

# **The Need to Integrate Themes of Environmental Education in the School Curriculum in Kenya**

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## **Abstract**

Globally, the environment is under pressure from climatic variability and anthropogenic activities including deforestation, wetland and water catchment destruction, agro-chemicals use and urbanization among others. The foregoing partly results from inappropriate information, ignorance, weak regulatory institutions and poverty, whose crosspollination exacerbates the fragility of the environment, threatening flora and fauna. The purpose of this study was therefore to investigate the need to establish the themes of environmental education integrated in the school curriculum, establish the strategies used to teach themes of environmental education in the school curriculum. This study adopted a descriptive survey design. The findings of the study revealed that the themes on environmental education were incorporated in the following subjects: geography, languages and religious education. The strategies used to teach environmental education included; lecture, field trips, discussions and guest speakers. It was therefore, concluded that the curriculum implementers should give more emphasis on themes of environmental education as a method of enhancing good management of the environment in Kenya.

**Keywords: Curriculum, Development , Education, Environmental, Integration, Themes**

## **Introduction**

Over the 20<sup>th</sup> century human activities have placed increasing demands on certain environmental services, particularly those affected by human survival and settlement (Steve & Cooper, 1985). Steve et al (1987) in another study noted that natural resources in the environment are at a great risk, unless strategic measures are immediately put in place. Before colonization, the indigenous communities had their formal, informal and unwritten education that centered on the environmental education, management and conservation. As Odera (1997) puts, traditional management systems carried precise control instruments and mechanisms based on shared norms, values and regulations that were based on community-specific customary laws. Consequently, rules and regulations, taboos and rituals governed

resource exploitation, promoted sustainability and environmental conservation. Today, due to nature of activities that people are engaged in, the settlement patterns, priorities and changes arising from industrialization, mechanization and technological advances management and sustainability of the environment has become a challenge. The uncontrolled human activities all over the world have affected virtually every major feature of the ecosystem in the planet (Moses, 2004).

Several world forums have been held to discuss environmental concerns ranging from Stockholm, Belgrade and Tbilisi Conferences. The third Inter-governmental Conference on Environmental Education (Popularly known as the Conference) was held in 1977, and its main achievement was the formulation and endorsement of goals, objectives and guiding principles for environmental education. The conference further recommended that member states should develop national policies and strategies for furthering environmental education research and incorporating their findings into the general educational process through appropriate courses. The Conference articulated goals of Environmental Education as: fostering awareness of, and concern about economic, social and ecological after dependence in urban and rural areas, providing every person with opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment and creating new patterns of behavior of individuals, groups and society as a whole towards the environment (George, 1999).

The increased interference of the ecosystem by human activities has triggered a lot of concern among stakeholders in Kenya (NEMA, 2010). This scenario has led to the realization that special attention should be given to the establishment of environmental educational programmes in schools. The government's effort to address the problem of environmental destruction can be traced back in the early 1980s, when it spent 34 million Kenyan shillings to establish environmental conservation programmes through the Ministry of Natural Resources (Republic of Kenya, 1999). However, in the early 1990s, the Government was dissatisfied after discovering that establishment of an environmental conservation authority was not helping to stop the problem of environmental pollution (Edward, 1997).

As a result of inability of the environmental conservation authority to reduce the pollution of the environment and also destruction of the natural resources, efforts were directed to establishment of environmental education programmes; formal and non-formal learning activities aimed at educating Kenyans against human encroachment on natural resources and the importance of positive attitudes towards the environment by providing them with skills and knowledge that would keep them informed about the dangers of environmental destruction. The government's formal response on protecting the environment against human activities through educational initiatives is documented in various official reports; Commissions of Education, Educational Reports, Policy documents and circulars (Republic of Kenya, 2004). The themes on environmental education are now integrated in various subjects in the school curriculum.

In attempt to reduce the pressure of human activities on the environment, teaching of themes on environmental education was introduced in the school curriculum more recently (Republic of Kenya, 2008). However, the teaching of themes on environmental education in the school curriculum may experience some challenges like resistance by teachers and lack of trained personnel (Miller, 2002). Such challenges are likely to negatively affect the teaching of the topics on environmental education. The study therefore, to investigated the need to teach themes of environmental education in the school curriculum.

