



# Implementation of Environmental Education (EE) in History in Seychelles: The Case of the Beau Vallon Secondary School

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## Abstract

This study explored the implementation of Environmental Education (EE) in History at Beau Vallon Secondary school. The objectives were to establish the extent to which teachers are knowledgeable of their role of History in EE, the frequency in the incorporation of EE in the teaching of History, and the obstacles History teachers face towards effective implementation of EE. A case study design informed the research. The study reveals that there is very limited implementation of EE in History at the institution despite the Ministry of Education's effort to have it infused in all subjects. Teacher training in EE has helped to increase their environmental knowledge but not the translation of this knowledge in teaching practice. The obstacles of EE implementation include low participation in environmental associations; examinations oriented teaching; lack of assessment of lifelong skill imparted by EE; and teachers' perception that EE belongs to science related subjects.

**Keywords:** Beau Vallon, Secondary, History, Environmental Education, Eco-School.

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## **INTRODUCTION**

Presently we have witnessed environmental problems arising out of a number of issues. These include over population, depletion of natural resources, and climate change. Therefore, there is need for students to be educated on these issues. Education involves learning, and learning, is seen when the experience or set of experiences changes behaviour patterns. Whatever subject you teach you can contribute to greater environmental awareness amongst students. Even if the subject does not lend itself to environmental content, you can still play an important role in providing students essential skills that will enable them to recognize and solve environmental problems (Simpson, 2011).

Therefore, there is the need for History teachers to make teaching of History more environmentally oriented by constantly implementing Environmental Education (EE) in their teaching and learning. Implementation is the process of putting into practice ideas, programs or a set of new activities to the people expected to change (Ndaruga, 2013). In this regard, as EE is implemented in teaching and learning there needs to be ways of assessing the extent in which these knowledge are put into practice. Noteworthy, is that EE can permeate all subject areas in the curriculum and that many environmental problems depend on complex economic, social and political consideration. These considerations are clearly visible in the topics within the History curriculum (Sinha, 1985).

### **Problem Statement and Purpose of the Study**

Personal experience at the Beau Vallon Secondary entails that there has been inadequate implementation of EE in the learning of History. Evidently, EE is ordinarily implemented as an exhibition in instances where there are national competitions to merely provides superficial evidence of it being implemented in the classrooms. As such, the present paper is a product of a study that explored the extent of the implementation of EE in History at Beau Vallon Secondary School with focus directed towards the factors which affect its implementation.

As a result, this research sought to determine:

- The extent to which teachers are knowledgeable of their role EE in History;
- The frequency of the incorporation of EE in the teaching History; and
- The obstacles faced by History teachers towards effective implementation of EE.

### **UNDERPINS FROM LITERATURE**

EE in the modern world has become as important as reading, writing and arithmetic. For this reason, there is the need to create ‘environmentally literate’ citizens so that we can look after our environment in such a way that will support our future, because it is presumed that what people do not know, they do not care about. That is why learning about, and for the environment is important (Kethoilwe, 2013; Sinha, 1985). According to Sundar (2010), EE is more than an essential part of the school curriculum. It is important to our survival and to the future of our planet. EE is also interdisciplinary, the knowledge and skills learned are readily transferable to other disciplines.

In addition, Archie (2001) posits that facilitating EE in the learning of all subjects rather than isolating it, models for the students how the environment is connected to their daily lives and relationship within their daily communities. Interdisciplinary nature of environmental concepts can lead students towards a deeper engagement with environmental learning.

