

Role of SEED Project in Propagating Environmental Awareness for Environment Conservation: A Study on Secondary School Students of Kerala, India

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Abstract: *The present investigation was undertaken to study the Environmental Awareness of secondary school students who had gone through SEED Project. The sample of the study comprised 193 boys, 207 girls, 196 rural, 204 urban, 204 aided and 196 government (total- 400) secondary school students. For the selection of sample, stratified random sampling technique was employed. The data were analysed by using Mean, Standard Deviation and 't' test techniques. The result of the study reveals that boys secondary school students have attained more Environmental Awareness than girls secondary school students, rural secondary school students have attained more Environmental Awareness than urban secondary school students and aided secondary school students have attained more Environmental Awareness than government secondary school students. Secondary school students possess above average level of Environmental Awareness with respect to the awareness on Environmental components used in the Environmental Awareness Scale. Environmental Awareness is not fully depends upon Environmental Education but programmes like SEED constitute a very effective role in creating Environmental Awareness.*

Keywords: *SEED Project, Environmental Awareness, Secondary school students*

I. Introduction

The advancement of science and technology made the life more and more ambitious. With such development, human dependence on environment increased. He consumed more resources and the effect of his activities on the environment became more and more detectable. The cooperation of world's people is essential to mitigate or avert these environmental risks. Public education and awareness are the key factors in any attempt to maintain a proper balance and ensure sustainable development. Propagation of environmental awareness is the first step of the ladder to environmental security for sustainable development. Students constitute a major portion of our community. Therefore student participation is essential in any environmental programme.

SEED (Student Empowerment for Environmental Development) Programme initiated by the leading newspaper, Mathrubhumi, in association with Federal Bank, aims to create awareness among the growing student community on environment protection and enable them to protect the water, soil and air. The project aims to pave way for a new green culture by assembling high schools, higher secondary schools and upper primary schools in the state. All schools do not have SEED Project. Major hurdles for the proper implementation of SEED Project in school system are enumerated as; lack of awareness about the relevant environmental problems, lack of interest and commitment of the teachers and students to the environment, lack of proper coordination and organisation of SEED project, lack of sufficient number of students, lack of cooperation and assistance of parents, teachers and local authorities, improper utilisation of financial assistance from project authorities, lack of participation of teachers and students in SEED projects and presence of sandy soil in the school area affects the proper implementation of SEED project. SEED is the largest green initiative in India at the school level by any newspaper organization for protecting and preserving Mother Nature through school children.

It is essential to understand the role played by SEED project to promote the sustainable development. The heads of the secondary schools, teacher coordinators and student leaders highly appreciated the initiative taken by the leading newspaper Mathrubhumi to create awareness among the budding generation in schools. All of them opined that the leading newspaper showed its social responsibility with this venture.

The slogan of SEED is "Social welfare through children". Majority of them stated that more than the financial help, it created a mind-set of competition which boosted the various clubs in schools to do their best activities to protect environment and create a sense of awareness. Mathrubhumi SEED, implemented to create awareness for environmental protection among school students, is entering its fifth successful year. All of them agreed that the SEED project is very significant, which aims to protect the earth for the future generations too. The activities employed through SEED Project, will enhance the students work for betterment in future and for SEED, environmental protection is not a display of exhibition or celebration but a responsibility.

There is a coordinator in every district. In every school, a teacher who has deep knowledge and interest in nature conservation is chosen as SEED coordinator. The teacher coordinator must attend the SEED training programmes and under his/her guidance a SEED club is formed in the school. A meeting of SEED club members is held in every week. Teacher coordinator keeps record of the various activities done during the academic year and sends a copy to Mathrubhumi office along with CD, DVD, album and photos. Thus, the functional activities aim to strengthen the students to ensure environment friendly growth and development. Therefore the investigator analyses the sustainable educational programme like SEED implemented in schools of Kerala, India.

II. Objectives Of The Study

To find out the extent of Environmental Awareness of secondary school students who had gone through SEED Project.

