

Assessment of the Level of Environmental Education among Secondary School Students in Mubi Local Government Area of Adamawa State, Nigeria

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ABSTRACT

This survey investigates the level of environmental education among secondary school students in Mubi Local Government Area of Adamawa State, Nigeria. The population of the study comprises all secondary school students in Mubi Local Government Area of Adamawa State, Nigeria. Systematic sampling technique is employed to select four secondary schools in Mubi. A simple random sampling technique was employed in selecting fifty respondents from each school. Data are analysed using frequency count and simple percentage. Two hundred (200) copies of questionnaire with 20 structured questions are distributed to the respondents. The results reveal among others that students are not absolutely ignorant of environmental issues, but when they cleaned their environment, they dump refuse in drainage and road sides. The level of environmental awareness and management were inadequate. Also, based on survey and interview carried out, it was found that there were no environmental related clubs and association among schools to educate student on the environmental problems. Hence, there is need to enlighten and sensitize the individual's knowledge and perception of the environment in order to enhance a sustainable habitable environment particularly in Mubi enclave.

Keywords: *Environmental education, environmental awareness, secondary school students.*

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INTRODUCTION

The most serious long-term threat facing the world today is the danger that human actions are producing irreversible harmful changes to the environmental conditions that support life on earth (Waila and Tini, 2011). Human activities have led to depletion, degradation and destruction of the environment. Education is a viable approach for achieving measurable improvement in environmental quality. Thus, policy makers may want to consider a new integrated programme. In 1988, the Federal Environmental Protection Agency (FEPA) was established to educate, mobilize, motivate, orientate and raise the level of environmental activities in Nigeria (Waila and Tini, 2011). The Agency works in collaboration with health agencies, non-governmental organisations, National Orientation Agency and schools to create awareness on the implementation of environmental education.

Environmental education, according to Meadow (1989), is the preparation of people for their lives as members of the biosphere (Waila and Tini, 2011). Such preparation involves the understanding, appreciation and sustenance of the environment (Waila and Tini, 2011). Pupils learn environmental education through action taking like awareness raising, negotiation, persuasion campaigns and rehabilitation of degraded areas (Tilbury, 1995). Also, one of the sure ways of enhancing environmental education is through participation. For instance, pupils at the primary and secondary levels, mostly in public schools used to engage in picking pieces of papers, waterproof and other unwanted materials around the school premises. They were also made to clean the toilets, fill pot holes, clean their classrooms as well as cut grasses as at when due. This is participation proper. Over time, the pupils get acquainted to it and it formed one of the norms in them. This trend is in decay today especially in private schools where people are hired to do everything including what the students should do to maintain the environment. Environmental education promotes increased awareness of the relationship between people and their physical and cultural environment, and to respect nature, the common heritage. Environmental education develops a good and functional relationship between knowledge, and awareness of citizens with the environment. It helps people to adopt environmentally safe or friendly behavioural attitude (Waila and Tini, 2011).

Contemporary environmental education goes further than learning about the environment and in the environment (Kimaryo, 2011). It advocates the learning of environmental education which aims at the preservation and improvement of the environment by making individuals develop attitudes or concern for the

environment so that they can take action to address various environmental problems or promote environmental quality (Lee and Williams, 2001). According to Kimaryo (2011), it should develop action competence in the learners. Action competence is defined as pupil's abilities to act at the personal and societal level (Jensen, 1995). Environmental education is designed to develop and produce citizens who are aware of and are concerned with the total knowledge, commitment toward the immediate environment (MANASAC 1996 as cited in Waila and Tini, 2011). According to Igwe (1997), environmental education encourages the development of self-confidence and attitude to effectively ginger commitment in solving environmental problems (Waila and Tini, 2011).

Another positive function of environmental education, according to Faniran (1997); Waila and Tini (2011), is to foster harmony with the environment and guarantee continued human existence. It also increases understanding of citizens' relationship with their environment and how they are affected by their environment (Waila and Tini, 2011). However, Agbo (2001) as cited by Waila and Tini (2011) argues that conscious efforts have not been made to give environmental education the focus it deserves in Nigeria. Hence, the impact of environmental education is yet to be felt significantly in Nigerian Schools (Igwe, 1998). According to Jensen and Schnack (1997), environmental education should aim at building a student's ability to act with reference to environmental concerns and assume responsibility for their actions.

