



Community Perceptions on the Effectiveness of Environmental Education Initiatives in Tanzania

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ABSTRACT

Studies about the environment have been carried out for many years but environmental wellbeing has continued to be a global challenge. This study aimed at assessing the perception of the community towards the effectiveness of environmental education initiatives in Tanzania. The Objectives of this study were to: assess community perception on the Organization, relevance and outcomes of EE; determine the relationship between demographic factors and community perceptions on the effectiveness of EE in combating deforestation. The study employed behaviourism theory for capturing people's perception. Cross-sectional research design was employed together with quantitative approach. Systematic random sampling was used to select a sample of 120 respondents. Structured attitude test likert scale questionnaire was employed during data collection process while ANOVA model was used for data analysis. Findings reveal that, the general community perception towards the effectiveness of EE initiatives in Morogoro was negative. Demographic variables such as income level, education, household size as well as location of the community have significant relationship with community perception on the effectiveness of EE initiatives in Morogoro. It was recommended that, intervention should be made to change the community's negative perception to positive.

1. INTRODUCTION

The world is implementing a number of mitigating strategies to reverse the worsening situation of the environment (Anderson et al., 2006; Poffenberger, 2009; Axin et al., 2002; Haig-Brown, 1995). Education has been mentioned as one of the tools for addressing environmental degradation in terrestrial, air and aquatic environment hence the need for EE. In the Tanzanian context, people's perceptions and attitudes towards the environment have been linked with how people value and conserve their environment (Kimaryo, 2011). Attitudes of different communities have been emphasized by different scholars such as (Thathong, 2005; Capra, 1996) as a contributing factor towards peoples understanding of the value of EE in their local communities.

Therefore, the need for environmental education has been emphasized through a number of inter-governmental forums and documents like The UN Conference on Human and Environment (1972), The Belgrade Charter (UNESCO,1996). The Tbilisi Declaration (UNESCO, 1978). In these conferences, it was recommended that, environmental education and other mitigation factors have to be integrated into formal and informal forms of education, that is; in schools, colleges as well as in communities. EE attempts to develop responsible citizenship towards all life forms on earth and evolves a sense of urgency for the acquirement of needed actions which make ecological problems easily solved.

In response to this move, at global level, several environmental programmes or initiatives have been established. Some of these include the United Nations Environment Program (UNEP),

which together with UNESCO founded UNESCO/UNEP, the International Environmental Education Programme (IEEP) which was founded in 1975 and the World Conservation Strategy which was launched in 1980 (Mowjee et al.,2010). These programmes aimed at helping to solve environmental problems although they have been facing different challenges including that of being perceived differently by different education stakeholders. With all these world efforts and initiatives to protect all components of the global environment, it is being reported that the conditions of the environment especially depletion of forests is on the increase, accompanied with declining global food production (FAO, 2010; SADC, 1999; Cohen et.al., 2007).

In the African context, for example, in 1993, Southern African Development Cooperation (SADC) and Environment and Land Management Sector (ELMS) initiated a programme to support environmental education processes in the southern African region with the aim of halting the problem of environmental degradation. The Royal Danish Ministry of Foreign Affairs (DANIDA), United States Agency for International Development (USAID) and International Union for Conservation of Nature (IUCN), has been providing financial support for different environmental initiatives with the view of combating environmental problems in the region (Palmer, 1992). The Regional Environmental Education Programme (EE) of SADC of 1999 and the Environmental Education Association of Southern Africa (EESA) has also been established for the same purpose of environmental conservation.

In Tanzania, environmental education has been implemented through sector-oriented programmes including agriculture, forestry and community development outreach or extension programmes (URT, 2005). Other EE initiatives began in the early 1990s through the programmes launched by NEMC, and by the then Ministry of Education and Culture (MoEC), Ministry of Natural Resources and Tourism (MNRT), World Wide Fund for Nature (WWF), and Wildlife Conservation Society of Tanzania (WCST). More specifically, EE initiatives which have been conducting EE activities in the Uluguru Mountains are: NGOs such as MECA Group, CARE international, WCST, and UMADEP. Government organizations are; Morogoro Municipality and Morogoro Rural Environmental Conservation and education departments, Uluguru Mountains Endowment Fund (UMEF), TAFORI, and the Eastern Arc Mountains Conservation Project (EAMCP) of Morogoro.

