



KNOWLEDGE OF SECONDARY SCHOOL STUDENTS OF ENVIRONMENTAL ISSUES IN EKITI STATE, NIGERIA

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Abstract

This study investigated the knowledge of secondary school students of environmental issues in Ekiti State, Nigeria. This study further investigated the influence of location and gender on secondary school students' knowledge of environmental issues in Ekiti State, Nigeria. The study employed the descriptive research design of the survey type. The population of the study comprised all senior secondary school students in Ekiti State. The sample consisted of 467 senior secondary school students whose selection was based on multistage sampling procedure. An instrument tagged 'Knowledge of Environmental Issues Questionnaire' (KEIQ) was used to collect data for the study. The face and content validity of the instrument were ensured by experts in Social Studies as well as Test, Measurement and Evaluation. The reliability of the instrument was determined through test retest method which yielded reliability coefficient of 0.67. The data collected were analysed using descriptive statistics of mean and standard deviation as well as inferential statistic of t-test. All the hypotheses were tested at 0.05 level of significance. The results obtained revealed that secondary school students in Ekiti State possess moderate knowledge of environmental issues. In addition, gender and location had no significant influence on secondary school students' knowledge of environmental issues. Based on the findings, it was recommended that secondary school curriculum planners should design inclusive environmental policy implementation strategies to engender students' participation in environmental management. It was also recommended that environmental field trip should be encouraged among secondary school students to allow knowledge transfer among students.

Keywords: Knowledge, students, secondary school, environment, environmental issues.

Introduction

Human activities, as a result of the quest and search for quality standard of living through science and technology, have brought problems on the environment. Every state in Nigeria seems to be suffering from one environmental problem or the other, ranging from environmental pollution, drought, flooding, desert encroachment to erosion among others. According to Ajitoni (2005) and Abdullahi & Tuna (2014), the available resources in Nigeria have been observed to be affected by increasing number of human population which perhaps might have led to the current environmental problems. This has constituted serious danger in many families nowadays because of low level of awareness about environment for most of Nigerian citizens as observed in several studies.

Environment can be defined as the aggregate of various forces and stimulations which the individual receives from the conceptions till death. It thus includes all the physical and cultural factors and conditions influencing the existence and development of organism. Man - environment interaction has existed since the existence of man on the surface of the earth. This interaction has brought about a lot of problems on man himself within the environment. Activities of man such as cultivation, harvesting, trading, construction and industrialisation brought about environmental issues among which is environmental pollution.

Environmental issues are harmful effects of human activity on the biophysical environment. Environmental protection is a practice of protecting



the natural environment on individual, organizational or governmental levels, for the benefit of both the environment and humans. The United Nations Office for the Coordination of Humanitarian Affairs (OCHA 2017), stated that the environmental destruction caused by humans is a global problem that is ongoing every day. Major current environmental issues may include climate change, pollution, environmental degradation and resources depletion.

The importance of environmental education cannot be overemphasised with particular reference to the creation of environmental knowledge and awareness, sustained concern for the environment and active participation in promoting environmental conservation. According to Agbor (2016), environmental education as a subject of discourse in national curriculum is necessary for every individual in the society, since every member of the society has something to do with the environment. Ayodele and Olorunsola (2016), noted that the increased awareness of the importance of education to the development of citizens, in terms of knowledge acquisition and altitudinal change, is on the increase.

Environmental problems and issues are complex. It is through the processes of quality environmental education that students can sort through the frequently biased, emotional and propagandized elements of environmental issues, weighing various sides of an issue in order to make informed, balanced and responsible decision. Successful environmental education tends to focus on processes that promote critical thinking, problem solving and effective decision-making skills. Environmental education utilizes processes that involve students in observing, measuring, classifying, experimenting and using other data gathering techniques to assist them in discussing, inferring, predicting and interpreting data about environmental issues. However, whether the responses towards these processes differ on the basis of gender and location has not been fully explored.

