JRIIE Journal of Research Innovation and Implications in Education
Center for Research Implications & Practice

Website:www.jriiejournal.com ISSN 2520-7504 (Online) Vol.6, Iss.2, 2022 (pp. 370 - 381)

Assessment of the Integration of Environmental Education in Social Science Subjects towards Environmental Conservation in Arusha City Public Secondary Schools, Tanzania

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Abstract: *The study aimed at assessing the integration of environmental education in social science subjects toward environmental conservation in Arusha city public secondary schools, Tanzania. This study was guided by environmental education theory developed in 2003 Hungerford. The study employed descriptive-correlation design through the use of questionnaires, observation, documentary review and interviews in collection of data. The researcher sampled 9 public schools out of 28 and 88 social science teachers were sampled randomly as respondents out of 752 social science teachers in Arusha city. The data in this study was analyzed using SPSS program version 22. This study found out that some social science teachers training attended on environmental education contents which are meant for environmental conservation; some social science teachers understandings of the importance of environmental education; environmental education contents are integrated in social science subjects; there is a significant relationship between the integration of environmental education into social science subjects and environmental conservation. The study recommended that environmental education integration should be translated into practice; despite the importance of the teaching and learning of environmental education contents, the approach used to integrate environmental education in secondary school education should marginalize it; and students and teachers should be active participant in integrating environmental education into school subjects.*

Keywords: *Curriculum, Environmental education, Integration, Social science subjects, Environmental conservation*

How to cite this work (APA):

Minja, O. B. (2022). Assessment of the Integration of Environmental Education in Social Science Subjects towards Environmental Conservation in Arusha City Public Secondary Schools, Tanzania. *Journal of Research Innovation and Implications in Education, 6*(2), 370 – 381.

1. Introduction

A better tomorrow can only be made today (Kimaryo, 2011). Therefore, tomorrow's leaders must be prepared for tomorrow's challenges. Since children are the future leaders they have to be prepared for the future that we wish them to inherit this is simply through providing children with quality education. Quality environmental education is essential in making children become educated thoughtful leaders of tomorrow (Kumar &Selvaraj, 2017). Learning environmental education enables Students to become Enthusiastic, Innovative Teacher and Leaders since it offers opportunities for rich, active, real world and relevant learning across the curriculum (Archie, 2003).

Awareness on negative impacts of human being on environmental rose in the 1960's this lead to the establishment of environmental policies and programs worldwide (Wagner, 2011). The collaborated effort worldwide began by the First United Nations Conference on Human Environment opened at Stockholm in June 1972. All United Nations members worldwide had to establish officially EE programs in their countries. The conference had 95 to 101 recommendations that stressed the potentiality of EE and that it will enable people to get a potential knowledge and ability. They realized that EE will grow the perfect attitudes and commitment to increase the surroundings Excellency. In January of 1975 UNESCO propelled the initiative on dealing with environmental education issues by forming the united nation environmental programme (UNEP) which is later followed by the establishment of the international programme in environmental education called (IEEP).

Regardless of environmental education being incorporated in schools curriculum from 1980's in many countries, its implementation has been low as evident in the continuous environmental problems that are seen in the world (Kumar, & Kumar, 2004). For this reason, many scholars attention has been turned to investigate if environmental education is truly integrated and is being implemented in school subjects as indicated in the curriculum of specific countries. For instance, the study by Monde (2011) in Zambia reveals that incorporation of environmental education successes are seen in science related subjects such as Chemistry, Physics, Biology and Agricultural Science, likely because some of the topics in these subjects have direct application to elements of the environment. However, this was accompanied by some challenges such as limited finances in securing teaching and learning materials for environmental education and limited text books on environmental education making it difficult to teach and learn. Some rural schools particularly government owned schools lack adequate water supply to carry out environmental education activities (ibid, 2011).

