

Environmental Issue Projects for Promoting Level of Social Values among Secondary School Students.

Dr Jisha G R

*Assistant Professor of Physical Science
Kerala University College of Teacher Education
Kariavattom, Thiruvananthapuram, Kerala*

Submitted: 15-10-2021

Revised: 26-10-2021

Accepted: 28-10-2021

ABSTRACT

All across the world, people are facing a wealth of new and challenging environmental problems every day. These environmental problems make us vulnerable to disasters and tragedies, now and in the future. The current situation is that environmental issues piling up high around us. Unless we address the various issues prudently and seriously, we are surely doomed for disasters, so it is the planetary emergency to give urgent attention towards current environmental problems. Environmental Issue Projects is a dynamic classroom approach which is based on Project Based Learning Strategy in which students actively explore real-world problems and challenges and acquire a deeper knowledge. By learning through projects based on environmental issues the students reached at the appropriate solutions about what the environmental issues are they concerned with. Environmental Issue Projects can enhance the level of social values in students. EIP activities are planned such that it can promote students' confidence level in problem solving and they become self-directed learners. Environmental Issue Projects (EIP) provided more chances to social experiences in students which in turn lead to promote social values in them.

Keywords: Environmental Issue Projects, Environmental issues, Social values

I. INTRODUCTION

“Man's attitude towards nature today is critically important simply because we have now acquired a fateful power to alter and destroy nature, but man is a part of nature and his war against is inevitably a war against himself”

(Carson, 1964)

Environment refers to the surroundings or conditions in which a person, animal or plant lives

or operates. It incorporates biotic factors like human beings, plants, animal, microbes etc. and abiotic factors like air, water, soil, light etc. According to Douglas and Holland (1947), “The term environment is used to describe in the aggregate, all the external forces, influences and conditions, which affect the life, nature, behaviour and the growth, development and maturity of living organism”. All across the world, people are facing a wealth of new and challenging environmental problems every day. These environmental problems make us vulnerable to disasters and tragedies, now and in the future. The current situation is that environmental issues piling up high around us. Unless we address the various issues prudently and seriously, we are surely doomed for disasters, so it is the planetary emergency to give urgent attention towards current environmental problems.

Major current environmental problems that our planet facing are

- Pollution:- Pollution of air, water and soil need millions of years to regain.
- Global warming:- The emission of Carbon dioxide is the major cause of global warming leads to rise in temperature of earth's surface, oceans and there by melting of polar ice caps, sea level rise and unnatural precipitation episodes.
- Population explosion:- Shortage of resources is the worse result of population explosion today.
- Waste disposal:- How to dispose the wastes is a serious threat to environment.
- Bio-diversity harm:- Human made activities are responsible for extinction of species and habitats as well as loss of bio-diversity.
- Deforestation:- Human being's greed towards the resources cleared the green cover of Earth and converted to residential and commercial lands.

- Ozone layer depletion:- The ozone layer is a natural blanket cover of earth from the harmful UV rays coming from Sun. The increased use of CFCs is the major problem leads to ozone layer depletion.
- Water scarcity:- Clean drinking water is one of the basic need of every living beings in the Earth. Lack of clean drinking water is the major problem nowadays.
- Public health issues:-The current environmental problems pose risk to health of humans and animals. Run-off to rivers carries along toxins, chemicals and disease carrying germs.

Unless we address the various issues prudently and seriously we are surely doomed for disasters, so it is the planetary emergency to give urgent attention towards current environmental problems.

Project Based Learning (PBL)

Project learning is experience centred teaching strategy and it advocates that education should be related to real life situations. According to Markham (2011), "Project Based Learning (PBL) integrates knowing and doing. Students learn knowledge and elements of the core curriculum, but also apply what they know to solve authentic problems and results that matter. PBL refocuses education in the student, not the curriculum - a shift mandated by the global world, which rewards intangible assets such as drive, passion, creativity, empathy and resiliency. These can't be taught out of a textbook, but must be activated through experience."

When incorporating environmental issues with Project Based Learning (PBL), it enables the students to engage deeply in academic content as well as investigating issues in their own backyard. Young people are highly concerned about the present state of environment. They are allowed to mingle with public as part of knowing environmental issues. Tapping in to students' curiosity and concern for the natural world, PBL offers students the opportunity to identify and develop solutions to environmental and sustainability challenges in their local communities. While tackling real world challenges, the students need to become actively engaged learners and the role of teachers shift to facilitators and motivators. Thus in environmental based projects, the core elements should be problem solving, local environmental issues, multi-disciplinary learning, leadership skills, community engagement and academic rigor.

Need and significance of the study

The need for change in our daily lives is growing. Because so many factors come into play,

many people don't consider that what they do will affect future generations. If human beings continue moving forward in such a harmful way towards the future then there will be no future to consider. There are still so many things humans can do to overcome the problems. By sharing consciousness in local community and within our families about these issues, a more eco-friendly and safe place can be created.

The teacher should facilitate and direct learning by stimulating students to ask questions, giving responses to their answers helping them accept challenges, think critically and offer creative solutions. It is very important that students should undertake the responsibility for their educational and personal development.