According to Joekes, S., Heyzer, N., Oniango, R. & Salles, V. (1994), Gender is a social construct which is not biologically determined but a concept equivalent to race or class. It is an ascribed attribute that differentiate feminine from masculine socially. Gender is by attribute seen as the categorization in the world of matter into sex. It implies the character of being male or female, man or woman, boy or girl. Offorma (2004) discovered that gender is enforced

through cultural practices, as gender identity is the outcome of cultural learning, hence the expectations from male and female are dependent on cultural practices. The way an individual perceives environmental issues such as good quality of environment, desertification, atmospheric pollution among others could be influenced by the role expectations. Furthermore, location of individuals could also influence awareness in the environment. Igwe (2003) defined location as a place where somebody or something resides in the world. Oguniyi (2008) noted that location can mean a settlement whether a village, town or city usually for human beings. Benton & Cormack (2000) also described location as a geographical place or an area. Contextually, location in this study implies a geographical place or area where something or somebody is situated, be it rural or urban area. According to United Nations Development Programme (UNDP 2010), awareness of the rural dwellers in Nigeria on environmental issues could be directly proportional to the quality of information prevalent and available to them.

Statement of problem.

In recent times, many conferences on environmental issues at both national and international levels have been held, but the fact remains, while most people recognise the urgent need for environmental education, only some have clear ideas about what to be done. In Ekiti State Nigeria, it appears that very few environmental educators have either the actual experience or the knowledge of the courses to be taught. Thus, there is need for orientation of secondary school students in Ekiti state about the objectives of environmental education.

It was observed that students unknowingly, as a result of day-to-day activities contribute largely to environmental degradation which has led to environmental threats occurring in many forms. Proofs of secondary school students' inadequate knowledge of environment are noticed in surroundings, especially in public places in Ekiti State. The problem now is how to inculcate the right knowledge of environment in students. This could be done by investigating student's knowledge of the environmental issues in Ekiti State.

Knowledge is a concept that has become important component in the curriculum of environmental education. These components have been measured in environmental education research using various



evaluation instruments like questionnaire. In environmental issues, the transfer of knowledge and skills about the environment and its allied problems is essential but not enough. Knowledge has to lead to positive changes. This study is geared to examine the knowledge of secondary school students on environmental issues.

Purpose of the Study

This study examined the knowledge of secondary school students on environmental issues in Ekiti State. This study further examined gender and location difference in the knowledge of senior secondary school students on environmental issues.

Research Question

The research question below was raised to pilot the study:

1. What is the level of secondary school students' knowledge of environmental issue?

Research Hypotheses

The following research hypotheses were tested at 0.05 level of significance:

1. There is no significant difference between male and female secondary school students' knowledge of environmental issues.
2. There is no significant difference between urban and rural secondary school students' knowledge of environmental issues.

Significance of the Study

It is hoped that the outcome of this study would be of great benefit to students, teachers, environmental educators, government and the general public. The findings from the study could enlighten students on

the importance of having knowledge of environmental issues with a view to promote environmental sustainability. The outcome of the study could also enable environmental educator and policy makers (government) to analyse the nature and the dimension of environmental problems with a view to formulating policies that would allow mutual relationship between human beings and the environment. Hence, this research would provide a basis for policy making towards resolving and managing environmental crisis.

Methodology

The descriptive research design of the survey type was adopted for this study. The population of the study consisted of all public senior secondary school students in Ekiti State. The sample of this study consisted of 467 senior secondary school students selected from the three senatorial districts in Ekiti State using multistage sampling procedure. An instrument designed by the researchers tagged 'Knowledge of Environmental Issues Questionnaire' (KEIQ) was used to collect relevant data for the study. The instrument was validated by the experts in Social Studies and Tests, Measurement and Evaluation. The reliability of the instrument was determined with the use of test-retest method within the period of two weeks. The reliability coefficient of 0.67 was obtained. The data collected were analysed using descriptive and inferential statistics. All the hypotheses were tested at 0.05 level of significance.

Results and Discussion

Research Questions: What is the level of secondary school students' knowledge of environmental issue?