According to Kimaryo (2011) Environmental education began since Arusha declaration in 1976. Education for self-reliance emphasized on education to install the knowledge on construction. Institutes had to center their education in construction (production) involving agriculture and other skills related to production. Despite its productive emphasis education for self-reliance did not pay more attention to caring the surroundings and the protection of natural resources. Initiatives on environmental education began officially in 1990s where Tanzanian environmental programs (NEMC, Ministry of Natural Resources and Tourism (MNRT), World Wide for Nature (WWF) as well as the ministry of education and culture (MoEC) were launched, these programmers' aimed at bringing the modification of boldness and loyalties toward the surroundings. The programmers' started by growing the familiarity of environmental education to the institute supervisors, instructors, schools principals and educators. Then followed by the integration of EE components to the primary and secondary education curriculum by the Tanzania Institute of Education (TIE) (NEMC, 2004). In 1990's, the ministry of education in Tanzania articulated EE topics and combined them in different subjects of the curriculum in all education levels. In Tanzania, Environmental Education topics are incorporated into social studies subjects responding to the global apprehensions (Makundi, 2003). The apprehensions aimed at incorporation of EE contents into school subjects like science and vocational skills.

In Tanzania EE concepts in the syllabus are not clear in some subjects. When teachers have to incorporate them in the classroom they search for contents from other sources such as books, magazines, newspapers, and other sources, to search for related EE concepts to involve in their lessons (Mtaita, 2007). For example, in the science syllabi of primary school on the topics concerning air, the concept of air pollution was not mentioned but instructors are supposed to connect that EE concept in their lessons (MoEVT, 2005). According to Da Silva (1996) Tanzania investigators critiqued the sectionalization of subjects in institutes. He also mentioned that the wrongness of the method is because of the interdisciplinary and general nature of environmental difficulties. The study by Mwendwa (2017) confirmed that implementing maintainable education using environmental education has been insufficient in Tanzania due to the fact that EE is incorporated education curriculum for ordinary level of secondary school in only two subjects, which are Geography and Biology subjects. In both subjects there is an incorporation of essential environmental concepts or topics which are: the interaction of organisms, the content on weather, management of water, pollutions, forest resources, erosion, surrounding challenges as well as surrounding protection that implementation of sustainable surroundings.

In Tanzanian Educational system at all levels, the practices of environmental education make extremely slight use of the actual environment as a teaching resource. For instance subjects such as Geography, Biology, Civics, Chemistry and General Studies lack coherence, integration, and practicality. This mean that the EE integration in many secondary subjects especially social science subjects to some extent does not actually reflect the EE contents incorporated in the curriculum for ensuring environmental conservation. Through the above views the key goal of this investigation was to assess the incorporation of EE into social science subjects in public ordinary secondary schools.

The following are research questions that guided the study; To what extent does the social science teachers recognizes the importance of environmental education for environmental conservation in secondary education? To what extent is environmental education integrated in social

science subjects in Secondary schools in Arusha City? Is there a significant relationship between the integration of environmental education into social science subjects and environmental conservation?

2. Literature Review

The Stockholm conference on environment which was held in 1972 showed that managing and improving the surroundings for the future peers is an essential goal of human beings. This was the first conference held with the aim of developing environmental education. The secretary general planed and organised the EE programs worldwide not only in formal settings but also in all human activities in the community. This led to the establishment of 96 suggestions, the formation of EE entities which are UNEP and international environmental education program (IEEP), these entities arranged international conferences and workshops worldwide for instance the Belgrade in 1975. Soon after the Belgrade conference, another big conference on EE in 1977 was arranged by UNESCO and UNEP. The conference joined different representatives from government and NGO's worldwide to deliberate and commend best ways to encourage EE in education levels. The Tbilisi congregation stressed the significance of EE in protecting as well as developing the UNESCO and UNEP in 1987 planned the educational conference about environmental education and teaching which was known as Tbilisi plus ten conferences that was apprehended in Moscow (UNESCO-1987).

Another United Nations conference on environment and improvement was held in Rio De Janeiro, Brazil. The conference maintained as well as exaggerated the objective of gaining sustainability. The conference included so many members with the aim of stressing the deliberation and strengthens the achievements the efforts of preserving the world natural resources through the use of community, fulfilling food demands, accessible water, shelter, hygiene, power, health services and secure economy (Johannesburg Summit, 2002). The integration approach is also used in several countries in the world including; Uganda, Nigeria, New Zealand, China, Jamaica, and Finland, this method is accepted in the national curriculum in the basic education in 2004, the aim of the sustainability of environment where the theme of accountability for the environment, security as well as a maintainable prospect. Mwenda (2017) claimed if EE is combined in the concepts of the curriculum learners will not mature a perfect understanding of different contents in subjects taught in their classroom.

