

A STUDY ON TEACHERS ATTITUDE TOWARDS INCLUSION OF ENVIRONMENTAL PROTECTION IN CURRICULUM OF SECONDARY SCHOOLS OF URBAN AND RURAL AREAS

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Abstract

In recent years, it is palpable that the rapid advancement of technology, industrialisation, betterment in means of transport and all that we call 'modern' has come with an alarming cost of environmental degradation. Global warming, Ozone layer depletion, increasing population, pollutions and disruptions in weather cycle are but slight indications of ever bigger catastrophes that lay yet ahead. The complacency of mankind towards such issues is only further aggravating the alarming situation. In cognizance of the above scenario, it is imperative that we combat such issues in a way that is effective and sustainable. The failure of countries to achieve SDGs, throws light on the fact that only policies at international and national levels is not the solution to this arduous problem. The proactive efforts by the common citizens across the world are actually the need of hour. However, to ensure that such proactive involvement perpetuates and continues, it is important that the young mass especially the ones in secondary level of education be educated, sensitised and trained about environment protection. Bringing the attitude level changes in secondary school children, thus would definitely go a long way in the substance of the efforts to a better environment and ultimately to a better future. Educating and training of the young mass would make our efforts for a better environment long lasting. For such to happen, the teachers teaching at the secondary level would have to be the torch bearers for bridging this gap between abstract idea and concrete action. Ultimately, teacher's attitude towards inclusion of environmental protection in curriculum of secondary schools of urban and rural areas has to be studied prima facie.

1. INTRODUCTION

In recent years, environmental issues has been centered in the important domain of environmental education by environment specialists and it has been used within a sense of emphatic perspective into the environment in developing environmental sensitivity, awareness and aims about attitudes are very important. Environmental protection and awareness related objectives focusing at helping social groups and individuals to develop an awareness and sensitivity towards the environment, itself and environmental problems.

Environmental Attitudes is always a set of ideas, motives and feeling of concerns for actively involving in protection and conservation of the natural environment. A person's attitude and vision towards his biophysical environment, like his attitude towards his social environment, is connected with his culture, values, ethics and practices, along with his ideas and knowledge, the way he interprets and comprehends environmental matters. Attitudes of environmental protection are rooted in a person's

concept of self and the degree to which an individual perceives him or herself to be an integral part of the natural environment.

As we know that youth has an important role to play in the success of SDGs, it become imperative to know how EE is imparted to them. At secondary school level infusion model is used to impart EE. The important characteristics of Infusion Model have been discussed below:

- i. Ease of Implementation - Requires that more and more teachers be trained; greater coordination of the curriculum necessary requires less time/content in the existing curriculum.
- ii. Teacher Competencies - Requires that all teachers from all disciplines be competent to adapt and use EE materials although perhaps not to the same depth as in single subject approaches.
- iii. Demand on Curriculum load -: May be effectively implemented with minimal demands on existing curricular load.

1.2 TEACHER'S ROLE

Education is considered as a powerful tool in the socio-economic transformation of a society, community and nation. It moulds the eye of knowledge, develops awareness and makes mind logical. Teacher as a agent of social change, play a vital role in shaping the behavior of children to promote desire for environmental awareness.

Apart from usual classroom teaching, teacher should play their significant roles as –

- i. Providing opportunity to students to observe local environment features, problems and phenomena and changes in community.
- ii. Allowing children to classify the idea of living and non-living things on the basis of criteria chosen by children themselves.
- iii. Helping students to draw obvious inferences from their observation and such classification.
- iv. Organizing out of class activities based on learning on immediate environment.

1. STATEMENT OF THE PROBLEM

Being not a single research has been taken by others till yet the researcher has taken keen interest the research entitled as

“A STUDY ON TEACHER’S ATTITUDE TOWARDS INCLUSION OF ENVIRONMENTAL PROTECTION IN CURRICULUM OF SECONDARY SCHOOLS OF URBAN AND RURAL AREAS.”