A study by Osak (1991) on factors influencing the use of the environment in science teaching found that, there was poor perception of the term EE, teachers had not attended training on EE and also there were no programmes of integrating EE in the biology curriculum; Kimaryo (1995) conducted a survey study on community participation in environmental management, findings showed that, there was little participation of women in managing the environment; Simelane (2006) studied community response to environmental education initiatives and found that, there was a support to EE in terms of fund by the outsiders, leadership participation as well as average community response to EE.

Again, Kimaryo (2011), studied on integration of EE in primary school curriculum and found that, EE was poorly integrated in the school curriculum and teaching and this was an indicator of poor perception on EE; Addai (2007) conducted a study on the situation of EE in secondary schools and revealed that there was little realization of EE in the community. As revealed from these studies it is clear that EE has been more emphasized at the community level and have not gone beyond to investigate the community perception on EE in relation to its demographic factors. Furthermore, there is evidence that, EE researches have been less linked to forest conservation.

Since it is important that environmental education should be delivered to all the people in order to develop an informed citizenry, there is need to expose communities to EE and not only to learners in schools. Therefore this study focused on community members and investigated how they perceived environmental education programs in their areas and how it could help them conserve fast disappearing forests.

Despite all these environmental education initiatives established to combat environmental problems, evidence shows that, there is continued deterioration of environmental resources especially forests as a result of deforestation (SADC&IUCN, 1999). It is also not clear on how communities based on their demographic factors such as education level, income level, age; household size and location have perceived these environmental education programmes that have been taking place in the Uluguru Mountains. Therefore this study was intended to assess the linkages of community demographic factors on the effectiveness of EE initiatives in combating deforestation on the Uluguru Mountains.

1.1. Behaviourism Theory

Methods informed by the behaviourist learning theory, as explained by Sterling (2004), aim at correcting the behaviour of people perceived to be lacking in knowledge by giving them the appropriate knowledge decided upon by experts. He elaborates that, according to this paradigm, it is assumed that people need to be made aware of the environment through education, so that they understand more about it and acquire skills that will enable them to behave positively towards it. Positive attitude towards the environment is rewarded and reinforced to ensure that positive behaviour is maintained.

1.2. Problem Statement

The importance of considering the perceptions of the physical environment held by different social groups has been emphasized in relation to understanding population responses to environmental conservation. Understanding Community perception on the effectiveness of EE is an effective tool for ensuring sustainable environmental management. Quite a good number of scholars such as (Kimaryo, 2011; O-sak, 1991; Palmer, 1992) have written on environmental education, but little has been addressed on studies about community perceptions on the effectiveness of EE initiatives in Uluguru Mountains, in Morogoro. Furthermore, a gap exists on studies on demographic factors and community perceptions on the effectiveness of EE in combating deforestation. On this basis therefore, the objectives of this study were to: assess community perception on the organization, relevance and outcomes of EE; determine the relationship between demographic factors and community perceptions on the effectiveness of EE in combating deforestation.

2. METHODOLOGY

The Design considered appropriate for this study was cross-sectional survey design. The study employed quantitative approach with the purpose of establishing numerical facts about the relationship between demographic factors and community perceptions on the effectiveness EE programs. The study was

carried out in Morogoro Municipality whereby four wards were involved. Systematic random sampling technique was employed to draw a sample of 120 respondents (i.e.

used throughout the statistical analysis. That is a p-value less than 5% indicates significant effect of the covariate.

3. RESULTS OF THE STUDY

For the purpose of logical order the findings of the present study are presented based on the research objectives as follows:

3.1. Community Perception on the Organization, Relevance and Outcomes of EE

Results for these research objectives are presented in appendix IV, V and VI. Appendix IV the average mean for the general responses to be 2.2 which again fall under the strongly disagree position. On the other hand, it is only 2 responses which fall under the agree category. Results from appendix V indicate that, out of 8 statements which were responded to, majority of them(7 statements) were reported under the “not sure status” while only one statement fall and the agree category with average mean of 2.9. The average mean in appendix VI was found to be 2.3. The average of the three means is 2.4 which indicate negative community perceptions on the way EE is organized, its relevance and outcomes. From the researchers’ point of view, it is concluded that the negative perception on the way EE is organized, its relevance and outcomes contributes to poor environmental protection and care.