Integration of Environmental Education into Social Science Subjects

Incorporating environmental education into school existence needs a intelligible method that will lead to the development of maintainable environmental development in schools (Conde& Sánchez, 2010) explained environmental supervision, keeping environment green using the curricula, the form of the institute as well as the relation between associates of education society have to be reliable in EE that has been suggested (Yetisir, &Kaptan, 2018) the whole education society like schools have to contribute in moving forward in inclusive functioning assurances (Conde& Sánchez, 2010).

Awareness that instructor wants to have an ability to establish a content to be able to establish the contents, philosophies as well as models in educational disciplines as well as awareness on the guidelines on confirmation and evidence utilized in making as well as defending information in the field of study (Erol, & Gezer, 2006)in Tanzania, this belief is seen in primary schools where instructors need to have the minimal requirement of secondary school education while in secondary schools diploma and degree levels are mandatory. Also primary school teachers need to have a minimum qualification of secondary education and in secondary schools the teachers must have a diploma or degree education level. The study done by Makhoba,(2009) on Implementation of Environmental Education in Senior Phase in south Africa shown that instructors appeared to be more attracted in coaching those environmental themes that were more concrete and relevant to their studying environments, as a result other environmental themes were the most or least taught. Students' attention and motivation towards exact studying parts and teacher experiences were found to be having a role to the educators' attention in teaching certain environmental themes. And also the study done by Monde, (2011) in Zambia on Barriers to Successful Implementation of Environmental Education in Zambian High Schools reveal that Integrating EE in a number of subjects has been a challenge. Integrating EE has only been a success in science related subjects such as chemistry, physics, biology and agricultural sciences. Other subjects where integration of EE has succeeded are geography and home economics. English language also has EE in terms of exercises such as comprehension and compositions writing that are given to the pupils.

In Tanzania, the methods which has been approved to involve of environmental education into the proper education systems is incorporating it into other subjects since it is not existing as a distinct subject (URT, 2004) meanwhile EE topics is not solid evidently into the curriculum in the unlike topics, since it increases honest training in class, educators needs to examine the EE topics in other foundations such as newspapers, magazines, as well as books and search for appropriate EE topics for combining them in lessons.

Environmental education with Environmental Conservation

Conservation and causes of environmental degradation are highly stressed in qualification as a scout in schools around the world. Bourke, (2011) stresses scouting movement as a non-formal movement that aims at changing the society. Persons contribute on a volunteer basis and as a result, they take a dynamic role in the studying process. Ozdemir, and Uzun, (2006) identifies scouting to have a practical approach to educating the young people as opposed to abstract and theoretical learning offered by formal learning. He notes that scouting offers learners a chance to live in nature without using day to day equipment's which are an indication of passive adaptation. People need to acknowledge their indirect environmental impacts as well as their direct impacts when on camps, a development that could be linked to the direction of domination of nature. Scouts are encouraged to do concrete, hand-on activities and therefore gain first hand environmental experience (Bourke, 2011).

Environmental Clubs, According to Dhawan, (2012) the goal of environmental clubs is to teach kids on their instant surroundings and communicate familiarity on the ecosystems, their inter-dependence and their requisite for existence, through appointments and demonstrations and to assemble young sisters by inspiring in them the spirit of scientific questions into environmental difficulties and including them in the struggles of environmental protection. The aims of environmental club are to make youngsters recognize surroundings and environmental difficulties. To deliver EE chances through actions for school youngsters. To use the sole situation of school kids as conduits for consciousness of the society at large. To enable children's contribution in decision making in parts connected to surroundings and growth. To bring youngsters in to straight contact with the environmental difficulties facing the public they live in and make them think of solution. To include youngsters in achievement based program in their environments connected to surroundings.

Routine Works, According to Jull, (2003), Educational settings like this (environmental education) normally take the form of workshops or project-based learning (examples creating recycled paper in a classroom, composting workshops). A skill-building setting involves all the basics of an active learning setting, but also needs the student to repetition a technique that allows them to comprehend the method being taught. The preparation of the technique is thought to be moveable to other surroundings. By performing, the student is anticipated to be more ready and clever to try new approaches, for example by composting at home or selecting suitable resources for reprocessing. Education that included hands-on skill construction assists people recollect evidence and study new behaviours.

