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RESEARCH ARTICLE

Teachers' Attitude towards Environmental Education and their roles in the school and nearby Community: The Case of Secondary Schools of South Wollo Zone, Amhara Regional State, Ethiopia.

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Abstract

Now-a-days Environmental problems such as pollution, waste disposal, soil erosion, flooding and deforestation through environmental education seem to have produced little or no result as the problems still persist. It is not that environmental problems are new but they are simply enlarging and threatening to become uncontrollable phenomena. Scholars have therefore, advocated environmental education activities that focus on early inculcation of the right knowledge in pupils at the primary and secondary school level. The study, therefore, investigated on teachers' attitudes towards environmental education and their roles in the school and nearby community in the selected secondary schools. It also discussed Environmental Education (EE) as a key to creating environmental awareness, empowerment and participation indecision-making regarding some of the world's vital environmental issues and challenges at secondary school level.

Purposive sampling technique was adopted to select four secondary schools from thirty six and all geography and biology teachers including school directors were considered in the study. Relevant data were collected using liker-type scale questioner, observation check-list and semi-structured interview. The result showed that, teachers' attitudes towards EE were found favorable. Whereas, their attitudes towards the teaching-learning process and their roles in the schools and nearby community were not encouraging. Based on these findings, some specific recommendations were made for implementation. Teachers' should improve their roles in the school and nearby community, through organizing environmental conservation clubs which could serve as a model for the school and surrounding community. So, teachers' can reach out to the community through their students' environmental message. This will increase awareness and will influence attitude and activities towards their environment.

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Introduction:-

Our natural resources are being depleted and environmental degradation is increasing because of our unsustainable patterns of production and consumption, uncontrolled population growth, and inequality of social and economic activities. These problems will cause more and more strain on the earth's natural resources and habitats. In solving environmental problems, it is imperative that every person develops an informed awareness of the limits of our natural resources and understand the interrelationship among living and nonliving elements in the whole environment. Human should conserve and protect nature not only for human benefit but also for nonhuman nature (UNESCO-UNEP, 1994).

Lack of environmental awareness is one of the underlying causes of severe environmental degradation in sub-Saharan African countries and they are gripped by a host of environmental challenges many of which implicate local, national and international economic factors. Like most economies in sub-Saharan African, Ethiopia's

economy is largely agriculturally based, and over 85% of Ethiopians depend on agriculture for their livelihoods (Daniel, 2009).

Education is one of the most important tools to bring social transformation in any society. Its purpose is to teach a student how to live his life by developing his mind and equipping him to deal with reality (Caduto, 1983). The importance of environmental education in protecting the world's environment was officially recognized in the first intergovernmental conference on environmental education, held in 1977. The conference was organized by the United Nations Education, Scientific and Cultural Organization (UNESCO) and the United Nations Environment Programme (UNEP). It is with this understanding that countries designed Environmental Education in order to make their population aware of and concern about the environment and associated problems. The aim was to make people change in the five important components i.e. knowledge, skills, attitudes, motivation and commitment enable to work individually and collectively towards finding solutions of the current problems (UNESCO, 1991).

Environmental problems are the most severe in Ethiopia as any part of the world. It is directly or indirectly responsible for the frequent challenges the country faced to feed its own population to enable them to keep in good health and nutritional status. It hampers the overall development of the country in different ways. Recurrent droughts, associated food shortages and deteriorations of biophysical conditions are partly the results of long term environmental problems (Tekeste, 1996).

Justification of the study:-

As human beings continue to have significant impacts on the environment and its resource, education seems to be the best tool for equipping the public with an understanding of the ramifications of their actions and behavioral patterns in order to increase sensitivity and concerns surrounding environmental issues (Desalegn, 1998).

Studies reveal that environmental practice stem from proper knowledge and attitudes. If appropriate knowledge and attitudes are instilled in learners and other people, according to humanistic and integrated models, their action will, by and large, be directly towards sustainable development. Otherwise, they may play a debilitating role for the above models uncover that man's decision grounds on his knowledge and experience (Kwan, 2004).