3.2. Relationship between Demographic Factors and Community Perceptions on the Effectiveness of EE

The model with the interaction term between covariates was fitted and all the interaction terms were found to be statistically insignificant. As a result of this the main effects model was opted for to ensure model parsimony. It was found that type three sum of the square for the final ANOVA model presented that, education level, household size, ward and income level had significant effect on perceptions of the community on the effectiveness of EE programmes in (Appendix I). It was also found that, Type III sum of square of the fitted ANOVA model had R² value of 0.81, this indicates that the amount of variability in the response variable (perception) explained by the predictors in the model is about 81%. The F-value obtained is 3.72 and the P-value is <0.0001 which implies that at least one of the coefficients is different from zero (Appendix II).

Therefore, appendix II implies that, the estimated mean perception for those with education level (1, 2, 3, 4, 5, 6, 7 and 8) is lower as compared to those with education_level₉. However, the difference in perception on the effectiveness of EE is not significant for people with education_level₁ (p=0.0806), education_level₄ (p=0.134), education_level₆ (p=0.4526) education_level₇ (p=0.746). Therefore it can be concluded that people with higher education level perceives the effectiveness of EE more positively than those with low level of

$$K = N/Sn$$

Whereas

K= Sample intervals

N = the total number of the wider population

Sn = the supposed sample number required

Using the above formula, the total number of households for the four selected villages was 1210; divide by the number of sample households (120) required. In that case 1210/120=10. Therefore, every 10th house was selected to form the sample. About thirty (30) households were sampled from each village to make an average of 12 respondents).

Respondents were drawn from the community, and structured questionnaire was used during data collection. Inferential statistics was used in the analysis of quantitative data; a Factor Effect ANOVA Model was employed. A linear relationship between the response (perception) and various covariates was examined using ANOVA model. The model assumed the response variable and the error terms to be normally distributed linearly between the response and the covariates, homoscedasticity and independence of the error terms. The full model with main effects and all the possible interaction terms was fitted in order to determine the significance of including the interaction terms in the model. The final model fitted was:

$$Y_{ijklp} = \mu + \alpha_i + \beta_j + \lambda_k + \tau_l + \varepsilon_{ijklp}$$

Where

Y_{ijklp} is response variable(perception)

α_i is effect of education level

β_j is household_size effect

λ_k is ward effect(location)

τ_l is effect of income level

ε_{ijklp} is error term

Descriptive statistics was performed where by frequencies, percentages and mean were determined from data collected by likert scale. The mean averages were computed so as to determine the direction of the community perception (see appendix IV, V&VI). The statistical packages (Statistical Analysis System (SAS) version 9.3) and SPSS (version 16) were used to analyze the data. A 5% level of significance was

education probably due to the fact that they have been exposed to various fields of knowledge and experience about the environment, therefore gives more value to the wellbeing of the environment.

Likewise, the effect of household size was significant even though there was no significant difference in mean perception between those from households_size₁ category as compared to households_size₃ category ($p=0.198$). This implies that, medium households have more positive perception on the effectiveness of EE as compared to smaller and larger households. This is probably due to the fact that, small households size may ignore environmental conservation activities because of low dependency on forest resources for their livelihoods. On the other hand, large households, even if they may be influenced to participate in conservation programmes, they may not do so due to their dependency on the forest as the livelihood alternative.

Results indicate that, there was significant difference in mean perceptions between Bigwa and Misongeni ($p=0.0305$), Bigwa and Tangeni ($p=0.0113$) and Misongeni and Tangeni ($p<0.0001$) (appendix III). In regard to the location the reference group in ward was Choma and the parameter estimate for Bigwa, Misongeni and Tangeni indicate that they perceive the effectiveness of EE initiatives more positively. This implies that the mean perceptions of the people living in the three different locations are more positive as compared to those in Choma. In comparison, it was found that Tangeni had more positive mean perception followed by Bigwa and Misongeni respectively. This may be caused by the frequency and intensity of EE provision that have been taking place in these areas but also with the differences in their attitudes.

4. DISCUSSION OF THE RESULTS

4.1. Community Perception on the Organization, Relevance and Outcomes of EE

Results from appendix IV, V and VI indicate that, the community had negative perception on the way EE is organized and implemented. These results imply that, EE have not been effective due to how it has been organized and implemented in the Uluguru Mountains. Due to this fact, it can be implied again that, poor organization and implementation of EE programmes might contribute to poor environmental conservation. Also, ineffectiveness of EE is found to be due to the fact that it has not brought change to their community in terms of environmental improvement. These findings are in line with Mitinje et al., (2008) who pointed out that, poor reception of EE is contributed by poor organization and implementation of EE programmes.