2. OBJECTIVES OF THE STUDY

- I. To study about teachers attitude towards environmental protection in curriculum for secondary and higher secondary school education.
- II. To compare the attitude of secondary school teachers of rural and urban areas.
- III. To provide remedial measures for the study.

3. HYPOTHESES OF THE STUDY

Hypothesis of the study are as follow:

Ho-1: “There would not have been any statistically significant differences among the mean score of male and female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.

Ho-2: “There would not have been any statistically significant differences among the mean score of rural male and rural female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.

- Ho-3:** “There would not have been any statistically significant differences among the mean score of urban male and urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-4:** “There would not have been any statistically significant differences among the mean score of high attitude rural male and high attitude rural female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-5:** “There would not have been any statistically significant differences among the mean score of medium attitude rural male and medium attitude rural female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-6:** “There would not have been any statistically significant differences among the mean score of low attitude male and low attitude female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-7:** “There would not have been any statistically significant differences among the mean score of high attitude urban male and high attitude urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-8:** “There would not have been any statistically significant differences among the mean score of medium attitude male and medium attitude female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.
- Ho-9:** “There would not have been any statistically significant differences among the mean score of low attitude urban male and low attitude urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection”.

4. LIMITATIONS OF THE STUDY:

For any researcher, it is not easy to conduct an exhausted study. Due to some factors like time, money and personal factors:

- I. The study is delimited to secondary school teachers.
- II. The study is delimited to the areas of Balasore and Bhubaneswar.
- III. The study is delimited to sample of one hundred eighty (180) male and female secondary school teachers.

5. POPULATION OF THE STUDY

Population comprises of all the secondary school teachers (both male and female) of Bhubaneswar and Balasore districts. There are 74 schools in urban areas of Bhubaneswar in which 1357 teachers are present (both male and female). Similarly in Balasore district 517 schools are present out of which 371 schools are present in rural areas. The no of teachers in rural area schools are 8620 (both male and female).

6.1 SAMPLE OF THE STUDY

By the method of simple random sampling, one eighty (180) teachers (male and female) were selected out of which male and female teachers ratio were same i.e. ninety (90) members each respectively. Again the each category was divided in to forty five (45) members of urban and rural areas respectively. For this purpose 4 schools of urban and 4 schools of rural areas were taken by random sampling method.

6.2 TOOLS AND TECHNIQUES TO BE USED FOR STUDY

Self made attitude scale (high, medium, low) for secondary school teacher for the study will be made.

6.3 DATA COLLECTION

Researcher moved from school to school to collect the relevant data for the research.

7. ANALYSIS AND INTERPRETATION OF THE DATA

'*t*-test' statistical method will be adopted for analyzing and interpreting of the data for research.

t –SUMMARY ATTITUDE TOWARDS ENVIRONMENTAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO GENDER

Group	N	Mean	SD	Pooled SD	SE _D or σ_D	df	t/z	t-table value	NS	S	HS
Male	90	5.05	0.81	0.095	0.014	178	5.714	0.01 Level of significance 2.60 0.05 Level of significance 1.97	NS	S	HS
Female	90	4.97	0.81								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMENTAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO RURAL MALE AND FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ_D	df	t/z	t-table value	NS	S	HS
Male	45	5	0.85	0.138	0.028	88	1.785	0.01 Level of significance 2.53 0.05 Level of significance 2.37	NS	S	HS
Female	45	4.95	0.85								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMENTAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO URBAN MALE AND FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ_D	df	t/z	t-table value	NS	S	HS
Female	45	5	0.77	0.13	0.027	88	3.70	0.01 Level of significance 2.53 0.05 Level of significance 2.37	NS	S	HS
Male	45	5.1	0.78								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO HIGH ATTITUDE RURAL MALE AND HIGH ATTITUDE RURAL FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ _D	df	t/z	t-table value	NS	S	HS
Female	15	8.13	0.74	0.236	0.086	28	0	0.01 Level of significance 2.64 0.05 Level of significance 4.20	NS	S	HS
Male	15	8.13	0.83								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO MEDIUM ATTITUDE RURAL MALE AND MEDIUM ATTITUDE RURAL FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ _D	df	t/z	t-table value	NS	S	HS
Female	15	4.93	0.798	0.234	0.085	28	2.352	0.01 Level of significance 2.64 0.05 Level of significance 4.20	NS	S	HS
Male	15	5.13	0.743								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO GENDER