In order to make children's to think about environmental problems, teachers should have basic knowledge in environmental dimensions, their attitudes towards the environment must first be changed and they must acquire minimal skills before they attempt to open the child's eyes to this natural, man-made and social environment (Jacobson, 1985). By having this information, the researcher strongly believes that our environmental situation has been placed at risk and it can now be saved from this situation only by the dissemination of environmental knowledge. Hence, teachers will share the highest proportion of the job of disseminating the knowledge. This in turn implies the urgent need to assess teachers' environmental perception and practice in their respective subjects.

The main objective of this study is to assess teachers' attitude towards environmental education and their roles in the school and nearby community in selected secondary schools of South Wollo Zone.

The specific objectives of the study are;

1. To identify whether or not geography and biology teachers' have the right attitude towards environmental education, the teaching-learning process and their roles in their schools and nearby community.
2. To examine how grade nine and ten geography and biology teachers' present environmental education in the actual teaching-learning process and to identify difficulties faced for effective implementation of environmental education.

Research Methodology:-

The study was conducted in Amhara Regional Governmental State, South Wollo Zone. Astronomically, the capital of south wollo zone lies on the intersection of 11°8'N 39°38'E. It is surrounded by imposing Tossa Mountain that overlooks the town in west and rises to 3000 meters. The eastern side of the town is hilly with an average elevation of about 2400 meters and constitutes a series of ridges of eastern escarpment of the north-western highlands of the country. Out of the total area of the town, flat plain covers 10 %, while 30 % is plateau, and the remaining 60 % is mountainous. (Dessie Town Sanitation, Beautification and Parks Development Department (SBPDD), 2011).

