

FIELD TRIP AND STUDENTS' PERFORMANCE IN ENVIRONMENTAL STUDIES: THE CASE OF NOUN BAYELSA STUDY CENTRE, YENAGOA

Iyorakpo Julius

Facilitator, School of Science and Technology (Environmental Studies & Resource Mgt.),
National Open University of Nigeria, Yenagoa Study Centre, Bayelsa State Nigeria

ABSTRACT: *Field trip is undertaken within most earth sciences and professions. More than a set of skills, environmental research is a way of thinking and examining critically the various aspects of our physical environment. It is a habit of questioning about what you do in your environment, and empirical examination to find answers to environmental problems, with a view to instituting appropriate changes for a more environmental friendly habitat. This study is therefore aimed at x-raying the imperatives of Field Trip in Students studying various aspects in Environmental Sciences. The study adopted reconnaissance survey, observation, assessment of field trip report and interview methods. It specifically examines works of students of the National Open University of Nigeria (NOUN) Yenagoa study center. The findings of the study among other issues discovered that students who undergo field trip during their course of studies acquire more knowledge and better equipped in their chosen discipline. Useful recommendations were made to guide students on further field trips so as to enrich their knowledge on Environmental issues.*

KEYWORDS: Field Trip, Performance, Noun, Environmental Studies

INTRODUCTION

International workshop on Environmental Education (1975) defined Environmental Education as “Education aimed at developing a world population that is aware, of and concerned about the environment and its associated problems which has the knowledge, skills, attitudes, motivations and commitments to work individually and collectively towards a solution of current problems as well as the prevention of new ones. The current interest in environmental matters in Nigeria especially on waste collections, disposal and land reclamation becomes necessary for educationists, parents, children, manufacturers, developers of processes and other entrepreneurs to understand the extent they contribute in polluting and degrading the environment. It will be a right step in the right direction to make them aware of the environmental side effects of economic activities, and rapid social change like over-crowding in urban slums, health hazards, emission of waste products from factories, the problems of domestic waste disposal, pollution of natural sources of water supply and the destruction of protective forest cover all in the process of construction of roads and buildings.

The Stockholm conference on Human Environment (1972) has as one of its principles that: “Education in environmental matters for the younger generation as well as adults is essential in order to broaden the basis for an enlightened opinion and responsible conduct by individuals, enterprises and communities in protecting and improving the environment in its full human dimension”. In conformity with the above principle the entire citizenry should be given orientation on the possible options of waste management and the types of waste generated. The waste products of society are by definition, those that the generator finds more profitable to

discard than to utilize. They include agricultural, household, human and industrial waste (Henstock, 1983).

There are several ways of obtaining answers to the existing environment problems and questions. These methods range from the fairly informal sources based upon clinical impressions to the strictly scientific, adhering to the conventional expectations of scientific procedures. However, the degrees to which the criteria are expected to be fulfilled differ from one academic discipline to another. For example, the expectations of the environmental research process are remarkably different between the environmental or physical sciences and the social sciences. In the physical sciences a research endeavour is expected to be strictly controlled at each step, whereas in the social sciences rigid control cannot be enforced and sometimes is not even demanded.

Within the environmental sciences, the level of control required also varies remarkably from one issue or subject to another. Despite these differences among subjects or disciplines, their broad approach to inquiry is similar. The field trip model in this study is based upon this philosophy. As beginners in research, students should understand that research is not all technical, complexes, statistics and computers. It can be very simple activity designed to provide answers to very simple questions relating to day-to-day activities in our environment. On the other hand environmental research procedures can also be employed to formulate intricate theories or environmental laws that govern our lives. The difference between research and non research activity is, as mentioned in the way we find answers.