Environmental Programs, Environmental education (EE) programmes are not restricted to school children only. They occur anywhere as long as people are interested in learning. Non-formal EE according to Norland (2005) is education in which participation is voluntary. It is a prepared educational procedure which occur beside normal systems of education and training, and does not necessarily cause to certification (Hassan et al., 2009; Semegne, 2007) all programmes outside the class-work that learners engage in and are concerned with environment for the purposes of this study were classified as environmental clubs. The exposure to education programmes outside classroom deepens and enhances educational skills that learners have in the classroom. These practices stimulus affective, cognitive and social empires of studying and accommodating variety of learning types and intelligences, Experimental and social studying talents are essential features resulted by those learners who contribute in environmental clubs (Bourke, 2011).

3. Methodology

This part explained the methodology that guided the study on the assessment of the integration of environmental education in social science subjects towards environmental conservation in Arusha city public ordinary secondary schools, Tanzania. It will discuss the research design, population and sampling procedures, research instruments, statistical treatment of data and ethical considerations.

Research Design

Descriptive-correlation design, according to Grove, Burns and Gray (2013) is a design used when researchers are interested in explaining the degree and characteristics of relationship that exist among variables or groups. This design builds on the descriptive design which simply describes phenomena (Peters, 2015) In this study descriptive-correlation design was used to determine mean scores, and relationship between environmental education and environmental conservation. The design was employed

to describe teachers' knowledge on environmental education, integration of environmental education during their teaching, importance of EE and policy manifestation in the curriculum categorized according to gender, length of services and level of education.

Population and Sampling Procedures

The study targeted all the public secondary school teachers in Arusha city with a total of 28 schools and a population of 752 social science teachers. Simple random sampling was used to select nine public secondary schools and 88 respondents. In selecting the number of schools the researcher wrote the names of all secondary schools in Arusha city. Each school was written in a small piece of paper and placed in the box. The researcher then folded the papers and placed them in a small box, shook them up and then picked one paper at every shake until a total number of nine schools were selected.

Simple random sampling procedure was used to select the social science teachers who were sampled because of their subject category. In selecting the number of teachers, the researcher wrote the names of all social science secondary school teachers in a given school. Each name of the teacher was written in a small piece of paper and placed in the box. The researcher then folded the papers and places them in a small box. The researcher shook the box to mix the papers and picked one paper that contained the name of the first respondent that after picking the first name he then closed the box well and shook it again to pick the second respondent. The process continued until the researcher got the representative number of the teachers in the school. This process continued in all nine schools.

Instruments and data collection procedures

The study used a number of instruments to gather data from respondents as follows:

Questionnaire: In this study the questionnaires were self-constructed. Questionnaire was used specifically to measure the commitment of social science teachers to integrate environmental education concepts which consists of four items teaches knowledge on EE, teacher's competency on integrating EE, importance of EE and environmental educational policies which were rated on a four point scale where 1 – 4 state "Agree", "Tend to agree" "Tend to disagree" and "Disagree"

Observation: The study used observation technique to collect data through recording information from the field without asking from the respondents available in the area. Structured observation was used to see what and how EE is implemented in schools environment.

Document Review: The study read the written documents on environmental education and environmental conservation, after gaining the knowledge from the documents he then used interview and observation methods to expand the knowledge, agree or disagree with information gained from the documents.

Interview: This was a face to face conservation between interviewer and the interviewee. The study conducted it with head of schools and head of departments to get intended information. The interview questions were structured by the researcher.

Statistical Treatment of Data

After data collection stage the researcher used SPSS program to analyses data collected. Each research question was given the statistical treatment it deserves. The researcher used frequency, percentage, mean and standard deviation and general mean score for describing the population of the study in terms of the demographic profile in answering questions one, two, three, four, five, and six. The data gained from the descriptive data was used to supplement the meaning from the mathematical data analysis in order to enrich the study findings. Data from mathematical and descriptive sources was merged in the interpretation of findings and used in the production of the research report. The discussion of findings and the report was done descriptively. Findings from the analysis were presented in description forms and tables.