Sundar (2010) says that traditionally we have studied History in order to understand the present. However to solve environmental problems, we need to think about the future. It should be noted that the future is that part of history that we can change. In fact, a large chunk of EE deals with history. Sample topics in History include how the environment has shaped human civilization and different cultures and how humans have impacted the environment through history. More particularly, it deals with how soil erosion, loss of trees, water pollution, species extinction and so on has influence History. Furthermore, History deals with aspects such as how events in History had impact on the environment, the importance of natural resources to a nation's community's economy and stability; how a country's political process works and how citizens get involved in issues concerning the environment and health; how past leaders have dealt with environmental issues (Neal, 1990). However, there are numerous challenges that history teachers face. This has made them reluctant to incorporate EE in their teaching and learning. Some of these challenges include; lack of teacher preparation in EE, lack of courses in EE teaching methods and lack of prior course work on EE (Archie, 2001). Despite these challenges, teachers need not be experts on environmental issues, but they should identify those who are and make use of their expertise. When implementing EE, teachers should ensure that there is a planned sequence of learning and that all students are introduced to a range of challenging experiences that encourage them to maintain an active interest in the environment. EE is best approached as an across-curriculum strategy. If EE is integrated across the key learning areas in primary and secondary schools, students will learn to care for the environment as part of their normal daily lives (Dibley, 2012).

### **EE in Seychelles**

According to Emilie (2015), in Seychelles the Ministry of Education attempts to implement EE through the Eco-School programme. All state schools were registered for the programme. The programme is co-ordinated by the Environmental Education Unit within the Ministry of Education. The programme ties into virtually all school topics. She further says that Eco-school provides great way of introducing environmental topics in the National Curriculum. As such, it helps to develop a creative learning environment for all students involved. Eco-schools help to deal with environmental issues and deliver cross curricular themes such as water use, healthy eating amongst others. The schools provide a context for learning to students by serving them to appreciate how diverse issues are linked together. It is widely recognised that there are many different learning, working and thinking styles. The activities Eco-Schools focused on is an amalgamation of aptitudes which are often ignored in the classroom. Practical, real-life activities have the potential to develop thinking skills, as such, offering vital opportunities to make students make connections between subjects. Experimental learning outside the classroom also has the capacity to raise levels of learning across a range of subjects (Ndaruga, 2013; Emilie, 2015).

## METHODOLOGY

A questionnaire was used for data collection. The questionnaires were sent to each of the respondents via e-mail. All the seven teachers of History at the Beau Vallon secondary school were involved in the study. However, only five teachers managed to complete and return the questionnaires. The said school was chosen for the research because of its active involvement in the Eco-School project and had more than once won the Eco-Schools' competition organised by the Ministry of Education. The implementation of EE in the teaching and learning of various subjects is one aspect in the competition.

It should be noted that ambiguous questions on the questionnaire were clarified through e-mail communication to respective respondents as advised by Powell (2014). The data were analysed manually which involved simple frequency count on the responses of teachers.

## RESULTS AND DISCUSSIONS

The first objective of this study was to examine the extent of the knowledge of History teachers regarding the role of History in EE. Firstly, the objective was pursued through establishing the frequency of teachers that had participated in EE training. The results are presented in table 1.

Table 1: Participation in EE Training

Response	Frequency (N)	Percentages (%)
Yes	4	80
No	1	20
Total	5	100

Table 1 show that the majority (80%) of the respondents had prior training in EE while only 20% stated that they had not received training. Therefore, by implication most of interviewees were familiar with EE and what is expected under the subject. It is not a surprise that 80% were able to successfully provide the definition of EE when required to do so. However, they demonstrated limitedness in their understating of EE when it came to stating the role of History in the subject (EE). In this regard, only 20% of the respondents gave a satisfactory, though vague answer to the question. Sadly, the remaining 80% could not say anything regarding the role of History in EE to the extent that they ended up leaving the question unattended to by leaving the answer slot blank. From this background one is forced to begin to wonder the quality of EE that the above (80%) of the respondents claimed to have received. This is because it is quite uncommon that teachers who received some training on EE about History would ultimately fail to state the relationship of the two subjects. Perhaps the problem could also be traced to the motive of the teachers under study to attend the workshop where EE was being introduced to them. It would not be overstating the truth by speculating that they attended the training simply to satisfy other hidden agendas and not necessarily to acquire meaningful competences or reasonably articulate EE in relation to History. In this case, it could actually be rightfully contended that the preceding predisposition is a necessary condition for the failure of these teachers to effectively implementation of EE in their teaching of History. In fact, it would be a defying reason for

teachers who cannot link EE to their teaching subject to be able to meaningfully incorporate EE in their teaching process (Ketloilwe, 2013).