Group	N	Mean	SD	Pooled SD	SE _D or σ _D	df	t/z	t-table value	NS	S	H S
Female	15	1.933	0.798	0.238	0.086	28	1.546	0.01 Level of significance 2.64 0.05 Level of significance 4.20	NS	S	H S
Male	15	2.066	0.798								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO HIGH ATTITUDE URBAN MALE AND HIGH ATTITUDE URBAN FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ _D	df	t/z	t-table value	NS	S	HS
Female	15	7.8	0.774	0.234	0.085	28	0	0.01 Level of significance 2.64 0.05 Level of significance 4.20	NS	S	HS
Male	15	7.8	0.774								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO MEDIUM ATTITUDE URBAN MALE AND MEDIUM ATTITUDE URBAN FEMALE

Group	N	Mean	SD	Pooled SD	SE _D or σ _D	df	t/z	t-table value	NS	S	HS
Female	15	5	0.925	0.257	0.093	28	0	0.01 Level significance 2.64 0.05 Level significance 4.20	NS	S	HS
Male	15	5	0.925								

t –SUMMARY ATTITUDE TOWARDS ENVIRONMETAL PROTECTION TOWARDS CURRICULAR PROVISION IN RELATION TO LOW ATTITUDE URBAN MALE AND LOW ATTITUDE URBAN FEMALE

Group	N	Mean	SD	Pooled δ	SE _D / δ _D	df	t/z	t-table value	NS	S	HS
Female	15	2.066	0.883	0.249	0.09	28	1.48	0.01 Level significance 2.64 0.05 Level significance 4.20	NS	S	HS
Male	15	2.2	0.861								

7.1 MAIN FINDINGS

On the basis of obtained result those for hypothesizes were tested. The tested results were given in tubular form bellow.

SL. NO	NO OF HYPOTHESIS	REJECTED/ ACCEPTED
I.	Ho-1	Rejected
II.	Ho-2	Accepted
III.	Ho-3	Rejected
IV.	Ho-4	Accepted
V.	Ho-5	Accepted
VI.	Ho-6	Accepted
VII.	Ho-7	Accepted
VIII.	Ho-8	Accepted
IX.	Ho-9	Accepted

- I. There was significant difference between male and female teachers of both rural and urban areas regarding their attitude towards inclusion of curricular provision for environment protection i.e. urban male and female teachers showed more attitudes.
- II. There was no significant difference between male and female teachers of rural areas regarding their attitude towards inclusion of curricular provision for environment protection i.e. rural male and female teachers showed same attitude.
- III. There was significant difference between male and female teachers of urban area regarding their attitude towards inclusion of curricular provision for environment protection i.e. urban male and female teachers showed different attitude.
- IV. There was no significant difference between high attitude male and female teachers of rural area regarding their attitude towards inclusion of curricular provision for environment protection i.e. urban male and female teachers showed more attitudes.
- V. There was no significant difference between medium attitude male and medium attitude female teachers of rural area regarding their attitude towards inclusion of curricular provision for environment protection.
- VI. There was no significant difference between low attitude male and low attitude female teachers of rural area regarding their attitude towards inclusion of curricular provision for environment protection.
- VII. There was no significant difference between high attitude urban male and high attitude urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection.
- VIII. There was no significant difference between medium attitude urban male and medium attitude urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection.
- IX. There was no significant difference between low attitude urban male and low attitude urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection.