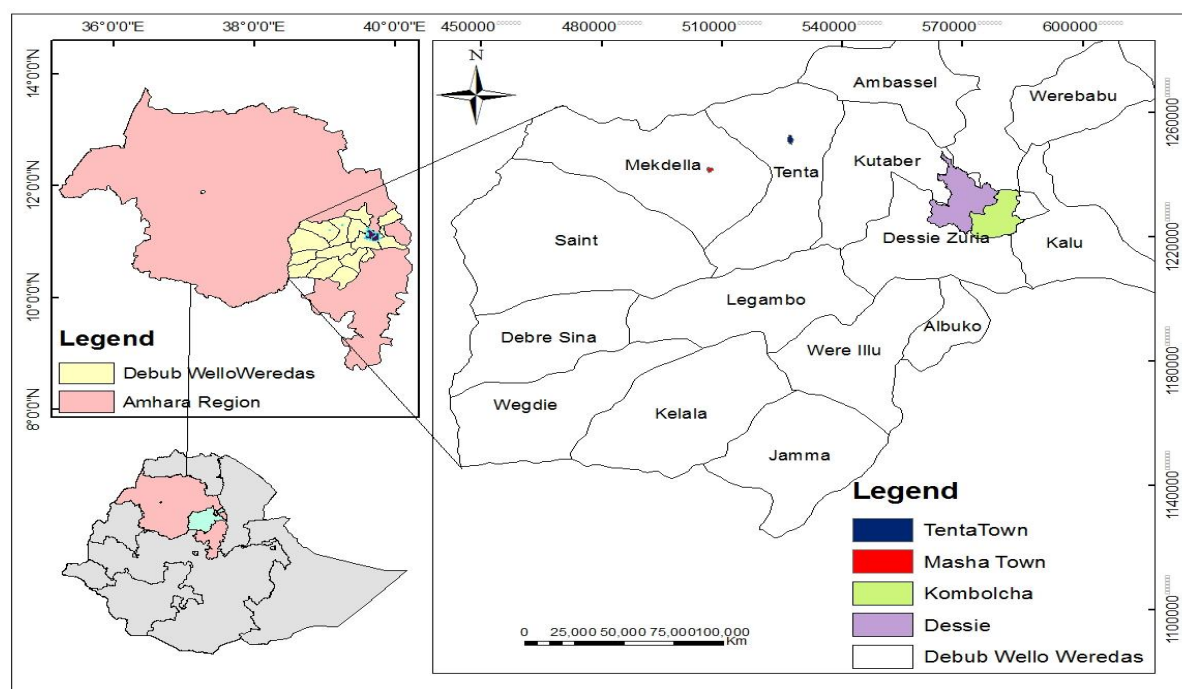


Figure 1. Location of South Wollo Zone and Study Area in Amhara Regional State

The research design of this study was descriptive survey method. The zone consists thirty six (36) secondary schools (9-10 grade level). Among those four of them (11.12%) were selected using purposeful sampling techniques. Because the schools are not evenly distributed. Therefore, the researcher included the schools which have urban and rural features in the zone.

Regarding their sample size, all geography and biology teachers and school directors were considered for this study. Data were collected by using professionally-validated Likert-type scale questionnaire and semi-structured interviews with secondary school teachers and directors. In addition, qualitative data was also obtained through observation checklist in the actual class room teaching -learning process to see the level of implementation of environmental education in the factual phenomena that occur and also reviewed existing documents, such as research data and other secondary sources. Finally, the data collected through different instruments were analyzed and described throughout the paper.

Results and Discussion:-

As the goal of environmental education is to prepare the worlds citizens to be capable and willing to implement behaviors' which improve and/or maintain environmental health and quality, environmental education plays an important role in providing information about the environment (Fekadu, 2005). To this end, the teachers' attitude is a very strong factor militating against the actualization of the goals of environmental education. Teachers' needed to have more knowledge, skills and change in attitude for them to be able to deliver the goals and objective of environmental education for sustainable living of man in the society. Therefore, assessing their attitude is vital.

Table 1:- Teachers' Attitudes towards Environmental Education

Items	Respondents Having									
	Favorable attitudes				Neutral attitudes		Unfavorable attitudes			
	5	4	total	%	3	%	2	1	total	%
*E1	23	12	35	74.46	5	10.63	4	3	7	14.89
E2	6	5	11	23.40	4	8.51	17	15	32	68.08
E3	16	18	34	72.34	5	10.63	4	4	8	17.02
E4	16	17	33	70.21	7	14.89	4	3	7	14.89
E5	22	14	36	76.59	4	8.51	4	3	7	14.89
E6	6	6	12	25.53	4	8.51	15	16	31	65.95

Source: field survey, 2011

The items are coded as numbered in the questionnaire and see appendix.

As observed in table 1, there were inconsistencies regarding respondents' view about the importance of environmental education in solving environmental problems. On the one hand, 76.59% of the teachers' believed that, environmental education is essential for our environmental problems. Whereas, only 14.89% of them did not agreed with this view. On the other hand, 25.53% of the teachers' did not think that environmental problems can be solved through environmental education.

Moreover, 70.21% of the teachers' believed that, to address societal problems environmental education should be the key component of the teaching-learning process. On the contrary, 23.40% of the respondents' believed that environmental education has little importance since environmental problems are very clear and familiar. Whereas, 68.89% of them did not agreed with this view.