Table 1: Secondary School Students' level of knowledge of environmental issues

Knowledge of environmental issues	Frequency	Percentage	Mean	SD
High (26-40)	157	33.6		
Average (16-25)	269	57.6	25.8	6.706
Low (0-15)	41	8.8		
Total	467	100.0		

Results presented in table 1 revealed that 157, representing 33.6%, of the students had high level of knowledge on environmental issues, 269 representing 57.6 % of the students have average knowledge of environmental issues, while only 8.8% of the respondents have low knowledge on

environmental issues. As obtained above it can be deduced that most of the students have average knowledge of environmental issues.



Hypothesis 1: There is no significant difference between male and female secondary school students knowledge of environmental issues

Table 2: t-test on the difference between male knowledge and female knowledge of environmental issues

Variables	N	Mean	SD	Df	t _{cal}	P
Male Knowledge	232	25.2	0.213	465	0.687	0.113
Female Knowledge	235	26.4	0.183			

p > 0.05

From table 2, data obtained revealed that $t(465) = 0.687$, $P = 0.113 > 0.05$. Therefore, the null hypothesis is accepted. This implies that gender has no influence on students' knowledge of environmental issues. Hence, there was no significant difference between

male and female secondary school students knowledge of environmental issues.

Hypothesis 2: There is no significant difference between Urban and Rural secondary school students' knowledge of environmental issues

Table 3: t-test on the difference between knowledge of urban and rural secondary school students of environmental issues

Variables	N	Mean	SD	Df	t _{cal}	P
Urban students	235	25.6	0.321	465	1.044	0.430
Rural Students	232	26.0	0.281			

p > 0.05

From table 3, data obtained revealed that $t(465) = 1.044$, $p = 0.430 > 0.05$. The null hypothesis is accepted. Thus, implies that location has no influence on students' knowledge of environmental issues. Therefore, there was no significant difference between knowledge of urban and rural secondary school students on environmental issues.

Discussion

The findings from this study revealed that students have average knowledge of environmental issue. This result perhaps implies that students must have been well taught by teachers on environmental issues but it appears that majority of the students failed to give the knowledge acquired on the environmental issues a top priority as they interacts with the environment. The society is experiencing increase rate of environmental problems owing to failure of students to make use of the knowledge gained on environment in their daily activities. The study is in relation with that of Agbor (2016), who saw environmental education as a subject of discourse in national curriculum is necessary for every individual in the society, since every member of the society has something to do with the environment.

The study revealed that there was no significant differences between male and female secondary school students' knowledge of environmental issues.

This result can be attributed to the fact that all the students irrespective of gender are exposed to the same curriculum on environmental issues as well as the same learning environment. The result is however not in agreement with Offorma (2004) who discovered that gender is enforced through cultural practices, as gender identity is the outcome of cultural learning, hence the expectations from male and female are dependent on their cultural practices. The way individual perceives environmental issues such as good quality of environment, desertification, atmospheric pollution among others could be influenced by role expectations.

The study further revealed that there was no significant difference between knowledge of urban and rural secondary school students on environmental issues. Perhaps, the reason for no difference in the knowledge of environmental issues between the urban and rural students is the uniformity of curriculum instruction of secondary school education. The result is however not in agreement with UNDP (2010) that awareness of the rural dwellers in Nigeria on environmental issues could be directly proportional to the quality of information prevalent and available to them.

Conclusion



Based on the finding of the study, it was concluded that secondary school students have moderate knowledge of environmental issues. It was also concluded that sex and location did not affect secondary school student's knowledge of environmental issues in Ekiti State.

Recommendations

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

1. Secondary school curriculum planners should design an inclusive environmental policy implementation strategies to engender student's participation in environmental management.
2. Secondary school curriculum should be designed to outline environmental threats indicator in order to sensitize students of their responsibility to make environment more friendly.
3. It was also recommended that environmental field trip should be encouraged among secondary school students to allow knowledge transfer among the students.

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