7 EDUCATIONAL IMPLICATIONS OF THE STUDY

The research will have a foresighted depth and colossal contribution for expert in the education, students, teachers and their involvement in the field of teaching learning process by promoting environmental education among students and society. It will help the educational researcher's for the further study.

The finding of the present study was as follows:

- I. The study reveals that EA of secondary students are more favorable towards the environment than EP, whereas less attached to EEth.
- II. EA of female appeared to be more positive than male. However, both male and female show the same EEth and EP.
- III. Results indicates that both private and government institutions having same level of EA and EEth. Whereas, positive EP were high in government institutions than private institutions.

- IV. The findings urged that colleges show more positive EA and EEth respectively as compared to higher secondary. However, equal EP shown between colleges and higher secondary.
- V. Both arts and commerce streams show equal EA, EEth and EP.
- VI. It was found that arts and science streams possessing same favorable EA, EEth and EP.
- VII. The findings revealed that commerce and science streams have positively same EA and EEth. But, commerce stream appeared to be more concerned about EP than science stream.
- VIII. The study revealed that arts stream of colleges have positive EA and EP than arts stream of higher secondary, however, arts streams of colleges and higher secondary have similar EEth.
- IX. Colleges' Positive EA of commerce stream are more than that of higher secondary commerce stream. However, commerce streams of colleges and higher secondary possessing similar EEth and EP.
- X. Colleges of science stream show favourable EA than higher secondary science stream. However, science streams of colleges and higher secondary having alike EEth and EP.
- XI. The researcher observed that most of the students were well equipped with environmental education subject and has good knowledge about the concept but coming to acting out environmental friendly activities in the surroundings is quite an unsporting character as because in the FDG it was informed by the teachers that Environmental Education practical works are followed next to never. This implies that knowledge gained is practically not applied.

8.1 Educational Implications

The present study shows the importance of environmental attitudes, ethics and practices among the teachers of urban and rural areas through environmental education. The present study has some educational implication towards its related area:

- I. It is a high time to make Environmental Education subject as one of the compulsory subject starting from primary to university levels of education for all the streams with holistic approach and locale specificity.
- II. Urban teachers were significantly higher in their Environmental Attitudes followed by Environmental Practices and Ethics. Therefore, teachers must be well trained in this particular subject.
- III. Teachers in Government institution and Private institution should be encouraged to take interest on environmental education subject in order to be well furnishing of the theoretical and practical contents included in the syllabus.
- IV. Both Higher Secondary Schools and Colleges teachers and students should be able to indicate the environmental issues at their own surroundings, the reasons, the effect and solution of the problems.

- V. Environmental Education for secondary school students should be general and easy concepts, including various local environmental issues should be given preference in the syllabus so it will increase the interests of the students Environmental Attitudes, Ethics and Practices towards sustainable development.
- VI. Special environmental programmes such as seminars, symposiums, workshops, campaign related to Environmental Attitudes, Ethics and Practices must be encouraged to organize in Higher Secondary Schools and Colleges.
- VII. To achieve the objectives of MDGs and Environmental Education subject should alarm the haphazard environmental issues in rural and urban areas..
- VIII. Environmental Attitudes, Ethics and Practices of the urban and rural teachers, students and community members with respective cultural background and geographical areas must encouraged being more positive towards the environment.
- IX. Curriculum of Environmental Education under MBOSE and NEHU should be more practical oriented of students and they should be able to draw conclusion and connection between larger ecosystems with their locale environment. They should be able to “Think Globally and Act Locally”.

8 SUGGESTIONS FOR THE STUDY

Environment being an active and functional part of all living organisms influence our life actively or passively. Environmental protection is the most debatable topic now a day. The attitudes of teachers towards curricular inclusion of Environmental Protection can be a mile stone to mould the thinking, attitude and attributes of youth towards the sensitive approaches towards Environmental Protection. The present study covers the higher secondary schools and teachers of Bhubaneswar and Balasore District. Due to lack of time the sample was limited for the study. By taking more variables and more areas for sampling can open the wide horizon of study, so that other aspects of the problem can be underlined.

