non-governmental bodies

(Organisation of Economic Co-operation and Development [OECD], 2012). Odia and Odia (2019) observed that that 'school ownership impacts significantly on students' knowledge and pro-environmental behaviour'. Location sometimes impacts on environmental knowledge, attitude and practice (UKEssays 2018; Vicente-Molina, *et al,* 2013). The level of exposure of students in urban areas to various environmental programmes may give them an edge over their rural counterparts. This is further buttressed by a previous study which was carried out by Huddart *et al* (2000) where it was observed that urban residents exhibited more pro-environmental attitudes than their rural counterparts while those in rural areas have significantly higher conservation behaviour than the urban residents. This may be due to the extent of their exposures to Environmental Education content occasioned by the influence of their locations. However, Muderrisoglu and Altanlar (2011) and Ali (2015) are of the opinion that locality has no significant impact on environmental awareness, attitude and behaviour.

The purpose of the study was to determine the influence of school type, ownership and location on environmental knowledge, attitude and practices among secondary school students in Edo South Senatorial District. The specific objectives are to:

i. find out the difference in environmental knowledge, attitude and practices among secondary school students based on school type;
ii. determine the difference in environmental knowledge, attitude and practices among students based on school ownership; and,
iii. find out the difference in environmental knowledge, attitude and practices among secondary school students based on school location.

Hypotheses

H_o1: There is no significant difference in environmental knowledge, attitude and practices among secondary school students based on school type.

H_o2: There is no significant difference in environmental knowledge, attitude and practices among secondary school students based on school ownership.

H_o3: There is no significant difference in environmental knowledge, attitude and practices among secondary school students based on school location.

Methods

The study adopted the descriptive survey research design of correlational type. The population comprised 21,222 students. The sample size was 1,202 students. The multi-stage sampling procedure was used for selecting the sample. Firstly, three local government areas in the senatorial district were purposively selected for the study. Secondly, all senior secondary schools in the three selected local government areas were listed and grouped according to their types (that is, as single-sex and co-educational schools), as well as according to their ownership. This was done through stratified random sampling. Thereafter, one public all-boys secondary school, one public all-girls secondary school, five (5) public co-educational secondary schools and five (5) private secondary schools were selected from each of the three local government areas. Thus, 12 schools were selected from each local government area to give a total of thirty-six (36) schools; lastly, 34 students were selected from each school. The sample consisted of 564 boys and 638 girls. Two instruments were used for the study – an achievement test and a questionnaire. Data was analysed using descriptive statistics while Wilks' Lambda F-statistic was used to test the hypotheses.

Results

Hypothesis 1: There is no significant difference in environmental knowledge, attitude and practices among secondary school students in Edo South Senatorial District based on school type.

Table 1: Mean, standard deviation and multivariate analysis of differences in environmental knowledge, attitude and practices among students based on school type

Variable	School Type	N	Mean	Standard Deviation	df	Wilks' Lambda (F)	Sig.
Knowledge	Boys' school	100	10.31	3.42			
	Girls' school	102	11.67	2.97			
	Co-educational	1000	12.40	3.70			
	Total	1202	12.16	3.66			
Attitude	Boys' school	100	53.30	8.33			
	Girls' school	102	56.69	6.51	1199	6.116	0.000
	Co-educational	1000	56.03	8.46			
	Total	1202	55.94	8.31			
Practices	Boys' school	100	58.19	10.53			
	Girls' school	102	57.25	7.83			
	Co-educational	1000	58.16	9.02			
	Total	1202	58.08	9.06			

From Table 1, it can be observed that students from co-educational schools had the highest mean score in environmental knowledge, followed by students from all-girls schools while students from all-boys schools had the lowest mean score. Students from all-girls schools had the highest mean score in environmental attitude, followed by students from co-educational schools while students from all-boys schools had the lowest mean score. Students from all-boys schools had the highest mean score in environmental practices, followed by students from co-educational schools while students from all-girls schools had the lowest mean score. The hypothesis was tested for significant difference and the analyses showed a significant difference in students' environmental knowledge, attitude and practices based on school type. To ascertain where the

significant difference lies, a post hoc test was done and the result is presented in Table 2.