4.2. Demographic Factors and Community Perceptions on the Effectiveness of Environmental Education

Formal education was found to have a contribution on the way people perceives the effectiveness of EE programmes in combating environmental problems such as deforestation. The findings conform to those by Sterling (2004) who asserts that education aims at correcting the behaviour of people perceived to be lacking in knowledge by giving them the appropriate knowledge decided upon by experts. Therefore, positive attitude towards the environment is rewarded and reinforced to ensure that positive behaviour is maintained.

In relation to this, Capra (1996) mentions that change in perceptions, thinking and values is essential in achieving a more sustainable way of living. Therefore, values education is at the core of EE, as it creates sensitivity and a strong personal connection to the environment. However, Thathong (2005) found contrary findings that personal values transformation is not enough in facilitating change in EE in the society. Also, SADC and IUCN (1999) reports that, despite the fact that environmental education has been employed in many places to fight environmental degradation; the condition of the environment, especially forests has continued to deteriorate.

Again, these findings are supported by other studies (Mowjee et al., 2010; Psacharopoulos, 2009) who suggested that, without formal education, the potential of individuals and the nation as a whole to overcome socio-ecological (environmental) and economic problems will be severely restricted. Therefore lack of environmental knowledge, awareness, collaboration; money and necessary equipment are the main drivers in negative perception of the community towards EE initiatives.

Furthermore, household size had significant effects on community perception on the effectiveness of EE initiatives in mitigating environmental problems (see appendix II). Therefore medium households perceive the effectiveness of EE initiatives more positively as compared to smaller and larger households. Similar results were discussed by Biddlecom et al., (2005) that, environmental degradation is positively associated with large family size preference. He asserts that, dependence on public land for natural resources and resource scarcity has an effect on forest conservation behaviours. A study by Izazola et al., (1998) also reflects these findings by arguing that social demography in produces some useful concepts which attempt to synthesize the varying roles played by individual perceptions to shape population structure and responses to changing environmental conditions.

This implies that increasing number of people in the household has a negative effect on forest conservation. Studies by Gregory (2009) and Tuiràn (1993) supports these findings by arguing that, concepts such as social reproduction, household survival

strategies and life course have influence on the ways in which individual perceptions and intentions interact with household characteristics (size, age structure and income level), as well as community and societal level factors (e.g. economic opportunities and socioeconomic class).

Findings reveal that, income level had a significant effect on the perception of the community towards the effectiveness of environmental education initiatives in combating environmental degradation. The middle income level in the community showed a more positive perception on the effectiveness of environmental education in mitigating deforestation. But there was a difference in mean perception between households of different income levels. Similarly Izazola et al., (1998) confirms that middle-income group reflected a wide perception of the EE which encompassed physical conditions such as air pollution as well as less tangible factors relating to the overall “quality of life” e.g. traffic, noise, distance to place of work, aggressiveness of city residents. Findings by Stevenson (2007) also concurs with these findings by stating that, among the lower-income households, environmental perceptions focuses more narrowly on those aspects most linked with daily existence, such as land quality, People’s perceptions to forest degradation and family size.

In regard to the location of respondents (appendix II), the parameter estimates for Bigwa ($P=0.0002$), Misongeni ($P=0.0239$) and Tangeni ($P=0.0001$) indicate that, there was a strong association between location and community perception on the effectiveness of EE initiatives. This implies that the mean perceptions of the people living in these three wards are larger as compared to those in Choma. In comparison, it was found that Tangeni had the highest level of mean perception on the effectiveness of EE initiatives in combating deforestation followed by Bigwa and Misongeni respectively. Again, when comparing mean perceptions between wards, findings prove that, there was significant difference in mean perceptions between Bigwa and Misongeni ($p=0.0305$), Bigwa and Tangeni ($p=0.0113$) and Misongeni and Tangeni ($p<0.0001$).

The findings are similar to those by (Ferreira, 2004; Ostrom, 1999; Robertson & Lawes, 2005;) which points out that communities living within location of the forest areas are critical to the success of conservation efforts as such, the attitudes of local residents and the level of local perception. They are also similar to studies by (Stevens, 1997; Brandon et al., 1998) who asserted that studies have attempted to analyse the factors that determine the attitudes of local people toward a given forest conservation programme, and these studies typically have correlated perceptions, attitudes, conservation, and the purpose and benefits of the participatory approach with a variety of socio-demographic factors.

