



THE IMPACT OF TECHNOLOGY EDUCATION ON ENVIRONMENTAL CONSERVATION

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ABSTRACT:

Environmental studies have been in the school curriculum for a very long time. It was taught in the Primary School as Elementary Science, hygiene, Social Studies, etc. In Secondary Schools as Health Science, Biology (Ecology), Chemistry etc. Teachers have not emphasised these areas thoroughly; this paper seeks to find how technology education affects environmental conservation, reviews materials that affects environment how it could be controlled Contributions from government, agencies and non-governmental organisation. How the problems have been established and the contributions of technology and engineering programmes in controlling environmental problems. Conclusions and recommendations were drawn.

INTRODUCTION

Technology education is a very important ingredient for the development of any nation Technology is defined by the New Standard Encyclopedia as the use of scientific knowledge to develop and produce goods and services useful to man. It is also the utilisation of manufacturing methods. Education is the development of mental powers and character as a result of training. Technology education could therefore be defined as training of persons in different types of occupations for the development of scientific ideas and knowledge and being up to date as new methods are being introduced for the service of man.

A nation's level of technology depends on the extent to which current scientific knowledge is put to practical use. Technology helps persons understand and appreciate their jobs (Romiszowski 1982).

Environment simply means everything around us. This includes both living and non-living things. Living things like plants and animals and non-living things as water, air, light soil and temperature. The World Bank report (1975) defined environment as the total setting for economic activity, which extends to the sociocultural milieu that was created to adapt to the demands and challenges of man's naturally occurring surrounding. Conservation is to control or prevent loss, damage and waste for the benefit of man. Conservation is defined as the wise management of natural resources for present and future use and enjoyment of man. (Bathscheffly 1992).

Man is wholly reliant upon the environment, in which he lives and yet seen to have lost sight of this fact. The quality of environment in which man and other organisms must live has become a vital issue of recent times. The World Bank report (1975) further stated that this is due to modern technology in the field of researches in (sciences, nuclear physics, military etc) and the increase of

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population have brought about pollution to a large extent that many scientists believed that man and other forms of living on earth are threatened.

THE PROBLEM OF ENVIRONMENTAL CONSERVATION

Conservation is the wise management of natural resources that are of direct benefit to man, and the maintenance of natural conditions in which all animals and plants can proceed with the natural succession of life.

- The World Bank report (1975) categorized these major problems of the environment as:-
- (i) Global - pertains to the biosphere affecting nearly the whole world. eg burning of fossil fuels, ship dumping on the high sea. *global warming*
 - (ii) Regional - pertains to biophysical linkages among few countries with little effects to countries beyond. eg. effect of river basins development on upstream and downstream.
 - (iii) Local - confined within the boundaries of a particular country e.g discharge of domestic waste from industries and heaps of refuse dumps in cities. *bush burning*

These environmental problems are not only caused by above factors, Bathscheffky (1992) lamented that wars not only kill and injure human beings, they also damage the natural environment. Even in peacetime however, armed forces are one of the biggest single causes of environmental damage. He therefore suggested that environmental laws should also be applicable to the military as it affects other sectors of the society.

Also conflicts of interest, especially in the area of economy is one major challenge of the conservation. Movement lies in balancing the pressure for a high standard of living against the often conflicting biological needs of man as well as other forms of life (Tolba, 1991).

The effect of poverty and economic development is an issue of serious concern in which according to Ahiako (1994) stated that man has lived for so many years of management (erosions and surface water pollutions).

EFFECTS OF ENVIRONMENT

The World Bank report weighed the cumulative impact that if remedial action is taken at a later stage of a country's development, the cost incurred will be considerably higher, but prudent planning and early preventive measures would avoid or reduce the high cost of mitigative measures.

Man do not seem to have concern about the problems affecting his surrounding, until around the 20th century when the need to look into environmental issues received some attention, this might be due to the increase in population. In addition (Essien 1998) attributed to other factors as:- natural disasters, misguided use of science and technology and the emphasis on primary health as being more efficacious than clinical therapy.

The introduction of some economic policies and programmes by government in order to meet its obligations to the people has resulted in the excessive exploitation of the natural environment. Essien (1998) added that some of these programmes are those of self-sufficiency in food production, raw materials, self-employment, increase export promotion rural development and the privatization of public enterprise.

TECHNOLOGY, SCIENCE AND ENVIRONMENT

The problem of conservation have been seen by many as the responsibility of all to control. Tham (1992) gave the duties of the technologist, Engineers and scientists in solving environmental problems as:

- (i) The concern was mostly for environmental impact analysis, which has become a regular feature of new water project e.g for agricultural use, storage, drainage or water supply.
- (ii) The technologist/engineers was central to effective malarial control eg level of water fluctuations, drainage or irrigation management and oiling.
- (iii) The case of human waste disposal which provides the channel of transmission for many of the water borne diseases - eg - pit - laterines, suck away.

The main purpose is to control wastages to improve the standard of living on man in a conducive atmosphere. The National Policy on Environmental management has the following goals:-

1. to secure for all Nigerians a quality environment adequate for their wellbeing.
2. to conserve and use the environment and natural resources for the benefit of present and future generations.
3. To restore, maintain and enhance the ecosystem and ecological processes essential for the functioning of the biosphere.

CONCLUSION

This paper analysis the problem of environmental issues and how technology education could help in controlling, or conserving or preventing wastages.

Though the issue of environment has been in the school curriculum for a long time, but that teachers and inspectors of education do not seem to have concern for that aspect. As pollution from military operations, nuclear power stations, industrial wastes etc are on the increase globally coupled with the increase of population which led to the utilisation of the available resources around the 20th century, that caused the need to give attention to environmental issues.

Little is being done by Government and non-governmental organizations and individuals in the control of environmental problems on the media both print and electronic. Advanced countries dump their industrial waste on the shores of weaker or developing countries knowing fully the dangers this might cause.

RECOMMENDATIONS

Greater support be given to conservation education, information and public awareness.

- Government and public should take whatever steps are necessary to examine, analyse and implement a development programme to ensure that development activities take conservation into account.
- Government to draw programmes of vocational and other environmental education.
- Government should incorporate environment and developmental issues in the existing curricula.
- Technical education students should be made to take courses on environmental studies.
- Government to organise in-service teacher education be arranged in the form of state or national conferences (such as this one) and make proposals for a new curriculum.

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