### **Membership of Teachers to Environmental Groups**

One of the questions in the study required the respondents to state if they belonged to any of the three environmental groups at Beau Vallon secondary school namely the Eco-School, Save Our Seas Foundation, and the Wildlife Club. The results indicated that only 20% of them were members of at least an environmental group at the school while major of the proportion (80%) of the study participants did not belong to an environmental association. The low participation of History teachers in environmental groups suggests that the teachers have poor interest or motivation for the environment. As such, their apathy in joining these environmental groups has hindered their opportunity to increase their knowledge on various environmental issues. According to Silo (2015) membership of environmental groups at the school level may help the teachers to better appreciate the environment, draw the link between the environment and topics in the History curriculum together with helping them come up with various ways on how they could incorporate EE in the teaching and learning of History.

### **Frequency of Implementing of EE in Teaching and Learning by Teachers**

An investigation was conducted on the frequency for which teachers implement EE at the different levels in Secondary. The study found that across all levels of secondary school, majority of the respondents (60%) claim that they never implement EE in the teaching and learning in History. In fact, concerning EE teaching at Junior Secondary school level, the study shows a balance (10%) between briefly included, and included as a major topic. However, implementation at senior secondary level indicates that 90% do not include EE in their teaching while only 10% said they merely briefly infused the concept of EE the teaching of History. In view of the foregoing findings, it could be articulated that the failure of most teachers to implement EE at senior level (secondary 4 and 5) in History is due to their focus on the International General Certificate of Secondary Education (IGCSE) syllabus. In this case, as will be shown later, teachers mostly focus on completing the syllabus and preparing the students for the international examinations rather than incorporating EE in their teaching and learning (Emilie, 2015). This is particularly so because they felt EE is not emphasized during the final examination.

### **Teachers' Involvement in Implementing EE**

The present study endeavoured to establish the extent of teachers' involvement in the implementation of EE. The focus was mainly to find out the extent to which teachers are involved in EE apart from just including it in teaching. Accordingly, 60% of the respondents include it in their lesson objectives and the rest (40%) did not. However, one would wish that the percentage of those including in their teaching objectives should be higher as teachers need to play a more active role in the implementation of EE as it affects all learners, including those taking History. Besides, EE is an interdisciplinary subject; hence, each subject has a role to play to ensure its holistic implementation (Kimaryo, 2011). According to Neal (1990), it is crucial for

History teachers to network with teachers of other subjects in order to enable smooth-edged implementation of EE.

Moreover, only 10% of the respondents had taken the initiative for networking with other stakeholders for the proper implementation of EE. By implication, it is only 10% of History teachers that collaborated with other subject teachers in the implementation of EE. The study further revealed that 10% has discussed the teaching of EE with other teachers while 20% have made use of EE materials in their teaching and learning processes. Furthermore, only 10% has designed educational materials to use for EE. The factors that are hindering teachers from taking a more active role in EE will be given later in this paper.