Ethical Consideration

The researcher required approval from University of Eastern Africa, Baraton Research Ethics Committee. He also obtained a recommendation letter from the Director of Research and Graduate Studies University of Eastern Africa, Baraton to facilitate the application of a research permit from the Commission for Science and Technology (COSTECH) of the government of the United Republic of Tanzania. Permission to collect data from the sampled schools also sought before beginning the data gathering. Respondents were also assured that participation was voluntary and they were free to withdraw their participation or any information given up to the point of data analysis. The researcher also abided to ethical principles in terms of intellectual, legality, honesty, confidentiality, non-discrimination policy.

4. Results and Discussion

This section analyzed, interpreted and discussed the data that are collected from the field. The analysis based on the research questions which were; To what extent does the social science teachers recognizes the importance of environmental education for environmental conservation in secondary education? To what extent is environmental education integrated in social science subjects in Secondary schools in Arusha City? Is there a significant relationship between the integration of environmental education into social science subjects and environmental conservation?

The importance of environmental education

This part of data analysis represents another research question which was *"To what extent does the social science teachers recognizes the importance of environmental education for environmental conservation in secondary education?"* Table 1 shows the respondent's recognition on the importance of environmental education for environmental conservation. To rate the awareness or recognition of the importance of EE the respondents were presented with eight items rated in four point scale follows: Disagree = 1.00 – 1.49, Tend to Disagree = 1.50 - 2.49, Tend to Agree 2.50 – 3.49 and Agree 3.50 – 4.00.

The data presented in table 1 provides the responses provided by the respondents to answer the question stated in the above paragraph. The data from the findings shows that the mean of overall data is ($\bar{X}$=3.20) which indicate the average recognition and understanding of the respondents on the importance of environmental education.

Table 1 represents the eight items that the respondents used to explore the recognition of social science teachers on the importance of environmental education so that they can understand what is at stake around the world. The first statement that was rated very high is *"Environmental education integration emphasizes skills essential for succeeding in tomorrow's world*" where the respondents rating was ($\bar{X}$=3.41; SD=.618) . This means that teachers recognize that by integrating environmental education contents in their lessons will increase their level of understanding and awareness on the environment issues and how to conserve their environment. Another statement was "*It is important to consider school contribution to shaping environmental conservation*" was ($\bar{X}$=3.25; SD=.731). Schools have a huge role in shaping environmental attitude to students and teachers for environmental conservation.

Table 1: The respondent's recognition on the importance of environmental education

The importance of environmental education	N	Mean	SD
It is important to consider school contribution to shaping environmental conservation	88	3.25	.731
The participation in environmental education activities in schools helps maximize environmental awareness	88	3.18	.781
The co-participation of students and teachers in EE activities help in developing environmental conservation	88	3.24	.773
I believe that the integration of EE in social science subjects helps in solving current environmental issues	87	3.10	.876
I believe that integrating EE in social science subjects activates environmental conservation behavior	88	3.18	.736
Integration of EE in teaching helps students to improve their level of understanding on environmental issues	88	3.24	.643
Environmental education integration emphasizes skills essential for succeeding in tomorrow's world	88	3.41	.618
Environmental education integration helps foster a new generation of informed decision makers.	88	3.01	.669
Valid N (list wise)	87		
Overall average Mean		***3.20***	

Source: field data, 2022

Another statement that was also rated by the respondents was *"Integration of EE in teaching helps students to improve their level of understanding on environmental issues"* which was rated ($\bar{X}$=3.24; SD=.643) as well as *"The co-participation of students and teachers in EE activities help in developing environmental conservation awareness"* which was rated ($\bar{X}$=3.24; SD=.773). This findings in these two statement to agree with Rush (2019), the relationship between education and environment is the base for the development of EE. This is because EE helps to develop students` holistic development in terms of knowledge, skills and attitude that help them to solve environmental problems and to contribute their share for the sustainable development of their nation.

Another item that was presented to respondents was *"The participation in environmental education activities in schools helps maximize environmental awareness"* and was rated ($\bar{X}$=3.18; SD=.781). This clearly indicates that it is essential for students and teachers to participate in EE activities but few social science teachers do not recognize that.