However, environmental education implies an organized effort to teach how natural environment functions and particularly, how human beings can manage their behaviours toward ecosystem in order to live sustainably. The purpose of this study therefore is the assessment of the level of environmental education among secondary school students in Mubi Local Government Area, Adamawa State, Nigeria. In order to achieve this, it is pertinent to consider the question, Does integration of environmental curriculum in schools enhance environmental educational attainments?

METHOD

This study adopts survey research design. The instruments for data collection include the questionnaire and field observation. The population of the study comprises all secondary school students in Mubi Local Government Area of Adamawa State, Nigeria. Systematic sampling technique is employed to select four secondary schools in Mubi. A simple random sampling technique was

employed in selecting fifty respondents from each school. The four secondary schools selected are Government Secondary School (GSS), Mubi, Government Technical Secondary School (GTSS), Mubi, Government Day Secondary School (GDSS), Lamorde, and Government Day Secondary School (GDSS), Gella. A simple random sampling technique was applied in selecting the respondents. Two hundred (200) copies of questionnaire “Level of Environmental Education” structured with twenty (20) questions were administered on the secondary school students. The data were presented in tables, analysed and interpreted using frequency count and simple percentage.

RESULTS AND DISCUSSION

Table 1 shows that majority of the respondents 47% belong to the category of age 12 – 15, 31% belong to category of age 16 -19, while 22% belong to the category of age 20 - 23. This implies that majority (53% who are of age 16 years to 23) of the students are in senior secondary level. This constitutes more than half of the total respondents. Table 2 indicates that Government Secondary School; Mubi have the highest level of awareness of the sources of drinking water in the community represented by 35%. This is followed by Government Technical Secondary School, Mubi with 25%, Government Day Secondary School, Lamorde and Gella were at the same level of awareness with 20%. In general, the level of awareness by the school students was not encouraging.

In table 3, the results reveal exactly the same results in table two. This is an indication that the students were not mindful of the sources of water they drank neither did they know the water source that was good for their consumption. With respect to perception of the respondents on the environmental issues, table 4 indicates a low level of ignorance, 15% and 20% for public awareness. This is as revealed by GSS, Mubi. Respondents at GTSS, Mubi reveal 11% level of ignorance and 14% for public awareness. Whereas GDSS, Lamorde and Gella reveal 9% and 7% for level of ignorance and 11% and 13% for public awareness respectively.

From the table 5, it is seen that students of GSS, Mubi, see environmental management as the responsibility of the community with 21%, while students of GTSS, Mubi also see it as the work of environmental authority with 11%. Also, students of GDSS, Lamorde and GDSS Gella see it as that of environmental authority and community respectively. From the analysis in table 6, students of GSS, Mubi majorly managed their waste by dumping in water. This is proven by

the highest percentage of that variable which is 20%. Students of GTSS, Mubi said they adopted regular cleaning and burning with 7% and 6% respectively. Students of GDSS, Lamorde and GDSS, Gella shared similar result with GTSS, Mubi. On the whole, the result does not indicate that all the sampled schools have a good culture of waste management. In respect of respondents' attitude towards environmental sanitation, table 7 reveals that GSS, Mubi and GTSS, Mubi showed positive attitude to waste management. This is indicated by 25% and 20% respectively. Also, the 10% and 11% rate labeled against GDSS, Lamorde and GDSS, Gella indicate that the schools have negative behaviour towards environment sanitation.

In GSS, Mubi, street flood with 15% and wall collapse with 11% were their perceptions of rainfall erosivity on the environment, whereas soil erosion with 11% was that of GTSS, Mubi and GDSS, Lamorde. Wall collapse with 8% was attributed to students of GDSS, Gella. From the table 9, students of GSS, Mubi recorded the highest total percentage of 33 based on the variables raised in respect of ignorance and level of environmental awareness. There was a tally of 24% between GTSS, Mubi and GDSS, Lamorde. GDSS, Gella recorded 19%, the least in all. Data contained in table 10 are reflections of the awareness of the respondents to the dangers of chemicals used in the farms with 14% for GSS, Mubi. They also identified destruction of soil structure and killing of soil creatures. This was observed to be the general view of all the participants of the study.