Table 2: Post-hoc test of difference in environmental knowledge, attitude and practices among students based on school type

Dependent Variable	(I) School Type	(J) School Type	Mean Difference (I-J)	Sig.
Knowledge	Boys School	Girls School	-1.3567*	**.008**
		Co-Educational	-2.0880*	**.000**
	Girls School	Boys School	1.3567*	**.008**
		Co-Educational	-.7313	.052
	Co-Educational	Boys School	2.0880*	**.000**
		Girls School	.7313	.052
Attitude	Boys School	Girls School	-2.3863*	**.041**
		Co-Educational	-1.7250*	**.048**
	Girls School	Boys School	2.3863*	**.041**
		Co-Educational	.6613	.444
	Co-Educational	Boys School	1.7250*	**.048**
		Girls School	-.6613	.444
Practices	Boys School	Girls School	.9449	.459
		Co-Educational	.0350	.971
	Girls School	Boys School	-.9449	.459
		Co-Educational	-.9099	.334
	Co-Educational	Boys School	-.0350	.971
		Girls School	.9099	.334

The post-hoc analysis on Table 2 showed that difference lies in students' environmental knowledge and attitude. Thus, hypothesis one was rejected.

Hypothesis 2: There is no significant difference in environmental knowledge, attitude and friendly practices among secondary school students based on school ownership.

Table 3: Mean, standard deviation and multivariate analysis of differences in environmental knowledge, attitude and friendly practices among students based on school ownership

Variable	School Ownership	N	Mean	Standard Deviation	df	Wilks' Lambda (F)	Sig.
Knowledge	Public	690	11.04	3.67			
	Private	512	13.68	3.06			
	Total	1202	12.16	3.66			
Attitude	Public	690	55.04	8.72			
	Private	512	57.15	7.58	1200	59.04	0.000
	Total	1202	55.94	8.31			
Practices	Public	690	57.98	9.31			
	Private	512	58.22	8.72			
	Total	1202	58.08	9.06			

From Table 3, it can be observed that students from private schools had higher mean score in environmental knowledge than students from public schools. The difference between their mean scores is quite significant. Also, students from private schools had higher mean score in environmental attitude than students from public schools. Students from private schools had a higher mean score than students from public schools in environmental practices. A test of hypothesis was done to determine significant difference; the result showed that the difference lies in students' environmental knowledge and attitude. Thus, the null hypothesis was rejected.

Hypothesis 3: *There is no significant difference in environmental knowledge, attitude and practices among secondary school students based on school location.*

Table 4: Mean, standard deviation and regression analysis of differences in environmental knowledge, attitude and practices among students based on school location

Variable	School Location	N	Mean	Standard Deviation	df	Wilks' Lambda (F)	Sig.
Knowledge	Egor	464	11.76	3.80			
	Ikpoba-	385	11.95	3.49			
	Okha	353	12.93	3.56			
	Oredo	1202	12.16	3.66			
	Total						
Attitude	Egor	464	55.80	7.36			
	Ikpoba-	385	55.76	7.82	1199	4.37	0.000
	Okha	353	56.31	9.88			
	Oredo	1202	55.94	8.31			
	Total						
Practices	Egor	464	57.58	8.69			
	Ikpoba-	385	58.16	8.54			
	Okha	353	58.65	10.01			
	Oredo	1202	58.08	9.06			
	Total						

From Table 4, it was observed that students from Oredo Local Government Area had the highest mean score in environmental knowledge followed by students from Ikpoba-Okha Local Government Area, while students from Egor Local Government Area had the lowest mean score. Students from Oredo Local Government Area had the highest mean score in environmental attitude followed by students from Egor Local Government Area, while students from Ikpoba-Okha Local Government Area had the lowest mean score. Also, students from Oredo Local Government Area had the highest mean score in environmental practices followed by students from Ikpoba-Okha and lastly, students from Egor Local Government Area. In all, students from Oredo Local Government Area had the highest mean scores in all the three aspects. The test of hypothesis showed a significant difference and a post-hoc test was done to establish where the significant difference lies, the result is presented in Table 5.

Table 5: Post-hoc test of difference in environmental knowledge, attitude and practices among students based on school location

Dependent Variable	(I) LGA	(J) LGA	Mean Difference (I-J)	Sig.
Knowledge	Egor	Ikpoba-Okha	-.1868	.456
		Oredo	-1.1706*	**.000**
	Ikpoba-Okha	Egor	.1868	.456
		Oredo	-.9837*	**.000**
	Oredo	Egor	1.1706*	**.000**
		Ikpoba-Okha	.9837*	**.000**
Attitude	Egor	Ikpoba-Okha	.0364	.949
		Oredo	-.5170	.379
	Ikpoba-Okha	Egor	-.0364	.949
		Oredo	-.5534	.367
	Oredo	Egor	.5170	.379
		Ikpoba-Okha	.5534	.367
Practices	Egor	Ikpoba-Okha	-.5787	.354
		Oredo	-1.0746	.093
	Ikpoba-Okha	Egor	.5787	.354
		Oredo	-.4959	.457
	Oredo	Egor	1.0746	.093
		Ikpoba-Okha	.4959	.457

From the post hoc analyses in Table 5, it can be deduced that significant difference lies in *environmental knowledge* among students based on school location. The null hypothesis was therefore rejected.