Table 2:- Teachers' Attitudes towards Teaching- Learning Processes

Items	Respondents Having									
	Favorable attitudes				Neutral attitudes		Unfavorable attitudes			
	5	4	total	%	3	%	2	1	total	%
*T7	10	17	27	57.44	5	10.63	9	6	15	31.91
T8	4	11	15	31.91	6	12.76	19	7	26	55.31
T9	9	20	29	61.70	7	14.89	8	3	11	23.40
T10	9	17	26	55.31	6	12.76	10	5	15	31.91
T11	6	17	23	48.93	7	14.89	13	4	17	36.17
T12	6	10	16	34.04	6	12.76	16	9	25	53.19
T13	4	9	13	27.65	6	12.76	12	16	28	59.57
T14	10	22	32	68.08	4	8.51	8	3	11	23.40
T15	7	15	22	46.80	7	14.89	14	4	18	38.29
T16	15	18	33	70.21	6	12.76	4	4	8	17.02
T17	20	13	33	70.21	6	12.76	4	4	8	17.02
T18	21	15	36	76.59	5	10.63	3	3	6	12.76
T19	10	21	31	65.95	8	17.08	4	4	8	17.02
T20	9	24	33	70.21	6	12.76	5	3	8	17.02
T21	12	24	36	76.59	5	10.63	3	3	6	12.76

Source: field survey, 2011

The items are coded as numbered in the questionnaire and see appendix

Table 2 depicts that, like their attitudes towards environmental education teachers' did not have clear views about the teaching learning processes. This includes the source of knowledge in the classroom, what students' are taught and teaching methods employed typically using the real environment and problem solving approach. In this regard, one-third (31.91%) of them believed that, a teacher should be the source of knowledge in the classroom. In the same manner one-third of the teachers' (31.91%) also believed that, students' should be recipients of knowledge from their teachers'.

Moreover, 46.80% of the teachers' believed that, teaching students' facts in their textbooks enable them to solve their local environmental problems. And 59.57% of them agreed that, students' should be taught to score good grades, not how to solve local environmental problems. On the contrary, 48.93% of them believed that, students' should not be taught facts in their textbooks. This showed that, the teachers' did not have clear view about the source of knowledge (teachers, textbooks, students, the real environment), what they should be thought (facts, problems or in combination) and the method of teaching typically problem solving approach.

Besides this, as the school directors' response to semi- structured interview question items revealed that, there are enough places and facilities in the schools compound such as; water pipe, garden area, equipment etc. These gave opportunities for the students' to relate theory learned in the classroom in to practical activities out of the class with in their schools compound. But, having these facilities in the schools teachers' did not properly utilized to support the contents of their course that demands practical activities out of the classroom.

While, learning about the environment (i.e. teaching students' out of the classroom), students' are exposed to a wide variety of living and non -living components of their everyday lives. This gives the opportunity for students' to disc

ss with their friends the value of the components they have observed and how these affect each other in the environment. So, teachers' should utilize different teaching methods that enabled students' to be active participants' in the teaching- learning process.

Moreover, although these four schools have different environmental protection clubs and the students' were participated in planting flowers in front of their classrooms, office of directors and staffrooms, they did not go beyond these activities. It is surprising to see only in *Hote* secondary school there was *Yegofa* environmental protection club, which is organized by the school director and teachers from biology department with its own office, and large number of members of students'. The club received two Cups as a reward from *Institute for Sustainable Development*, its main office was at Addis Ababa, and different materials used for planting seeds and trees, certificates etc from *Millennium Secretariat of Dessie Town*. Besides this, the club did many activities such as; planted 453 indigenous trees, sixty-five different traditional medical plants are planted in the school compound.

Regarding, the needs of training 70.21% of the teachers' believed that the training of teachers' to deal with environment is one of the most urgent needs in teaching. Besides this, the *Woreda* and *Zone* supervisors and curriculum experts did not give training and workshops focusing on the dynamic aspects of environmental issues. Which should have made the teaching- learning process relevant to the lives of the students' and the society in these four schools as the schools directors replied.

It is known that an organized effort was needed to teach different environmental issues for students' in order to live sustainable way of life. To this end teachers' contribute a lot in teaching different environmental issues for students' to protect and utilized their local environment without deteriorating the ecosystems.

The Attitudes of Teachers' towards their Roles in their Schools and nearby Community

The aim of environmental education is re-directing the relationship of human beings with their environment towards a sustainable mode of existence. Hence, the education provided in schools should make an effective contribution to solve environmental problems (Kwan, 2004).