Another statement that was averagely rated by respondents was *"I believe that integrating EE in social science subjects will activate environmental conservation behavior in students"* which was rated ($\bar{X}$=3.18; SD=.736). Due to this rate, it reveals that some social science teachers do not believe that integrating EE in social science subjects will activate environmental conservation behavior in students. One respondent said that *"Sometimes I do integrate EE into my lessons and sometimes I do not. It depends on the topic that I am teaching. For example, I take them outdoors if I am teaching about gardening, physical education, music, theatre arts and handcraft."* Another item was "*I believe that the integration of EE in social science subjects will help in solving current environmental issues"* that was ($\bar{X}$=3.10; SD=.876). This indicates that some social science teachers do not accept the fact that integration of environmental education contents in social science subjects is essential for securing the future of our surroundings. In agreement with these two findings Dufour, (2020) pointed out that many of the components of curriculum in education reflect only the goal for learners to acquire knowledge and cognitive skills. Therefore, the integration of EE into different subjects makes the curriculum materials as well as the teaching - learning process, relevant to the lives of students and the society. But failing to recognize that may lead to failure in developing understanding and solving of current environmental issues.

The last statement that respondents agreed to was *"Environmental education integration helps foster a new generation of informed consumers, workers, as well as policy decision makers"* which was rated ($\bar{X}$=3.01; SD=.669). This findings in this statement indicates that many social science teachers do not understand the potentiality of integration of environmental education contents for the purpose of fostering a new generation of informed consumers, workers, as well as policy decision makers.

Competence on environmental education integration

This component of data analysis represents question number four which was *"Have the teachers mastered environmental education concepts in social science subjects?"* to answer this question, the respondents were provided with six items where they were requested to rate using the four point scale of disagree, tend to disagree, tend to agree and agree. These four point scale in the data analysis is presented as follows: Disagree = 1.00 – 1.49, Tend to Disagree = 1.50 - 2.49, Tend to Agree 2.50 – 3.49 and Agree 3.50 – 4.00.

The findings in table 2 reveals that the level of competence or mastery of social science teachers in teaching environmental education contents in their lessons is ($\bar{X}$=3.17) which means that the respondents agreed to social science teachers are competent in in teaching environmental education contents in their lessons.

Table 2: Competence or mastery of social science teachers in teaching environmental education

Competence on environmental Education	N	Mean	SD
I have been trained on environmental conservation education	88	3.36	.776
I know how to integrate environmental education concepts in the lesson	88	3.17	.731
I have the knowledge to evaluate environmental education programs	88	3.14	.805
I attended seminars and workshops on environmental education	88	3.02	.802
I can teach environmental education as per syllabus prescription	88	3.11	.915
I am able to translate environmental education into practice	88	3.25	.791
Valid N (list wise)	88		
Overall average of Mean		***3.17***	

Source: field data, 2022

Table 2 represents the seven items that were meant to explore the respondent's competence in teaching environmental education contents. although all the items were rated at an average rate that the respondents agrees to all the facts but some are rated lower that the others, like *"I attended seminars and workshops that emphasize on environmental education and conservation"* which was rated ($\overline{X}$=3.02; SD=.802) which means the social science teachers did not attend any seminars and workshops. This indicates that there are no/ few seminars and workshops on environmental education teaching and learning. One respondent for the interview commented that *"I think there is need to organize both short and long term seminars for teachers. Also, there should be a college where teachers can go to get training on the teaching of environmental education so that every school can get at least three teachers to this college for training and when they come back they can train the other teachers in the school."*

Another statement was *"I can teach environmental education as per syllabus prescription"* which was rated ($\overline{X}$=3.11; SD=.915). This indicates that social science teachers are capable of teaching environmental education contents integrated in their syllabus. This finding does agree with UNESCO-UNEP, (2018) which emphasized that education should play its role for sustainable development of a given country by integrating education for the environment. To accomplish this, educators such as curriculum experts, teachers and the like should be familiar with the relationship between learning and sustainable development. Another statement was *"I plan, implement, monitor and evaluate environmental education programs in school"* was rated ($\overline{X}$=3.14; SD=.805). This indicates that some social science teachers plan, implement, monitor and evaluate environmental education programs in school. The findings in these two statements agree with the study done by Rush et al. (2019), where they explained that Education must begin with the solution of the teacher-student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers and students. Therefore, not only the teachers but also the students can teach each other and community members, know something, think, talk, act and be the subject of the teaching-learning process.