Table 1: Age group of the respondents

Age group	GSS Mubi		GDSS Mubi		GDSS Lamorde		GDSS Gella		Total	
	f	%	f	%	f	%	f	%	f	%
12 – 15	14	7	30	15	26	13	24	12	94	47
16 – 19	22	11	14	7	13	6.5	13	6.5	62	31
20 – 23	14	7	6	3	11	5.5	13	6.5	44	22
Total	50	25	50	25	50	25	50	25	200	100

Source: Survey, 2014

Table 2: Awareness of the sources of drinking water in the community

	Tap Water		Borehole		River Water		Total	
	f	%	f	%	f	%	f	%
GSS Mubi	22	11	30	15	18	9	70	35
GTSS Mubi	16	8	16	8	18	9	50	25
GDSS Lamorde	4	2	20	10	16	8	40	20
GDSS Gella	12	6	18	9	10	5	40	20
Total	48	27	84	42	62	31	200	100

Source: Survey, 2014

Table 3: Awareness of the source of waste water in the community

Institution	Affluent		Sewage		Washing Water		Total	
	f	%	f	%	f	%	f	%
GSS Mubi	18	9	34	17	18	9	70	35
GTSS Mubi	22	11	16	8	12	6	50	25
GDSS Lamorde	12	6	8	4	20	10	40	20
GDSS Gella	8	4	12	6	20	10	40	20
Total	60	30	70	35	70	35	200	100

Source: Survey, 2014**Table 4:** Perception of the respondents on the environmental issues

Institution	Level of ignorance		Public Awareness		Total	
	f	%	f	%	f	%
GSS Mubi	30	15	40	20	70	35
GTSS Mubi	22	11	28	14	50	25
GDSS Lamorde	18	9	22	11	40	20
GDSS Gella	14	7	26	13	40	20
Total	84	42	116	58	200	100

Source: Survey, 2014**Table 5:** Perception of the respondents on environmental management and sanitation Authorities in the community

Institution	Local		Environmental				Total	
	Government		Authority		Community			
	f	%	f	%	f	%	f	%
GSS Mubi	14	7	14	7	42	21	70	35
GTSS Mubi	12	6	22	11	16	8	50	25
GDSS Lamorde	8	4	18	9	14	7	40	20
GDSS Gella	8	4	10	5	22	11	40	20
Total	42	21	64	32	94	47	200	100

Source: Survey, 2014**Table 6:** Perception of the respondents on waste accumulations and refuse disposal

Institution	Cleaning regular		Burning regular		Use of refuse bin		Use of refuse field and recycling		Water management		Total	
	f	%	f	%	f	%	f	%	f	%	f	%
	GSS Mubi	14	7	10	5	12	6	18	9	16	8	70
GTSS Mubi	14	7	14	7	6	3	10	5	6	3	50	25
GDSS Lamorde	10	5	8	4	6	3	6	3	10	5	40	20
GDSS Gella	10	5	12	6	8	4	8	4	6	3	40	20
Total	44	22	44	22	32	16	42	21	38	19	200	100

Source: Survey, 2014

Table 7: Behaviours of the respondent on environmental sanitation

Institution	Attitude of the respondents on environmental sanitation		Nonchalant attitude of the respondents on environmental sanitation		Total	
	f	%	f	%	f	%
GSS Mubi	52	26	18	9	70	35
GTSS Mubi	36	18	14	7	50	25
GDSS Lamorde	20	10	20	10	40	20
GDSS Gella	18	9	22	11	40	20
Total	126	63	74	37	200	100

Source: Survey, 2014**Table 8:** Perception of the respondents on rainfall erosivity on the environment

Institution	Soil Erosion		Street Flood		Wall Collapse		Total	
	f	%	f	%	f	%	f	%
GSS Mubi	16	8	30	15	24	12	70	35
GTSS Mubi	22	11	16	8	12	6	50	25
GDSS Lamorde	16	8	14	7	12	6	40	20
GDSS Gella	14	7	12	6	14	7	40	20
Total	68	34	72	36	60	30	200	100