1. To find out extent of Environmental Awareness of
 - 1) Boys and Girls
 - 2) Rural and Urban
 - 3) Government and Aided
2. To find out the extent of Environmental Awareness of secondary school students who had gone through SEED Project, under different aspects such as,
 - 1) Awareness on Pollution
 - 2) Awareness on Deforestation
 - 3) Awareness on Land Use
 - 4) Awareness on Population Explosion
 - 5) Awareness on Global Warming
 - 6) Awareness on Ecological Description
 - 7) Awareness on Energy Conservation

III. Methodology

The Investigator adopted the normative survey method of research. After the selection of the title and the tool, the data were collected from 400 students. The sample consists of 6 schools selected from the three districts of Kerala.

3.1. Sample

The study made use of a representative sample of 400 secondary school students of Kerala, selected on the basis of stratified random sampling technique. The sample consists of 193 boys, 207 girls, 196 rural, 204 urban, 204 aided and 196 government (total- 400) secondary school students.

3.2. Tools Used

To collect the data required for the study, device such as Environmental Awareness Scale was used. The Environmental Awareness Scale were prepared according to the major activities of SEED Project and also based on the basic knowledge in which students possess. Environmental Awareness Scale consists of a list of statements related to the Environmental Awareness of secondary school students on the various dimensions of environment.

3.3. Statistical Techniques Used

To achieve the objectives of the study and to test the hypotheses, the data collected were codified; tabulated and descriptive statistics such as Mean and Standard Deviation are used in the analysis of data. An inferential statistic technique, Critical Ratio (t) was also used¹.

IV. Data Analysis And Interpretation

Objective-wise analysis and interpretation is the main component of the investigation. The data were analysed with the help of Mean, Standard Deviation and 't' test techniques of statistics. The data were presented in the following tables (in the order of objectives formulated).

Table 1: Number, mean, median, standard deviation, skewness and kurtosis of secondary school students who had gone through SEED Project

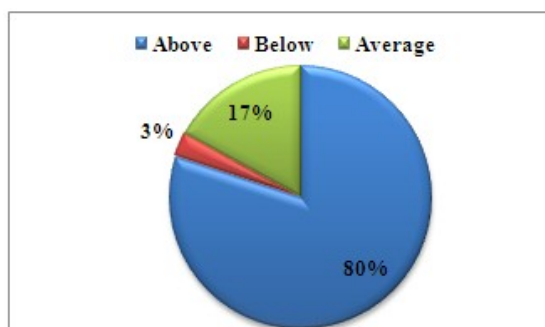
Number	Mean	Median	Standard deviation	Skewness	Kurtosis
400	57.70	58.58	9.37	-0.50	-0.04

From the table 1, secondary school students who had gone through SEED project possess the value of arithmetic mean for total sample is 57.70 with the standard deviation, 9.37. The maximum score of the total sample is 72. This shows that 80% of secondary school students who had gone through SEED project possess above average level of Environmental Awareness.

The value median obtained is 58.58, which shows that 80% of students got awareness scores above 58.58.

The distribution is negatively skewed since the value of skewness is -0.50. It indicates that the scores are massed at the high end.

Kurtosis is -0.04, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that the extent of Environmental Awareness among secondary school students who had gone through SEED project for the total sample is above average.



Graph 1: Graphical representation of extent of Environmental Awareness of secondary school students who had not gone through SEED project

Table 2: Group, Number, Mean, Standard Deviation, t and Level of significance of secondary school students who had gone through SEED project

Sl No.	Group	N	Mean	Standard deviation	Critical ratio	Level of Significance
1	Boys	193	59.23	5.26	3.46	P<0.01
	Girls	207	57.21	6.38		
2	Rural	196	58.78	6.57	3.19	P<0.01
	Urban	204	56.90	5.05		
3	Government	196	57.12	6.57	3.05	P<0.01
	Aided	204	58.93	5.16		

An overview of the Table 2 revealed that among all the groups, there exists significant difference in the mean scores of Environmental Awareness of secondary school students. The 't' test in respect of Environmental Awareness of at 0.01 level of significance has been found and the following findings have been made;

1. Boys having higher Environmental Awareness than girls (t=3.46)
2. Rural secondary school students having higher Environmental Awareness than urban secondary school students (t=3.19)
3. Aided secondary school students having higher Environmental Awareness than government secondary school students (t=3.05).