Although the attitudes of teachers under the study was remarkable but it can be enhanced many fold by organizing seminars, work shop, study tours, and advanced research in Environmental protection can seal the flaws which create negative dimensions on environmental education.

9.1 SUGGESTIONS FOR FURTHER RESEARCH

The present study endow with positive suggestions for further research. It can be supportive if other research can conduct in future; the following are some of the suggestions:

The present study covers the higher secondary schools and teachers of Bhubaneswar and Balasore District. Similar studies can also be done on civil society members, businessperson, coal miners, employees of cement plant, besides, it can also be conducted on primary, secondary and university level of various institutions in India.

- I. The present study consists only on the rural and urban area teachers of higher secondary schools in which the similar studies can be made on the environmental attitudes, ethics and practices of parents and teachers in India.
- II. The present studies are limited to sex, across management and across stream falls under same cultural practices and geographical area. Therefore, alike studies can be conducted across culture among the different tribes of teachers, people, and students in India.
- III. Attempts can also be made to study on trained and untrained teachers across institutions.
- IV. A study on environmental attitudes, ethics and practices can be carried out at different district levels.
- V. A study can also be conducted on the same variables on the employees of Forest and agriculture office.
- VI. An investigation on relationship between attitudes, ethics and practices on environment can be conducted at various levels of institutions.

10. CONCLUSION

The main focus of the study was to exploration of teacher's attitudes of secondary school teacher's of rural and urban areas i.e. towards curricular provision of environmental protection and to make concrete vision on socio-environmental factors to close the flaws that creates negative demographs on Environmental Education. The prime requirement of teacher's attitude to make the Environmental Education in school curriculum worth a lot.

Thus, it can be concluded that EA of Balasore and Bhubaneswar teachers was stronger as compared to EP and EEth being the lowest in the score. Female showed positive EA than male but showed no difference in EEth and EP. Government institutions had positive EP than private institutions but showed same EA and EEth. Urban school's EA and EEth were significantly higher than that of rural schools, but proved to have same EP. In our study we found that two hypothesizes i.e. [Ho-1: "There would not have been any statistically significant differences among the mean score of male and female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection" and Ho-3: "There would not have been any statistically significant differences among the mean score of urban male and urban female secondary school teachers and their attitude towards inclusion of curricular provision for environment protection".] were rejected . It indicates that there was significant difference present between two groups.

The present study is an attempt to examining the infusion of EA, EEth and EP vides environmental education and its goal, objective, aims, methods, approaches among the urban and rural area teachers of colleges and higher secondary schools. Environmental education aims to promote changes that meet the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987).

Education an integral part of formal education can do a lot to develop a storehouse of knowledge about the environment that helps to make a better place for tomorrow. In practice, Environmental Education should deal with the harmonious interaction between the biophysical environment and man himself, his societies and culture.

The studies aim to ensure that schools present within the communities are training citizens that will be prepared youths for a challenging environment with changing world. It can take the help of schools, local self-governments (municipalities/panchayats) and voluntary civic organizations to creatively formulate formal and non-formal learning platforms which would prepare citizens for a sustainable future. The most important step is to initiate a serious long-term planning process that begins with envisioning sustainable practices appropriate for local conditions. Local governments and civic groups can reach out to academic communities for assistance. Municipalities and local community organizations should serve as catalysts for initiating partnerships and helping build consensus to infuse the principles of sustainable development into the educational curricula of local schools. In additions, civic groups in particular should seek out opportunities to interact with teachers in the classrooms, to teach them how important environmental education is at the present day context.

Environmental protection is a global concern to be given due wattage. In this context teachers awareness and sincere efforts can successfully ensure EA, EEth and EP by empowering the future generations of the students who can actualize the things. In this context, the present piece of work is no doubt a Sparkling Light. On generally environmental awareness and environmental ethic will encourage other researchers to conduct such study for futuristic aspects.

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