Purpose of the study

The aim of this study is to examine students' field trip as a way of thinking and identifying various aspects and features that are relevant in environmental studies so as to obtain answers that address environmental problems. The above aim can be achieved by the following objectives;

- i. To identify the attributes of a good or clean environment and the various forms of interaction between different components/settlements.
- ii. To identify the most common physical environmental problems such as; drainage system, waste management system, road network etc.
- iii. To determine the socio-economic implication of existing environment such as; emergence of squatter settlement, lack of basic amenities etc
- iv. To determine the causes of the existing environmental conditions such as; flooding, slum developments, waste disposal etc.
- v. To ascertain how satisfied the residents in these environment or areas visited. This is carried out through the issuance of well structured questionnaire and interviews.

Statement of the research problem

Most undergraduate students in the nations higher institutions of learning over the years of their studentship do not have a practical knowledge of their physical environment and therefore have little or no idea about the practical requirements in their various fields of environmental studies. This lacuna or deficiency has greatly contributed to the difficulties encountered by students during their final year project research work.

Students are the future leaders of a nation therefore the paucity of detailed scientific environmental research by students will create a vacuum of knowledge and base line data required for national development by policy makers hence the need for students field trip to enable them be equipped with the necessary tools for meaningful research work at graduation. For example, a student of environmental studies who have never seen pollution site or an area with severe flooding will not appreciate its condition even though he or she is taught in a classroom about such environmental disaster.

Research Questions

- i. What are the causes of the present environmental conditions in Yenagoa and environs?
- ii. What are the peoples' perceptions about their environment in Yenagoa and environs?
- iii. How satisfied are the inhabitants with their environment in the study area?
- iv. How natural is the environment in the study area?
- v. How can the environmental condition be improved upon?

Conceptual and Theoretical Framework

In regional studies, settlements are studied not just individually but in relation to one another with regards to their location and characteristics. Within this context are two elements; distribution and pattern. Distribution implies the nature of the spatial spread of settlements across the area or region of the study. The settlement pattern of any spatial system refers to classifying the whole system into types (rural and urban). A settlement simply put, is any point or place on the earth's surface inhabited by man with dwellings in them. There are several units of settlement with considerable number of varieties in their spatial settings. Each of these units of settlement with considerable number of hamlets, villages, towns, cities and metropolis to megalopolis is unique and has a personality of its own. This ranking according to settlement size is generally acknowledged by a large number of scholars in the field but terminology presents a problem. There is, for instance, no exact definition of a village compared with a town or of a hamlet compared with a village and the significance of the word 'city' varies from one country to another.

The terms 'Rural and Urban' lack precision but are useful since they attempt to recognize and distinguish both the physical and human characteristics of man-made structures. Johnson (1997) remarks that in spite of lack of precision, there are many differences between the two classes of settlements; a rural area has less population than an urban centre; while human activities in rural areas are largely oriented towards primary production, they are largely secondary and tertiary in urban areas. However, Johnson maintains that there are some rural areas with diverse characteristics. Some rural areas may contain more people than some urban centres. On a general note, farms, hamlets and villages are considered as rural settlements while towns, cities, metropolis and megalopolis are classed as urban centres (Oyeleye, 2001). In the advanced countries a rural area may serve as residential unit for retired persons and they could contain services that lacking in some urban centres in the developing countries.

Urban phenomenon varies greatly from one geographical region to another, and through time from one era to another. The term 'Urban' is often used interchangeably with city and there is no international agreement on their definitions. Many attempts have been made at defining

urban centres by several scholars Yussuff (1974), Johnson (1980), Andah (1988) and Abiodun and Salau (1993) attempted to define urban centres using the socio-economic parameters. Atanda, et al (1980) employed cultural activities in their attempts to describe urban centres. Other scholars like Buck and Atkins (1976), McGee and Das (1983), Harrison (1994) used the easily observable geographical features like the extent of built up area or population. All these attempts failed; each arrived at different definitions owing to prevailing differences in their focus of study.