The respondents also indicated that they have attended the training on environmental education and environmental conservation which made them able to translate environmental education contents in their lessons as well as in practice *"I have been trained how to integrate environmental education concepts in the lesson"* which was rated ($\bar{X}$=3.17; SD=.731), this findings do agree with Alade (2006) detailed that trained ability have to be about how to teach, this means the specific criterion known by instructors level of education and awareness of the subject contents they teach. Elliot, et al (2000) inscribed of trained ability basing on the procedures and teaching methods of the instructors, class supervision as well as active communiqué. "*I am able to translate environmental education into practice"* was rated ($\bar{X}$=3.25; SD=.791). To support this finding one respondent gave an example of his translation of environmental education contents into practice *"I think I was successful because the topic itself was related to environmental education. Although I was supposed to teach it as science knowledge, I related it to the learners environment and daily lives by asking them where they get the water they use at home, how they use the water and many other things, as you saw. And since the lesson was on cleanliness and safety of water, together with the learners we identified the things that we do that can make the water dirty."*

Another statement was *"I have been trained on environmental conservation education"* which was rated ($\bar{X}$=3.36; SD=.776). This findings agree with Berku, (2017) where he said that the integrated curriculum materials become fruitfully implemented when teachers get the right training: how to be flexible actors or actress in the teaching and learning process, use different teaching methods in isolation or in combination to develop students` knowledge, skills and attitudes as a whole by engaging them in learning facts, identifying problems, and finding solutions and criticizing social, economic and political aspects. Also Mwenda (2019) in his study indicated that for environmental education integration to be effective teachers have to undergo training to develop the physical and mental potential and problem solving capacity of teachers, to bring up students who can take care of and utilize resources wisely, to cultivate the cognitive, creative, productive and appreciative potential of students on the environment, and protect natural resources and historical heritages.

Environmental conservation in environmental education

This is another essential part of research where the researcher aimed at finding out the environmental conversations activities that operates in schools environments as the way of making environmental education components in social science subjects be more practical. To fulfill this aim the researcher provided respondents with seven items where they were directed to rate using a four point scale. These four point scale in the data analysis is presented as follows: Disagree = 1.00 – 1.49, Tend to Disagree = 1.50 - 2.49, Tend to Agree 2.50 – 3.49 and Agree 3.50 – 4.00.

The findings in the table 3 reveal that environmental education and environmental conversation in schools go hand in hand since the finding shows ($\bar{X}$=3.22) which means respondents agree to the fact that knowledge on environmental education and environmental conversation in schools is very essential and is fruitful in taking care of environment practically. This findings do agree with Aklilu (2021) who stated that education in or from the environment in Ethiopia focused on fragmented facts that did help students to learn from their environment through first hand experiences by doing, observing, analyzing, and criticizing the interrelationship and interdependence between people with their environment.

Though the mean of this component of data analysis shows the moderate findings some responses are rated higher like *"Environmental conservation tour"*being a highly rated ($\bar{X}$=3.57; SD=.675). Supporting this finding during the interview one respondent said that *"tours like visiting environmental conservation areas; Ngorongoro national parks, Manyara national parks, faming sites as well as manmade parks, manmade forests, also environmental conservation seminars and training have attended by social science teachers and students occasionally in his school"*. This do agree with Farmer et al., (2007) who showed that when EE is done in environment with field works, it becomes easier for the acquired knowledge to turn into activities and positive attitudes towards the environment

Another statement was *"Planting of trees programs"* which was rated ($\bar{X}$=3.24; SD=.625). This finding indicates there have been trees planted by students in their school environment. It was also evidenced by the researcher as he was collecting data using an observation method. Presence of Environmental debates also has been rated high by the respondents, *"Presence of environmental conservation debates"* was rated ($\bar{X}$=3.23; SD=.673). This finding was supported by one respondent by saying *"geography and biology teachers in my school do conduct debates in the school on Tuesdays about environmental issues and contents included in their subjects. Form one and form two may debate this week, and form three and four will do it next week. The debate focuses on the environmental concerns and ways to conserve the environment"* another respondent added by saying *"debate held in the our school have shown positive results since students became more inspired and developed an interest in learning about their surroundings. Most of our debates are supervised by social science department on Fridays"*

Another statement was *"There is an establishment of conservation clubs in my school"* which was rated ($\bar{X}$=3.22; SD=.651). Root & shoot club and environmental conservation club have been cited by the respondents during the interview that they do exist in their schools with the aim of installing the knowledge on environmental preservation and conservation to students with interest on environment. They also aimed at implementing environmental education in practical. This finding seems to agree with Bogner (2002) who outlined the importance of environmental club activities in creating positive changes in the environmental behavior.