Additionally, respondents were asked to indicate the subject(s) in which EE has been implemented and to justify their response:

Teacher 1: *Science and Geography. Because it has links more with environment. Thus the two subjects have no option but to implement EE.*

Teacher 2: *It should be a subject on its own. But I believe it can be incorporated in all subjects.*

Teacher 3: *Geography, since there is already a branch that talks about the environment but it does not give much overview since the curriculum restricted only to certain topics.*

Teacher 4: *All*

Teacher 5: *Geography because of its direct relationship.*

An analysis of the above perspectives indicates that basically 20% of the teachers feel that EE can be incorporated in all subjects. This implies that only one respondent perceive that it is acceptable to infuse EE in all subjects, History inclusive. Besides, majority (60%) of them are of the view that it should be in either Geography or Science. Thus, they justified their arguments by positing that Geography and Science are more related to environmental issues than any other subject. The attitude of the majority (60%) of the respondents revealed above will definitely have an effect on whether or not teachers will efficiently and effectively implement EE in their teaching of History. This is particularly so because they understand EE as the responsibility of other subject teachers rather than their own. According to Martha et al. (2007), this attitude can be the result of teachers not knowing the role of History in EE, as we have seen in the earlier sections. Ndaruga (2013) contents that such lack of knowledge by teachers stands as a critical hindrance in the implementation of EE in the subject.

### **Teaching Strategies used by Teachers in Implementing EE**

One of the study objectives was to investigate the most common teaching and learning strategies used in implementing EE. Essentially, the respondents were asked to state how often they used the following learning and teaching methods to teach EE: Exposition, text book, notes and worksheets, exposition and visual aids, class discussion, group work discussion, design, brochure, bookmark, and posters. Also included were dairy keeping and record keeping, fieldwork and visits, project, role playing, letter writing, and essay writing. The study discloses that the methods which are most popular amongst the teachers, because they are the most

commonly used by the majority of them include Projects, followed by Class discussions, field work and visits, together with role playing. However, when considering the methods which are most often used by the teachers, the results show exposition, textbook, notes, worksheets, visual aids and group discussion.

The difference in the methods used is probably due to the fact that the methods used by the teachers more occasionally are suitable for implementing EE in teaching and learning, however, they cannot be used more often because they require long preparation time or it will take quite a considerable amount of time for the teachers to mark the students' reports which they write after participating through these methods (Silo, 2015; Neal, 1990). In contrast, the strategies, outlined above, used most often by the teachers in teaching EE neither demand a lot of preparation time and resources nor do they require much time for the teacher to make correction or follow-up of the products of their use (Martha et al., 2007; Ndaruga, 2013).

### **Factors Hindering the Implementation of EE in History**

Among the aspects that were of concern for this study, was to explore the obstacles faced towards successful implementation of EE in History. The results of this inquiry are as illustrated in table 2.

Table 2: Main Factors Affecting the Implementation of EE in History

<b>Factor</b>	<b>Frequency</b>	<b>%</b>
Lack of materials	5	100
Lack of training	4	80
Heavy teaching load	4	80
Lack of emphasis in examination	3	60
Unclear curriculum guidelines	2	20
Lack of financial help	2	20
Lack of support from management	1	10
Insufficient teaching time to diversify strategy	1	10

According to table 2, the main (100%) hindrance to the implementation of EE in History at the Beau Vallon secondary school is the lack of materials for the teaching of the subject (EE). Also, featuring very prominently (80%) are lack of training in EE and heavy teaching load, while lack of emphasis of EE in examination follow in importance (60%). These factors definitely impacts directly on the teacher's preparation. For instance, lack of materials might prevent teachers from implementing EE in History because it prevents them from producing the resources needed for the particular lesson or in some cases series of lessons. Included among such materials are resource text books, and Information Technology Communication (ICT) gadgets (Kethoilwe, 2013). Furthermore, heavy teaching load will only allow teachers to concentrate on what is seen as 'important' that is the subject matter, thus, the incorporation of EE might not be seen as a priority (Scoullis & Malotidi, 2004). Teachers also feel that lack of training is hindering them from efficiently incorporating EE. As a matter of fact, it cannot be denied that training gives confidence in the implementation of EE; however, it is not essentially a necessary condition for the infusion of EE in History. According to Sinha (1985), one does not need to be an environmental expert to effectively teach EE. He further argues that teachers can learn right along with students as they infuse environmental themes and learning activities into the teaching. Therefore, one can argue that despite the lack of training, if the teachers had the motivation or

saw the importance of EE in the teaching and learning lack of training could be easily overcome by teachers doing their own research or experimenting with various strategies.