Graph 2: Graphical representation of extent of Environmental Awareness of secondary school students who had gone through SEED project in their group wise analysis

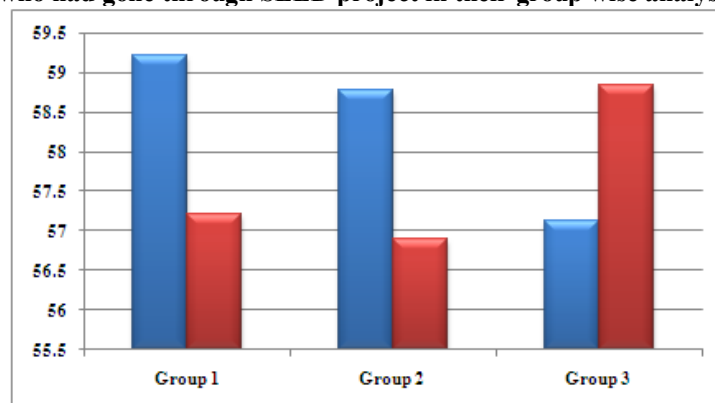


Table 3: Number, Mean, Median, Standard Deviation, Skewness and Kurtosis of secondary school students who had gone through SEED project under different environmental aspects

Sl No.	Components	N	Mean	Median	Standard Deviation	Skewness	Kurtosis
1	Awareness on Pollution	400	13.96	14	1.87	-0.65	-1.33
2	Awareness on Deforestation	400	10.01	10	1.60	-1.13	-0.35
3	Awareness on Land Use	400	4.63	5	1.21	-0.39	-0.89
4	Awareness on Population Explosion	400	4.63	4	1.14	-0.31	-0.67
5	Awareness on Global Warming	400	4.88	5	1.04	-0.66	-0.15
6	Awareness on Ecological Description	400	14.60	15	1.96	-0.93	-0.76
7	Awareness on Energy Conservation	400	4.86	5	1.10	-0.66	-0.35

An overview of the Table 3 leads to the conclusion that mean values of secondary school students possess above average level of Environment Awareness. Details of component wise analysis is described below.

3.1. Awareness on Pollution

The mean value for the total sample is 13.96 with the standard deviation of 1.87. The maximum score for the total sample is 18. This means that students who had gone through SEED project have above average level of Awareness on Pollution.

The value of median obtained is 14, which shows that 77% of the students who had gone through SEED project got awareness scores above 14.

The distribution is negatively skewed, since the value of skewness is -0.65. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -1.33, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Pollution.

3.2. Awareness on Deforestation

The mean value for the total sample is 10.01 with the standard deviation of 1.60. The maximum score for the total sample is 12. This means that students who had gone through SEED project have above average level of Awareness on Deforestation.

The value of median obtained is 10, which shows that 83% of the students who had gone through SEED project got awareness scores above 10.

The distribution is negatively skewed, since the value of skewness is -1.13. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.35, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Deforestation.

3.3. Awareness on Land Use

The mean value for the total sample is 4.63 with the standard deviation of 1.21. The maximum score for the total sample is 6. This means that students who had gone through SEED project have above average level of Awareness on Land Use.

The value of median obtained is 5, which shows that 83% of the students who had gone through SEED project got awareness scores above 5.

The distribution is negatively skewed, since the value of skewness is -0.39. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.89, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Land Use.

3.4. Awareness on Population Explosion

The mean value for the total sample is 4.63 with the standard deviation of 1.14. The maximum score for the total sample is 6. This means that students who had gone through SEED project have above average level of Awareness on Population Explosion.

The value of median obtained is 4, which shows that 66% of the students who had gone through SEED project got awareness scores above 4.

The distribution is negatively skewed, since the value of skewness is -0.31. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.67, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Population Explosion.

3.5. Awareness on Global Warming

The mean value for the total sample is 4.88 with the standard deviation of 1.04. The maximum score for the total sample is 6. This means that students who had gone through SEED project have above average level of Awareness on Global Warming.

The value of median obtained is 5, which shows that 83% of the students who had gone through SEED project got awareness scores above 5.

The distribution is negatively skewed, since the value of skewness is -0.66. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.15, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Global Warming.