Table 3:- Teachers' Attitudes towards Their Roles in Their Schools and Nearby Community

Items	Respondents Having									
	Favorable attitudes				Neutral attitudes		Unfavorable attitudes			
	5	4	total	%	3	%	2	1	total	%
*R22	20	14	34	72.34	5	10.63	4	4	8	17.02
R23	17	15	32	68.08	8	17.02	4	3	7	14.89
R24	8	9	17	36.17	6	12.76	13	11	24	51.06
R25	8	16	24	51.06	8	17.02	10	5	15	31.91
R26	10	14	24	51.06	4	8.51	13	6	19	40.42
R27	11	23	34	72.34	3	6.38	6	4	10	21.27
R28	14	19	33	70.21	5	10.63	5	4	9	19.14
R29	18	15	33	70.21	6	12.76	5	3	8	17.02
R30	17	20	37	78.72	3	6.38	4	3	7	14.89
R31	22	15	37	78.72	3	6.38	3	4	7	14.89
R32	17	18	35	74.46	4	8.51	5	3	8	17.02

Source: field survey, 2011

The items are coded as numbered in the questionnaire and see appendixes.

As observed in table 3, 72.34% and 68.08% of the teachers' responded that, teachers' like development agents, are responsible for fighting environmental ignorance in the community. Teachers' duty is not only teaching students' but, also the school community and nearby community at large respectively.

On the contrary, more than half of the teachers' (51.06%) believed that, their contribution to solve the existing environmental problems in Ethiopia is very little. Moreover, 21.27% of them believed that, it is not the responsibility of the teachers' to show concern and care for to the environment in a practical way.

In this regard, the teachers' should have the right attitudes to their roles as a teacher, as a member of the school and the community. In countries, like Ethiopia where most of the people are illiterate, having little access to modern communication system, the teachers' are expected to teach and disseminate environmental education through their students'.

However, only 51.06% of the teachers' believed that, their role is facilitating students' learning not imparting knowledge. Whereas, 31.91% of them have the view that, their role is imparting knowledge to their students'. However, according to Archie, (2001), being effective teachers' does not mean imparting knowledge, knowledge that is developed by educators such as; curriculum experts, subjects specialists etc. Rather, effective teacher needs to motivate, facilitate and lead students' active learning.

As revealed in responses' of the schools' director, lack of relationship between the schools and the community is one of the major obstacles to solve their local environmental problems such as, soil erosion, land degradation etc. Whereas, the community tried to support the schools in terms of money, labor and so forth. Moreover, the practice of using invited guests as a source of environmental information was found to be low. This may emanate from the less attempt made by the school community to bring the school and the surrounding community together.

Above all, the benefits of environmental- based education to students', teachers' and communities are to produce; high performance lifelong learners, effective future workers and participant peoples who care about the environment, creatures and places around them (NAAEE, 2001).

Summary and Conclusion:-

Teachers' of geography and biology subjects of grade nine and ten also participated. The school directors from each school participated as key informants. Then the data collected from these participants' are analyzed qualitatively. Since, teachers' are the key agents for implementing environmental education in their respective subjects, their attitudes towards environmental education, the teaching and learning process and the roles that they can play in the school and the community at large are indispensable. The result of the assessment shows that, teachers' attitudes towards environmental education are found favorable. Whereas, their attitudes to the source of knowledge, how students' should be thought, and their roles in the school and in the community are not encouraging. More than half of the teachers' (57.44%) believed that, they are source of knowledge. However, the source of knowledge are not only classroom teachers', but also the interaction among students', teachers' and the real environment that both students' and teachers' can get first hand experiences, learning by doing and develop skills and appreciate them to participate actively in the teaching-learning process.