The findings are also in line with those of (Infield, 1988; Newmark et al., 1993; Ormsby, 1996; Mehta & Kellert, 1998;

and Gillingham & Lee, 1999) who reported that communities which exist in different locations perceive environmental conservation differently due to their differences in socioeconomic activities, culture and income level. These findings concurs with behaviourism learning theory, as explained by Sterling (2004), that aim at correcting the behaviour of people perceived to be lacking in knowledge by giving them the appropriate knowledge decided upon by experts. He elaborates that according to this paradigm, it is assumed that people need to be made aware of the environment through education, so that they understand more about it and acquire skills that will enable them to behave positively towards it. Positive attitude towards the environment is rewarded and reinforced to ensure that positive behaviour is and should be maintained.

Generally the findings imply that, the community of Uluguru Mountains have been perceiving environmental education programmes more negatively, this is why environmental participation in EE programmes has been poor. This situation has led to continued forest degradation in this area of Uluguru Mountains. It has also been clear that, demographic factors can influence how community’s perceives the effectiveness of EE. Therefore if EE will be implemented in consideration of demographic factors such as age, income level, educational level and household size, it will be possible to change people’s attitudes and perceptions towards EE programmes in Morogoro.

5. CONCLUSION AND RECOMMENDATIONS

Majority of the community members have negative perception on the way EE is organized, implemented as well as on its outcomes. Also, Demographic factors have been found to have a significant relationship with the way the community perceives the effectiveness of EE initiatives. People of different education level, economic status, locations and household size perceived the effectiveness of EE more differently. There is a strong link between behaviourist theory and practice of community especially on the way they perceive EE. Therefore it is recommended that, during the implementation of EE programmes, environmental educators should consider community’s demographic factors in order to make it more effective. Further research should focus on the mixed approach and on wider scope of Tanzania.

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LIST OF APPENDICES

Appendix I

Type III sum of square of the fitted ANOVA model

Source	DF	Type III SS	Mean Square	F -value	P-value
Education_level	8	0.9544	0.1193***	3.9	0.0007
House_size	2	0.3397	0.1698**	5.55	0.0058
Ward(location)	3	1.3108	0.4369***	14.27	<0.0001
Income	4	0.4799	0.1199**	3.92	0.0062

Appendix II

Parameter estimates and standard errors of ANOVA model for Perception on the effectiveness of EE programmes in combating deforestation

Parameter	Estimate	Standard Error	P-value
Intercept	2.192755098	0.07879527***	<0.0001
Education_level 1	-0.249454888	0.14073299*	0.0806
Education_level 2	-0.522887566	0.16243316**	0.0019
Education_level 3	-0.261982149	0.1367036*	0.0593
Education_level 4	-0.145844753	0.09621543	0.134
Education_level 5	-0.333648236	0.11708518**	0.0057
Education_level 6	-0.077012059	0.10197396	0.4526
Education_level 7	0.035040188	0.10779768	0.7461
Education_level 8	-0.448460725	0.12225683***	0.0005
House_size 1	0.084156261	0.06477032	0.198
House_size 2	0.178457672	0.05663571***	0.0024
Bigwa	0.27904579	0.07138563***	0.0002
Misongeni	0.161662363	0.07001135*	0.0239
Tangeni	0.437534248	0.07263978***	<0.0001
Income 1	0.122482414	0.08624835	0.16
Income 2	-0.020866387	0.07885503	0.7921
Income 3	-0.104308398	0.09622542	0.282
Income 4	-0.187554028	0.08988907**	0.0405

Key:House hold size 1(small size), 2(medium size), 3(large size).

Appendix III

Parameter estimates, and standard errors, of the contrast between Bigwa, Misongeni and Tangeni, for Perception on the effectiveness of EE programmes in combating deforestation

Parameter	Estimate	Standard Error	P-value
Bigwa vs Misongeni	0.13002733	0.05885024	0.0305
Bigwa vs Tangeni	-0.15287717	0.05871523	0.0113
Misongeni vs Tangeni	-0.2829045	0.05819447	<0.0001

Appendix IV

Community Perception on Organization and Implementation of EE (N=121)