Discussions

The findings showed that there was a significant difference in environmental knowledge, attitude and practices among secondary school students based on school type. Further analyses showed that the difference lies in *environmental knowledge* and *attitude*. When their environmental knowledge mean scores were compared, it was observed that students in co-educational schools had higher mean score than students in single-sex schools; while the environmental attitude mean score of students from all-girls' schools was higher than that of students from both all-boys' and co-educational schools. One would have expected that students from all-boys' schools would have the highest environmental knowledge mean score, but it was students from co-educational schools because it is usually argued that boys are more knowledgeable than girls. However, it can be

explained away that students in co-educational schools are usually competitive in performance and as such the boys will want to outperform the girls and vice-versa, hence the reason students from co-educational schools had the highest mean score in environmental knowledge. Furthermore, it is in order that students from all-girls' schools had the highest mean score in environmental attitude since girls generally are known for cleanliness. It would have therefore been absurd if the mean score of students from all-girls' schools was otherwise. These findings are in contrast with the findings of the study done by Odia (2017) in which it was observed that school type did not significantly impact on secondary school students' environmental knowledge, attitude and involvement in friendly practices.

Findings also showed a significant difference in environmental knowledge, attitude and practices among secondary school students based on school ownership. Further analyses showed that the difference lies in *environmental knowledge* and *attitude*. When their mean scores were compared, it was observed that students from private schools had higher mean scores than students from public schools in both knowledge and attitude. It is believed that students who attend private schools are better in terms of knowledge acquisition and development of positive attitude towards environmental issues generally unlike their counterparts in public schools. Previous research findings by Odia and Odia (2019) showed that school ownership impacts significantly on students' environmental knowledge and involvement in friendly practices as students from public and private schools differed in their environmental knowledge and practices and this agrees with the findings of this study.

Findings also showed a significant difference in environmental knowledge, attitude and practices among secondary school students based on school location. Further analyses revealed that the difference lies in their *environmental knowledge*. The observed difference in environmental knowledge among students in Oredo and the other local government areas may be due to the advantages that are inherent in Oredo Local Government Area which are not

present in the other local government areas. For example, Oredo Local Government Area is more centralised, has more human population, is the central business district of the senatorial district, it houses the state seat of power and house of assembly, has the palace of the monarch located in it, most tourists' attraction sites are located in it and so many more advantages. Following from these, it will be out of place not to have better schools, adequate number of teachers, educational facilities and learning materials that would help to enhance students' knowledge and other environmental variables. This finding is in consonance with the findings of the studies done by Huddart *et al* (2003) and Vicente-Molina *et al* (2013). It was observed in their studies that place of residence impacts significantly on individuals' environmental knowledge and pro-environmental behaviour. However, the findings of the study done by Ali (2015) are in contrast with the findings of this study. In Ali's study, 'school location had no effect on students' level of environmental knowledge'.

Conclusion

This paper concludes that differences exist among in their environmental knowledge, attitude and practices based on school type, ownership and location. This may be occasioned by the role that is attached to the female gender through the process of socialisation in which females are taught to take care of themselves, the home and their surroundings; it could also be as a result of the standards being upheld by private school owners hence, the better performance of their students; and it could be as a result of the institutional framework, opportunities and amenities present in Oredo Local Government Area. However, these differences can become insignificant over time if the male students become intentional about their attitude towards environmental issues, operators of public schools take the same measures as private school owners, and the same amenities, opportunities and enabling environment are made available in all three local government areas in the senatorial district.

Recommendations

Based on the findings of this study, it is recommended that public schools operators should borrow a leaf from the owners of private schools so as to get acquainted with the methods used in helping to promote environmental knowledge, attitude and friendly practices among students. Also, male students should start getting involved in domestic chores rather than limiting such to only the females. Also, teachers should get more interested in the cleanliness of male students as this will enhance their attitude towards environmental issues. Lastly, those facilities and enabling environments present in Oredo Local Government Area which gave the students an advantage over others should be extended to the other local government areas so that all students can perform equally in matters of environmental concern.

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