With regard to the lack of emphasis of EE in final examination, the focus is about most teachers of History paying particular attention on preparing or rather drilling student for examinations rather than training them to become more responsible citizens who would be able to exploit the environment in a sustainable manner and contribute to resolving environmental problem (Ndaruga, 2013). Besides, even if EE is not assessed during examination, teachers need to know the importance of teaching EE the classroom. In this regard Kanene (2014) and Neal (1990) advise that teachers need to look at the bigger picture, that is, helping student to 'recognise the value and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relatedness amongst man, his culture and his biophysical surrounding which also entails practice in decision making. Nevertheless it cannot entirely be blamed on the teachers for their neglect of incorporating important lifelong aspects such as EE, experience and indeed literature, has revealed that the expectations of society, particularly parents and school management, is that the worth of the teacher is demonstrated through the pass rate of his class. In fact, it is out of student performance during final examination that teachers will be praised or condemned (Neal, 1990). Actually some teachers have been promoted on the basis of their production of high pass percentage among their students at final examination level (Kimaryo, 2011). As such, EE, though important, loses its place and importance within the teaching and learning process (Kanene, 2014).

## **CONCLUSION AND RECOMMENDATIONS**

The research has revealed that to a limited extent EE is being implemented at the Beau Vallon Secondary School in History. A number of strategies are being used to implement EE; however, EE is not being implemented on a consistent basis. Even if teachers have had prior training on EE and can attempt to define the term, the research shows that they do not really appreciate the role and importance of History in EE. The study has revealed several reasons that are associated with the failure to successfully implement EE in the teaching and learning of History. It has come out overtly that teachers of History at Beau Vallon have a very low participation in environmental associations that are available within the school. As a matter of fact, this limited participation could be cited as one of the reasons why they have very limited appreciation and knowledge of the importance of their subject in EE. This is particularly so because environmental associations are generally credited with boosting interest among their members towards the integration of environmental issues in their subject areas (Silo, 2015). The study has further established that teachers of History are mostly focussed on completing the syllabus and preparing the students for the international examinations rather than incorporating EE in their teaching and learning which rarely features in examination questions. This scenario could heavily be attributed to the demands of society, school management, and the Ministry of education who basically assess teacher performance mainly on the basis of pass percentage of students at national examination level. Sadly, the school system does not seem to have any interest to measuring the level of attainment of lifelong skill such as those imparted by EE (Neal, 1990). The study further shows that despite EE being interdisciplinary, there is minimal collaboration and networking between History teachers and teachers of other subjects for effective implementation of EE. Essentially, most teachers of History perceive EE as the responsibility of other subject teachers, such as science and geography, rather than their own.

This is to a greater extent a function of these teachers not fully understanding the role of History in EE which has been cited as one of the major hindrance in the implementation of EE.

Other obstacles that have been revealed concerning the implementation of EE in History include inadequate teaching and learning materials, lack of training, and heavy teaching load. An analysis of these factors reveals that lack of training has led to limited initiative among the history teachers to use locally available teaching and learning materials that could have eliminated their view of teaching materials as a major hindrance towards implementation of EE in History. Nevertheless, it is not an overstatement that the foregoing factors impacts directly on the teacher's preparation in the perspective of EE implementation.

The present paper recommends for the development of a teacher handbook or guide to provide History teachers with means and ways to incorporate EE in their teaching and the use of diverse teaching strategies. Besides, the Government should generate a National Policy that should demand compulsory implementation of EE in teaching subjects (Government of Botswana, 1994) together with a monitoring tool by relevant Ministry of Education Officials. Finally, there should be a mechanism put in place to ensure EE issues account for the final examination History grade.

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