### **Objectives of the Study**

- i. Establish the strategies used to teach themes of environmental education in the school curriculum.
- ii. Examine the benefits of mainstreaming themes of environmental education school curriculum.

### **Methodology of Research**

This study adopted a descriptive survey design. Twelve teacher respondents were interviewed. The researcher also carried out a documentary analysis of several government records to complement the findings from the interviews. The documents analyzed included: government policies, official records, research findings, the formal school curriculum and non-formal activities that have infused and integrated environmental education in Kenya. A few case studies on environmental education were also reviewed. The review focused more on the content validity of the instruments being reviewed. A total of 49 documents were sampled for review. The documents reviewed in this paper were sampled through purposive sampling; five government policies, 18 researches, six session papers, five Educational Commissions and Reports, Teaching resources and curricula.

### **Discussion of Findings of the Research**

The results were categorized, presented and analyzed as follows:

- i. Themes of environmental education integrated in the school curriculum.
- ii. Strategies used to teach the themes of environmental education in the school curriculum.

### **Themes Of Environmental Education Integrated In The School Curriculum**

The study aimed at establishing the themes of environmental education that were mainstreamed in the school curriculum. A summary of its findings on whether topics on environmental education were mainstreamed in the school curriculum is revealed that the themes were mainstreamed in various levels; primary, secondary and post-secondary education.

A documentary analysis of the primary school curriculum showed that themes on environmental education were mainstreamed in social studies subject. These themes were integrated in class six and seven. A further analysis showed that the following themes were covered in class six; meaning of the environment features of the environment and economic activities in Kenya. At the standard seven class, themes of environmental education included; economic activities and the effects of human activities on the environment. The above finding was supported by study carried by Collins (1997), who reported that themes of environmental education were covered in the social studies subjects. This researcher also revealed that the themes were covered in the same classes and also in Standard eight.

However, themes of environmental education were also infused in languages; English and Kiswahili, and in Creative Arts. Morris (1999), in a study on the integration of topics on environmental education, noted that Volume 2 of the 2002 Creative arts syllabus had integrated environmental education as an emerging issue in the school curriculum. The emphasis given to teaching of environmental education was shown by a teacher interviewee in this study, who had noted that in her school, their schemes of work could not be approved for use by the HODs unless the themes on environmental education were clearly shown. Similarly, this result was further supported by findings from a principal respondent who noted that topics on environmental education were overemphasized at the primary school curriculum. When challenged by the researcher to justify her stand, she had this to say:

During the signing of the teachers' schemes of work, I usually pay keen interest on the teaching of the emerging issues in teaching process. My major areas of concern are the topics on environmental education and HIV/AIDS... this practice is known by all my teachers.

On the other hand, themes on environmental education were also given a special preference in the secondary school curriculum (Morris, 1999). Unlike in the primary school curriculum, themes of environmental education were covered at all levels in the secondary school Geography syllabus. The scope of the themes was also broad at the secondary school level. The themes covered included: The Earth, geographical feature, farming in Africa, East Africa and Kenya; mining and effects of human activities on the environment. However, geography was a core subject at form I and II. This suggested that the themes of environmental education were only covered by those students who selected it as an elective at the senior classes.

The finding of the study further revealed that the topics on environmental education were integrated other subjects at the secondary school level. Documentary analysis of the various syllabuses showed that the topics on environmental education were also integrated in other subjects: Christian Religious Education and Agriculture in the secondary school curriculum but at different levels (Republic of Kenya, 2007). For instance, the syllabus for Agriculture clearly showed that various topics on environmental education had been incorporated in the syllabus. According to the Agriculture syllabus, in Form 1 and Form 2 classes, topics on geographical features, types of environment and economic activities were covered (Republic of Kenya, 2007).

Similarly the topics on importance of the environment and methods of conserving the environment were included in Christian Education syllabus (pp. 12-17).

This study also sought to find out whether the topics on environmental education were integrated in the non-formal curriculum; students' clubs and religious societies programmes in the secondary school curriculum. The findings from various researches, Committee reports and school activities revealed that themes on environmental education were covered in students' clubs meetings and during their religious societies meetings. These findings revealed that several themes of environmental education were covered in the students' club meetings. The specific clubs that covered themes on environmental educations were: Debate, Science, Wildlife, and Environmental conservation. The themes covered in most of these clubs included; importance of the environment, threats caused by human activities to the environment and method of protecting the environment. Apart from the group discussions many of the clubs were actively involved in environmental activities such as; tree planting, cleaning the environment and participating in national environmental and international world environment day.