Study Area

Students of environmental studies and resource management of the National Open University of Nigeria (NOUN) Yenagoa study centre whose focus this study is all about embarked on a field trip sometime in March, 2012 to the locations and establishments stated below with some interesting discoveries and findings. Yenagoa, the capital of Bayelsa State and environs is found at the southern part of Nigeria known as the Niger Delta region. It is bounded by the Atlantic Ocean in the South, in the West by Delta State, in the East by Rivers State and in the North by Imo State of Nigeria. Yenagoa municipality has existed as a province in the late 1960s, in the eastern region but later metamorphosed to a local government status in the 1970s and later State Capital in 1996. The city of Yenagoa is located between longitude 6°15' to 6°30'E and latitude 4°50' to 5°50'N and lies along the Epie Creek which empties into the Nun River.

Yenagoa has a total population of 266,008 male (112,002) and female (154,006) with a population density of 237 persons per square kilometers (Census, 2006). It has an average elevation between 12m and 15.5m above sea level (Alagoa, 1999) and has a deltaic soil, back swamps are found southwards of Yenagoa. It has a gray-very dark brownish colour and at the surface which grades from gray into light brownish gray. The Gbarian-Ubie Oil and Gas Project one of the locations visited by students on the field trip is located within Gbarian/Ekpetiama clans in Yenagoa local government area, Bayelsa State at the eastern part of the Niger Delta in Nigeria covers an area of approximately 650 square kilometers. It encompasses the Gbarian, Kolo Creek, Etelebou and Zarama Oil Fields under the Shell Petroleum Development Company's OML 28 production license.

The Gbarian-Ubie integrated Oil and Gas Project entails the drilling of new oil and gas wells, re-entry into existing oil wells, construction of new flow lines and pipelines and the construction of new Central Processing Facility (CPF) in Gbarian. The facilities are designed and constructed with strict adherence to strengthen standard covering security during the construction and operations phase and in order to minimize environmental, social and health impacts. To reduce land, take the project has adopted strategy to lay most of the new flow lines and pipelines along existing pipeline routes. From discussions on the field trip it was observed that Gbarian-Ubie Integrated Oil and Gas Project is believed to be the first incline of major oil and gas development activities of Shell Petroleum Development Company centered on the Gbarian-Ubie Integrated Oil and Gas Project in the next three to five years. Its success is critical in providing impetus for more development opportunities to the Government and people of Gbarian/Ekpetiama in Yenagoa Local Government Area of Bayelsa State as well as the nations at large and also has environmental conservation area or the vegetation separately kept within the site of operation for the survival of natural habitats. Hazards area conservation for noisy market and it's measured; area reserved for natural habitat is found to be swampy, death trees, raffia palm and has numerous advantages over the survival of natural habitat or wild life.

Pictorial Scene of the Field Trip:

Below are some environmental scenes during the field trip embarked upon by 400 level Students of the National Open University of Nigeria (NOUN) Yenagoa study centre, Bayelsa State.

Plate 1: Refuse dump site at Amassoma/Tombia Rd., Yenagoa



Source: NOUN Students Field Trip (2012)

Plate 2: Flooding around Gbaran-Ubie Oil Field near Yenagoa, Bayelsa State



Source: NOUN Students Field Trip (2012)

Plate3: Effect of Oil Spill on the Environment



Source: NOUN Students Field Trip (2012)

Plate 4 & 5: Sprawl of Oil spillage from Gbarian/Etelebou pipeline oil field, Yenagoa

Plate 4:



Plate 5:



Source: NOUN Students Field Trip (2012)

METHODOLOGY

The study due to its peculiar nature adopted reconnaissance survey, observation, interview and questionnaire methods as well as student field trip reports assessment in arriving at relevant and reliable conclusion, inferences and recommendations. The following variables were investigated in the cause of the study among others i.e. waste disposal methods, coastal (shore) protection, nature park conservation, pollution control, waste recycling, endangered species conservation and sanitation etc. Some government designated disposal sites were randomly selected within the Yenagoa metropolis where students visited on field trip and questionnaires were administered to residents within those identified areas. On the whole, six locations (refuse dump sites) were visited and a total of One hundred and twenty questionnaires were distributed of which One hundred and five were retrieved and analyzed. Among the designated refuse dump sites visited were Tombia/Amassoma dump site, Biogbolo/Green Villa dump site, Yenigwe dump site, Agudama dump site, Imiringi dump site and Ox-bow Lake. In the entire above mentioned dump sites, senior government officials' in-charge were interviewed in the various methods of refuse/waste disposal and obstacles inherent in the system.