The present classrooms neglected the social aspects of the environment. It is better to concern with affective domain and attitudinal development among pupils. Not just providing information about environmental issues around them, but giving them opportunities to collect data from problem areas and to prepare projects and their own solutions. Environmental Issue Projects may enhance the level of social values in students. The expectation is that EIP can promote students confidence level in problem solving and they become self-directed learners. Environmental Issue Projects (EIP) may provide more chances to social experiences in students which in turn lead to promote social values in them.

Hypotheses formulated for the study

- There will be significant difference in the emotional intelligence post-test scores of students taught through Environmental Issue Projects and that of those taught through Activity method.
- There will be significant difference in the Emotional Intelligence post-test scores of boys and girls taught through Environmental issues Projects technique.

Objectives of the study

- To find out the effectiveness of Environmental Issue Projects on social values among secondary school students.
- To find out the effectiveness of Activity method on social values among secondary school students.
- To compare the effectiveness of Environmental Issue Projects and the Activity method on social values among secondary school students.
- To compare the social value post-test scores of students learned through environmental issue projects based on gender.

Methodology in Brief

The study was conducted on a sample of 80 Std IX students (40 in Experimental group and 40 in Control group) of GHSS Kulakkada in Kollam District. The investigator analysed secondary school level science curriculum of Kerala and the areas of environmental importance are selected for the study. The experimental group was taught through Projects prepared and the control group through Activity method.

Tools used

The various tools employed for the study are Social value scale (for both pre-test and post -

test), Environmental Issue Projects based learning materials on selected environmental issues and lesson transcripts based on Activity method.

Statistical techniques used

Descriptive statistics such as mean, standard deviation and the inferential statistics ‘t’ test are used to analyse the data.

II. RESULT AND DISCUSSION

Results of the study are presented below in three different parts.

Result of Social values (post- test scores) of the Experimental group.

Table 1: Post-test scores of Experimental group.

Group	Number of students	Treatment	Mean	SD
Experimental group	40	Environmental Issue Projects learning materials	49.1	4.1

The mean score indicated that the experimental group exposed to Project Based Learning shows high scores in the level of social values.

Result of level of social values(post- test scores) of the Control group.

Table 2: Post-test scores of control group

Group	Number of students	Treatment	Mean	SD
Control group	40	Activity method	32.21	4.6

Table 2 shows the post-test scores of the group of students taught through Activity method. The mean score indicated that control group shows average performance in scores of Social values.

Result of significance on the mean scores of experimental and control groups.

Table 3: Result of significance on the mean scores of two groups.

Group	Mean	Standard deviation	Critical ratio	Level of significance
Experimental group	49.1	4.1	19.19	0.01
Control group	32.2	4.6		

Table 3 shows the post test scores of the experimental and control groups. The t-value is 19.19 which is significant at both levels.

Result of significance on the mean Emotional Intelligence post test scores of boys and girls of experimental group.

Table 4: Result of test of significance of difference in social values post test scores of boys and girls of experimental group.

Group	No. of students	Mean	SD	CR	Level of significance
Boys	19	49.5	5.12	0.76	NS
Girls	21	48.3	4.89		

Table 4 reveals that there is no significant difference between boys and girls in their post scores of social values of experimental group.

III. FINDINGS

- The test of significance of difference between mean post test scores (social values) of the students learned through Environmental Issue Projects and Activity method show that the difference between means is statistically significant. This revealed that the Projects group is superior to Activity group in achieving the level of social values.
- The mean post test scores of boys and girls of Projects group revealed that there is no significant difference between the boys and girls in their post-test scores of social values. Thus Projects are effective for both boys and girls for enhancing emotional intelligence.

IV. CONCLUSION

The present study was an attempt to explore the effectiveness of Projects on environmental issues for enhancing social values at secondary school level. The study revealed that learning through Environmental Issue Projects is significantly superior to Activity method on promoting the level of social values. Implementing Projects in classrooms can not only just provide information about environmental issues but also

giving opportunities to apply the knowledge to solve problems. Doing projects provide stronger learning opportunities and encourage pupils' collaborative skills and social value development. It promotes better team working, community based work and development of an integrated knowledge base. Hence it can be effectively used in our classrooms.

BIBLIOGRAPHY

- [1]. About, G.D(2000). Classroom 2000. An experiment with the instrumentation of a living educational environment. IBM systems journal.
- [2]. Sharma, R. A. (2005). Environmental Education (Components, problems, management), sixth edition, Published by Vinay Rakheja, Meerut.
- [3]. Singh, P.P. & Sharma, Sandhir. (2005). Environment and pollution Education, Deep and Deep publications PVT. LTD.
- [4]. www.central.rcs.K12.tn.us/.../EnvironmentalIssuesProject
- [5]. www.biologycorner.com/projectecoproject/undertml.teacherYPERLINK
- [6]. "http://www.biologycorner.com/projectecoproject/undertml.teacher".
- [7]. www.eric.in
- [8]. www.ncert.nic.in