Table 3: Environmental conservation in environmental education

Environmental conservation in environmental education	N	Mean	SD
There is an establishment of conservation clubs in my school	88	3.22	.651
Environmental conservation tour	88	3.57	.675
Planting of trees programs	88	3.24	.625
Presence of environmental conservation debates	88	3.23	.673
Presence of dust bins on school campus	88	3.11	.535
Regular workshops on environmental conservation	88	3.15	.617
Minimum air pollution	88	3.08	.834
Valid N (list wise)	88		
Overall average Mean		**3.22**	

Source: field data, 2022

Another statement was *"Regular workshops on environmental conservation"* which was rated ($\bar{X}$=3.15; SD=.617). This findings indicates that there are few workshops conducted on environmental education to teachers. This was confirmed by the interview conducted where one respondent said that *"we have been attending workshops concerning environmental issues conducted in district level, and sometime UNESCO do conduct environmental conservation workshop and every school send their representative"* another respondent added by saying *"we do conduct workshop for all students not only to those members of environment clubs but to all students so they be aware of the environmental issues and conservation".* Another respondent from another said that *"there are workshops and trainings but there is no a door for all the teachers to attend. Only few for instance in this school only the social science department attends."*

From the findings *"Presence of dust bins on school campus"* was rated ($\bar{X}$=3.11; SD=.535) which means that some secondary schools have dust bins in every school area to ensure cleanness in the school. But through observation method the researcher found out that many schools don not have dustbins in their schools while other schools have very few dustbins that do not relate the number of the students and staff. The finding disagree with the study by Wasmer (2005) in China shows that, students go external the school and aid the local government to retain the area clean, building it more attractive or noticing difficulties. During the academic year the learner is fortified to contribute in organizing out trash and spread their familiarity to their parents. The educators also try to contain the parents by donation evidence on regulation and reading materials on environmental issues together with them. They can only succeed then the school environment prepares them to do so.

Another statement was *"Minimum air pollution"* which was rated ($\bar{X}$=3.08; SD=.834). This was seen by the researcher as he was observing the environment surrounding the school and in the school compound, he observed that to extent some schools have tried to minimize air pollution. Some schools have built modern kitchens that do not pollute air but many schools use local kitchens that pollutes air, do not have recycling programs, the decomposition of waste is too local.

5. Conclusion and Recommendations

5.1 Conclusion

The study concludes that Social science teachers are averagely competent in teaching environmental education contents in their lessons. The study revealed that social science received few seminars and workshops on environmental education teaching and learning. It also reveal that only few social science teachers are capable of teaching environmental education contents integrated in their syllabus, some social science teachers also do not plan, implement, monitor and evaluate environmental education programs in school. Some of them have attended training on environmental education and environmental conservation which made them able to translate environmental education contents in their lessons as well as in practice. Social science teachers agree to the fact that knowledge on environmental education and environmental conversation in schools is very essential and is fruitful in taking care of environment practically. The study revealed that in many schools there have been trees planted by students in their school environment, environmental clubs known as root & shoot as well as environmental club, discussions, and debates in secondary schools. The study reveals that many schools do not have dustbins in their schools while other schools have very few dustbins that do not relate to the number of the students and staff. The study also revealed that some schools have built modern kitchens that do not pollute air but many schools use local kitchens that pollute air, do not have recycling programs, the decomposition of waste is too local.

5.2 Recommendations

It is recommended that despite the importance of the teaching and learning of environmental education contents, teachers should explore more of the benefits of having the environmental education contents in their lessons. Teachers should be active involve students in integrating EE into school subjects at different levels of education to equip the younger generation with the appropriate environmental knowledge, skills, attitudes, and participation to bring sustainable development of our country. Through the creation of more environmental clubs, discussions, and debates as well as dustbins in their schools.

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