Further, 48.43% of them believe that, students' should be taught facts in their textbooks and 46.80% of them agreed that, this make students' problem solver. However, the present philosophy of environmental education and the actual practices in different countries of the world showed that, teachers' are not only expected to teach facts written in the text book, but also they have to integrate local, national and global environmental problems and issues from the environment or from secondary sources. So, those students' can debate, discuss, argue and come up with their own solutions. To accomplish this effectively, teachers' needed to be trained to implement environmental education in their respective subjects. However, the result of interview question from schools director showed that, teachers' are not participating in training and workshops focusing on the dynamic aspects of environmental issues to integrate environmental education in their respective subjects.

Recommendations:-

Finally ,Teachers' should improve their roles in the school and nearby community, by sharing their interest and concern for the environment through organizing conservation clubs which could serve as a model for the school and surrounding community. So, teachers' can reach to the community through their students' the environmental message can reach out of their families at home this will increase awareness and will influence attitude and activities towards their environment. Teachers' should break the tradition or the way they were taught. which are highly teacher dominated and focuses on transmitting facts written in the text books, they should utilize progressive methods like; problem solving, field visit including practical activities and so forth. This allows students' to address real problems in their locality. Students' as younger stages of learning need to be exposed to the experiences of environmental education, as they have keen attention to the environment which is a potential to develop their knowledge related to environmental concerns.

Appendix- 1:-

NO	Items						
		Strongly agree	agree	undecided	disagree	strongly disagree	
1	In my view, environmental education enables teachers to make their teaching relevant to the lives of their students and the society.						
2	Environmental education has little importance since environmental problems are very clear and familiar.						
3	I believe that environmental education is the main important part of quality education at different levels.						
4	If schools are expected to address societal problems environmental education should be the key component of the teaching-learning process.						
5	I believe that environmental education is essential for our environmental problems.						
6	I don't think that environmental problems can be solved through teaching environmental education.						
	B. about the teaching-learning process						
7	I believe that a teacher should be the source of knowledge in the classroom.						
8	Teaching my student in the immediate environment is time consuming.						
9	I feel secure when I teach my students in and out of the classrooms.						
10	I don't think that students should be recipients of knowledge from their teachers.						
11	I think students should be taught facts in their text book.						
12	I don't believe that students, being they are too young, should be taught how to identify problems prioritized and solve them.						
13	In my opinion, students should be taught to score good grade, not how to solve local environmental problems.						
14	I enjoy using a variety of teaching methods in a given period.						
15	I believe that teaching my students facts in their text book enable them to solve their local environmental problems.						
16	The first lesson a child need to learn is to know his local environment.						
17	The training of teachers to deal with environment is one of the most urgent needs in teaching.						
18	Teachers are expected to integrate environmental concepts in their teaching-learning processes.						
19	Attending lectures by inviting guests.e.g guests from health sector, agricultural office etc.						
20	Developing lesson and unit plan in my subject, which include environmental concepts.						
21	Arrange group discussion in the classroom on issues such as; population growth, poverty, management of natural resource etc.						
	C. about their roles in the schools and near by community						
22	As an individual, teachers like development agents, are responsible for fighting environmental ignorance in the community.						
23	As a member of the community, my duty is not only teaching my students but, also the school community and near by community.						
24	I believe that my contribution to solve the existing environmental problems in Ethiopia is very little.						
25	As a teacher, my role is imparting knowledge to my students.						
26	I believe that my role is facilitating my students learning, not imparting knowledge.						

27	I believe that it is the responsibilities of the teachers' to show concern and care for the environment in a practical way.					
28	Responsible citizenship can be developed through environmental education.					
29	Environmental education is essential in the school, if the on-going destruction of the planet is to be stopped.					
30	Collecting, recording and reporting information on specific environmental issues; such as, history, believe and methods of the local community to conserve their environment from degradation.					
31	Mobilizing local community and individuals effort to preserve forest areas, soil erosion, wild life, the health of river, etc.					
32	Using the school mini-mass media and audio-visual aids to disseminate environmental issues in the school.					

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