Source: Survey, 2014**Table 9:** Ignorance and the level of environmental awareness

Institution	Free available sand		Cost of sand		Demand of sand		Total	
	f	%	f	%	f	%	f	%
GSS Mubi	34	17	22	11	14	7	70	35
GTSS Mubi	22	11	16	8	12	6	50	25
GDSS Lamorde	24	12	8	4	8	4	40	20
GDSS Gella	16	8	12	6	16	8	40	20
Total	96	48	58	29	46	23	200	100

Source: Survey, 2014**Table 10:** Awareness of the effect of chemicals used in the farms

Institution	Killed Creatures		Destroyed soil Structure		Imbalance in the Ecosystem		Total	
	f	%	f	%	f	%	f	%
GSS Mubi	18	9	24	12	28	14	70	35
GTSS Mubi	18	9	18	9	14	7	50	25
GDSS Lamorde	14	7	12	6	14	7	40	20
GDSS Gella	14	7	10	5	16	8	40	20
Total	64	32	64	32	72	36	200	100

Source: Survey, 2014

CONCLUSION

This study aimed at examining the level of environmental education among secondary school students in Mubi Local Government Area of Adamawa State. The communities enjoy facilities and services such as water, roads, sewage and drainage. But, the management of these facilities were absolutely inadequate. However, most of the people in the communities depend on water vendors for their domestic utilization. Results have shown that, people are not absolutely ignorant of the environmental issues, but when they clean their surroundings, they end up dumping refuse in drainage and road sides and in rivers. Mubi is well known as a commercial centre which turns to be affluence in economic consumption, with more waste accumulated. The extent of environmental awareness and management were poorly inadequate. Water resources and fire woods were the crucial resources in great depend. Also, it is through people awareness that all efforts towards preventing destruction to the environment can be effective.

It was found that there were no environmental related clubs and associations among the sampled schools. Also, there was absent of environmental agents who are responsible for monitoring the sources and causes of environmental problems as well as education and awareness among the people on the use of the environment. Based on the findings, it is found that there is need to enlighten and sensitize the individual's knowledge and perception of the environment in order to enhance a sustainable habitable environment particularly in Mubi enclave.

REFERENCES

- Faniran, A.** (1997) *Land, Land Degradation and Global Environmental Change*. London: Heinemann, Educational Books.
- Igwe, M. M.** (1998). *Environmental Education for Child Development*. In: G. N Chima and A. S. Ibiam (Eds). *Sustainable Environment and Development in Nigeria*. Okigwe: Whyterm Publishers.
- Jensen, B. B.** (1995). *Concepts and Models in a Democratic Health Education: Research in Environmental Health Education*. Copenhagen: Royal Danish School of Studies.
- Jensen, B.** and **Schnack, K.** (1997). The action competence approach in environmental education. *Environmental Education Research*, 3 (2), 163 – 178.
- Kimaryo, L. A.** (2011). Integrating Environmental Education in Primary School Education in Tanzania: Teachers' Perceptions and Teaching Practices. Biskopsgatan13: Åbo Akademi University Press, Finland. Available online at: http://www.doria.fi/bitstream/handle/10024/67481/kimaryo_lydia.pdf. Accessed: February 13, 2017
- Lee, J. C. K.** and **Williams, M.** (2001). Researching environmental education in the school curriculum: An introduction for student and teacher researchers. *International Research in Geographical and Environmental Education* 10, 218 – 244.
- Meadow, D. H.** (1989). *Harvesting a Hundredfold*. Nairobi: UNEP, 5.
- Tilbury, D.** (1995). Environmental Education for Sustainability: defining the new focus of environmental education in the 1990s. *Environmental Education Research*, 1 (2), 195 – 212.
- Waila M. K. A.** and **Tini, N. H.** (2011). Appraisal of the Extent of Environmental Education among Students in Mubi Metropolis, Adamawa State, Nigeria. *Journal of Research in Education and Society*, 2 (1), 87 – 96.