The field trip was also carried out on the operational areas of the Gbarian-Ubie Integrated Oil & Gas project Yenagoa, owned and operated by the Shell Petroleum Development Company Ltd (SPDC). On arrival the company's management received our research team on field trip made up of the facilitator and students of the National Open University of Nigeria (NOUN). Thereafter, the research team was conducted round the facilities within the precinct of the company which include; the wild-life conservation buffer zone, gas flaring point, pipeline, community development area, reservation site and some residential quarters. Other facilities include; the incineration plant, the land jetty, the central processing unit, the gas compressor unit, the gas turbine and drainage facilities. In the cause of the excursion trip, the research team (students) was subjected to open field lectures and audio visual instructional aid by the company personnel as well as the facilitator of the team. Field notes as well as photographs of various environmental features and inventory were recorded.

Findings

Most of the sites visited during the field trip especially the government designated refuse dumps were discovered left uncovered with little or no regard for control of scavengers, diseases, air pollution aesthetics and water pollution.

Reduction of Gas flaring:

When fully commissioned, the Gbarian-Ubie gas project flow station will gather the gas currently being flared at two existing flow stations namely; Kolo Creek Flow Station and Etelebou Flow Station thereby eliminating the current level and volume of gas flared from June 2010. The gas flared in Etelebou Flow Station was 12m.m/d; while the current is 1m.m/d. In Kolo Creek Flow Station, from June 2010, the gas flared was 27mmdd; while the current flared is 2m.mt/d. That from the statistic above over 90% of gas flared reduction has been achieved from the Flow Stations. That for the purpose of drastic gas flare reduction, flare system is provided at the Central Processing Facility (CPF) primarily for emergency flaring; sequel to the fact that in Oil and Gas processing for now, with our kind of equipment gas flare cannot be eliminated completely.

Drainage

The drainage system around the Gbarian-Ubie integrated gas project area is well constructed and channeled to the nearby drainage basin i.e. the River (tylor creek). This makes the company premises to be flood free and well defined with improved sanitary condition. On the other hand, contrary to the above the other dump sites visited down town have little or no drainages at all which makes the environmental condition poor.

Assessment of Students Field Trip Report

At the end of the field trip, students were given an assignment to prepare a comprehensive report on their experiences during the field trip. These reports were thoroughly assessed and evaluated by the facilitators of the programme at the National Open University of Nigeria (NOUN) Bayelsa State Study Centre and Bayelsa State College of Arts and Science respectively. The outcome of this development is very encouraging which translate to the students improved performances in their terminal exams and projects works.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Environmental impact assessment is therefore very essential within the context of sustainable development planning. Rational use of natural resources, understanding of the environmental characteristics especially the socio-economic environment will give a guide to the future since according to Redcliff (1990) 'Sustainable Development is either about meeting human needs or maintaining economic growth or conserving natural capital, or about all of these. There is, therefore, likely to be conflict between what is sustainable at the global, national, regional or project level because what is sustainable at one level, may prove to be damaging or simply unrealistic at another. Therefore, the following propositions are vital towards the sustainable development of communities in Gbarian oil field and indeed the Niger Delta region of Nigeria that is seriously being eroded.

Policy Issues

- Companies operating within the study area should behave as responsible corporate citizens by ensuring compliance to international standards in environmental issues.
- They should help to develop the host Communities through training of the people; developing their skills in agriculture and talents that could economically empower them.
- They should ensure the implementation of local content in their projects.
- They should ensure provision of employment to indigenes of the area.
- Give financial security for agriculture, cottage industry and co-operatives to Communities that are impacted.
- Communities/individuals in the Niger Delta are made shareholders in the oil industry.
- Development of a blue print for the Gbarian-Ubie oil field Communities by the oil companies so as to establish modern skills acquisition and entrepreneurship development centres.