SN	Item/Parameter	5.Strongly agree		4.Agree		3.Undecided		2.Disagree		Strongly 1.disagree		Mean
		N	%	N	%	N	%	N	%	N	%	
1	EE implemented in our community is well organized	2	1.7	13	11	25	21.2	41	34.7	37	31.4	2.34
2	Activities not related to environmental conservation involved during learning process	2	1.7	16	13.7	34	29.1	33	27.3	32	27.4	2.12
3	Teaching and learning resources for EE are always available	0	0	20	17.1	19	16.2	33	28.2	45	38.5	2.28
4	EE Educators seem to be of high morale for their task	3	2.5	19	16.1	29	24.6	24	20.3	43	36.4	2.31
5	EE implementation seems to be more effective	3	2.5	19	16.1	22	18.6	42	35.6	32	27.1	2.31
6	I attend EE programmes just because I am required to	11	9.3	7	5.9	25	21.2	40	33.9	35	29.7	3.51
7	Training on EE is important for all members of our community	25	21.2	58	49.2	4	3.4	14	11.9	17	14.4	3.51
8	Government provides fund to support implementation in community	1	0.8	24	20.3	27	22.9	23	19.5	43	36.4	2.30
9	The EE provides opportunities for new knowledge and skills	8	6.8	62	52.5	11	9.3	15	12.7	22	18.6	3.16
10	People often do ask questions related to environment during learning	2	1.7	34	29.1	40	34.2	24	20.5	17	14.5	2.83
11	Successful people don't need EE	9	7.8	21	18.1	10	8.6	41	35.3	35	30.2	2.38
12	The EE training is meaningful in promoting conservation	9	7.8	21	18.1	10	8.6	41	35.3	35	30.2	2.17
TOTAL MEAN												27.71
AVERAGE MEAN												2.3

Key: Lower boundary=1, Upper boundary=5 Mean boundaries:1-1.4 =Strongly disagree, 1.5-2.4 = Disagree, 2.5-3.4 = Not sure, 3.5-4.4= Agree, 4.5-5=strongly agree (Adapted from Mlaki, 2011 and Nemes, 2012).

Appendix V

Community perception on the relevance of EE to Forest Conservation (N=121)

SN	Item/Parameter	5.Strongly agree		4.Agree		3.Undecided		2.Disagree		Strongly .disagree		Mean
		N	%	N	%	N	%	N	%	N	%	
1	EE prepares one to be able to protect forests	4	3.4	56	47.5	21	17.8	15	12.7	22	18.6	3.04
2	EE prepares one to solve day to day environmental problems	16	13.7	61	52.1	16	13.7	11	9.4	13	11.1	3.48
3	EE make communities get involved in planning for forest conservation	3	2.6	31	26.5	33	28.2	30	25.6	20	17.1	2.72
4	EE prepares one to improve income generating activities	15	12.8	58	49.6	12	10.3	12	10.3	20	17.1	3.31
5	EE helps people make better use of their lives	2	1.7	38	32.5	23	19.7	19	16.2	35	29.9	2.60
6	EE is mostly for people with little else to do	6	5.1	33	28.2	39	33.3	22	18.8	17	14.5	2.91
7	EE is highly conducted in our community	3	2.6	33	28.2	25	21.4	30	25.6	26	22.5	2.75
8	EE is an important way to help people cope with changes in their environment	24	20.7	56	48.3	3	2.6	17	14.7	16	13.8	2.63
TOTAL MEAN												23.44
AVERAGE MEAN												2.93

Appendix VI

Community perception on the intended outcomes of the EE for forest conservation (N=121)

SN	Item/Parameter	5.Strongly agree		4.Agree		3.Undecided		2.Disagree		Strongly 1.disagree		Mean
		N	%	N	%	N	%	N	%	N	%	
1	EE prepares one to learn more on content tl him or her	16	13.7	17	14.5	11	9.4	67	57.3	6	5.1	2.74
2	EE prepares one to earn more from his/her	15	12.8	21	19.9	4	3.4	70	59.8	7	6	2.72
3	EE prepares one to effectively participate For forest conservation	41	35.3	30	25.9	12	10.3	29	25	4	3.4	3.65
4	EE prepares one to gain awareness on EE	11	9.4	15	12.8	3	2.6	83	70.9	5	4.3	2.52
5	EE prepares one to have livelihood alternat	10	8.5	17	14.5	5	4.3	78	66.7	7	6	2.53
6	EE prepares one for new career	12	10.3	15	12.9	7	6	76	65.5	6	5.2	2.58
7	EE programmes prepares one to cor environmental stewardship as a citizen	14	12	11	9.4	7	6	66	56.4	19	16.2	2.44
TOTAL MEAN												19.18
AVERAGE MEAN												2.74