3.6. Awareness on Ecological Description

The mean value for the total sample is 14.60 with the standard deviation of 1.96. The maximum score for the total sample is 18. This means that students who had gone through SEED project have above average level of Awareness on Ecological Description.

The value of median obtained is 15, which shows that 83% of the students who had gone through SEED project got awareness scores above 15.

The distribution is negatively skewed, since the value of skewness is -0.93. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.76, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Ecological Description.

3.7. Awareness on Energy Conservation

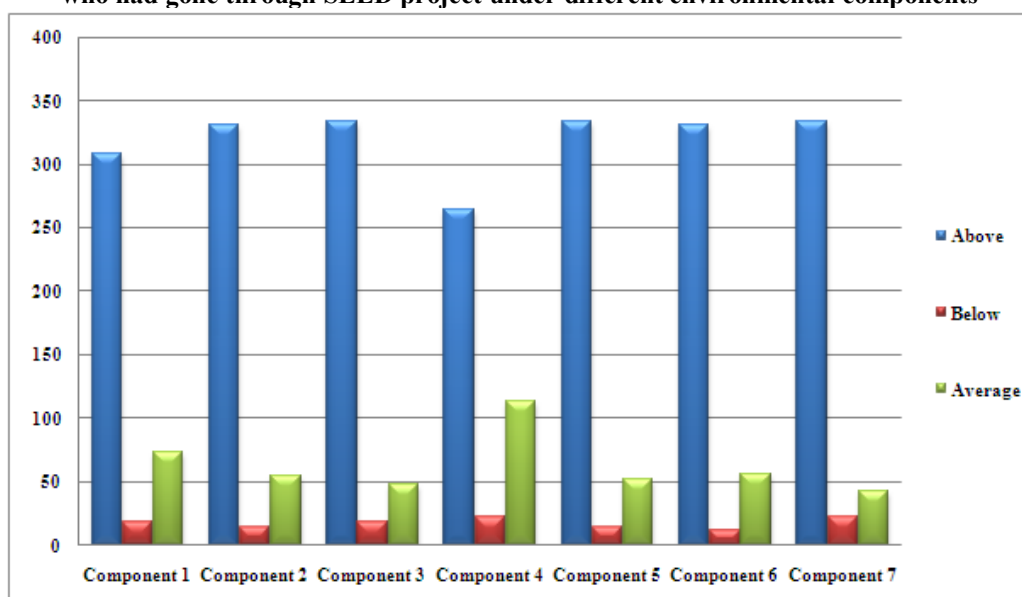
The mean value for the total sample is 4.86 with the standard deviation of 1.10. The maximum score for the total sample is 6. This means that students who had gone through SEED project have above average level of Awareness on Energy Conservation.

The value of median obtained is 5, which shows that 83% of the students who had gone through SEED project got awareness scores above 5.

The distribution is negatively skewed, since the value of skewness is -0.66. This shows that number of students who got high scores were comparatively higher than those who got low scores in the group.

Kurtosis is -0.35, which is lower than the normal value 0.263. Therefore the distribution is platykurtic. This means that extent of Environmental Awareness among students who had gone through SEED project for the total sample is above average level in their Awareness on Energy Conservation.

Graph 3: Graphical representation of extent of Environmental Awareness of secondary school students who had gone through SEED project under different environmental components



V. Conclusion

The present study was undertaken to investigate the role of SEED Project in propagating Environmental Awareness for Environment conservation. The result of the study reveals that boys secondary school students have attained more Environmental Awareness than girls secondary school students, rural secondary school students have attained more Environmental Awareness than urban secondary school students and aided secondary school students have attained more Environmental Awareness than government secondary school students. Secondary school students possess above average level of Environmental Awareness with respect to the awareness on Environmental components used in the Environmental Awareness Scale. Environmental Awareness is not fully depends upon Environmental Education but programmes like SEED constitute a very effective role in creating Environmental Awareness. Educational programmes like SEED Project will have to try for making people aware and motivate them for environment conservation. The awareness or consciousness should also come from the inner self of the individual. Therefore, it is urgent requirement to create positive attitude towards Environmental Awareness. The activities and facilities provided through SEED Project should propagate the Environmental Awareness among students and also help to live Environment Friendly/Eco- friendly.

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