- They should carry out a post impact assessment in the Gbarian field with a possible compensation and remediation.
- Adequate consultation in EIA, and train Communities on environmental education.
- The should ensure the monitoring of oil and gas activities.

For all we have discussed about waste problems and management in Yenagoa local government area. This study has focused on waste transfer station and industrial waste management pollution (Air, Land and Waste) which strategies for proper waste management and recommended the involvement of government parastatal and private participation in the collection and disposal of waste to land fill sites. The influence of economic problems on the nation has made some individual business of scavenging and recycling of renewable materials to earn their living. Waste management is the biggest problem facing the capital city of Bayelsa State because of human population, modernization and increased of tastes and dumping of more wastes, mostly non-biodegradable pollution, by plastic and metals. The government should seriously educate or campaign to the citizenry on sustainable waste management techniques, and encourage recycling of waste and purchase of products from recycled materials strategies will enable us to manage our wastes.

In view of the trust of field trip report, the following recommendations are made to enhance sustainable waste management in Yenagoa Local Government Area, Bayelsa State.

- i. Adequate and sufficient form of refuse disposal service is provided such as garbage trucks for the traditional core areas because of lack of easy access to these areas.
- ii. Adequate financial resources should be made available by the government to the authorities directly responsible for sanitary evacuation of waste.
- iii. Government should provide more sanitary temporal dump site be put in place to avert indiscriminate dumping of refuse in the River, Stream, Drainages thereby blocking drains and creating a wide spread of flood hazard.
- iv. The Yenagoa L.G.A should make regulations or by-laws which specify the type of containers to be used for storage of refuse.
- v. Waste bags are made available to the public for transfer of wastes from their home to the dump site for onward transportation to a permanent waste dump station.
- vi. Environmental Health and Safety Campaigns should be made to the public to avoid effects of indiscriminate dumping of waste, improper management of waste disposal on our health and environment.
- vii. Industrial waste management, there should be a transparent and credible public participation in the Environmental Impact Assessment (EIA) process. This would include informing local communities about the carrying out (EIA) scoping and making available, the scoping report for review and comment by communities before forwarding it to government supervising agency. This process should ensure that each oil operation has the consent of those who will suffer its negative consequences.

REFERENCES

- Ademoriti, C.M. (1996) 'Toxicity and Hazards of Heavy Metals' in Environmental Chemistry and Toxicity, Foludex Press Ltd. Ibadan p. 186-204
- A.M Ahoje et al (2006) 'The Nigerian Environment' Regent (Printing) & Publishing Ltd
- Barrow, C.J. (1993) 'Developing the Environment: Problem and Management' U.K. Longman Scientific and Technology
- C. Medupin et al (2010) 'Air and Noise Pollution, NOUN, Lagos-Nigeria
- D.K Asthana and M. Asthana (2006) 'Environmental Studies' 1st edition S. Chand and Company Ltd. Ram Nagar, New Delhi
- Holkes, E.H. (1983) 'Small Community Water Supplies' Enlargement Education, New York.
- Lawrence Atsegbua et al (2003) 'Environmental Law in Nigeria: Theory and Practice' Ababa Press Ltd, Lagos-Nigeria
- Orhiene S.S. (1999) 'Biodiversity Conservation Nigeria' The role of the Nigeria Conservation Foundation (NCF). Monograph of the centre for Environment and Science Education, Lagos University, Nigeria
- S.V.S Rana (2009) 'Essentials of Ecology and Environmental Science' 4th edition, Heineman Educational Publications, Lagos-Nigeria
- World Health Organization (1984) 'Guideline for Waste Management and Quality' WHO, Geneva.