In the Environmental Conservation Club, themes of environmental education were discussed more often compared to the other clubs. This finding was associated to the aims and principles of the Environmental conservation club. The review found out that the Environmental Conservation Club was purposely established to spearhead environmental programmes in schools. In the Straight Talk club, the topics discussed by its members were programmed by The Kenya Wildlife Services. Among the themes mentioned earlier, the theme on environmental conservation was given a special preference together with emerging issues on the environment.

In debate club, the students' discussions were specifically tailored to address the human activities such settlements, and how they affect the environment. In this respect, the debate patrons deliberately taught the integrated themes on environmental education as a way of sensitizing students on the dangers destroying the ecosystem. For this reason, the students got an opportunity to acquire more knowledge related to the problems associated with human activities on the environment. Some of the topics that the students debated upon were: global concerns towards the environment, social impact on the environment and the future of the environment.

The findings about mainstreaming environmental education in school curriculum reported earlier in the section corresponds to other documentary evidence obtained from an analysis carried out on various syllabi in the primary and secondary school curricula. Most of the syllabi reviewed showed that the topics on: global concerns towards the environment, social impact on the environment and methods of conserving the environment were covered in the school curriculum (Republic of Kenya, 2007). A similar observation which was in line with the findings of this study was earlier recorded by Muli (1990) in a study on teaching of environmental education in Kenya. Muli (1990) showed that apart from the topics integrated in the current secondary school curriculum, other topics such as: use and misuse of natural resources,

industrial pollution on the environment and emerging issues on environment were also incorporated in education programmes.

### **Strategies Used Teach The Themes Of Environmental Education In The School Curriculum**

The documentary analysis revealed that a variety of teaching strategies were used to teach the themes of environmental education in the school curriculum. These strategies can be classified as either direct or indirect approaches. Among the direct strategies, the lecture method was commonly used according to a study carried out by Morris (1999). Another teacher-centered strategy used mainstream environmental education was guest speakers. On the other hand, several indirect strategies were used to mainstream the themes of environmental education in the school curriculum. For example, the question and answer method was used to mainstream themes of environmental education as revealed in four researches reviewed in this study (Lenard, 1989). Other approaches used to mainstream the themes of environmental education in the secondary school curriculum included: group discussions, problem solving, field excursions and project method.

The effectiveness implementation of the school curriculum is significantly determined by selection of the appropriate teaching methods. In a study on factors that influence teaching of an integrated curriculum, Olembo (1990) suggested that teaching methods that encourage student participation promoted a better understanding of the content taught in class. The findings of the current study revealed that: group discussions, question and answer, and experimental methods enhanced students understanding. In addition, these methods further promoted transfer of learning and especially on real life situations. On the other hand, the lecture method though did not promote the students understanding, it was preferred in situations where teachers were teaching large classes. Similarly the lecture method is best used in circumstances where teachers are required to cover a lot of content within limited time. This finding was further supported by Yunis & Thomas (1998) in a study carried out in Kenya.

Although the guest speakers were commonly used to teach themes on environmental education in the non-formal curriculum, this finding was contradictory to that of the study carried out by Davison (1992). In this study, Davison (1992) noted that guest speakers were commonly used in the formal curriculum and rarely utilized in the non-formal one. In view of this contradiction, the researcher for the current study raised questions about the effectiveness of the guest speaker in teaching themes of environmental education in the students' clubs meeting and their religious societies meetings.

### **Conclusion**

In conclusion, the findings of this study as reported and discussed in this section revealed that the themes on environmental education have been incorporated in the school curriculum in Kenya. It was also found out that the themes on environmental education were covered in both the primary and secondary school curricula. Several strategies were also used to teach themes

on environmental education; lecture, group discussions, question and answer methods, field excursions among others.

The mainstreaming of environmental education has impacted positively on the protection of the environment against human activities. For instance people's attitudes toward the conservation of the environment have changed significantly.

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