



Effectiveness of experiential learning strategies for enhancing environmental awareness among class v students

Dr. Bhupinder Singh Bagh

Principal, Dronacharya College of Education, Rait, Kangra, Himachal Pradesh, India

Abstract

Environment is a global concept today. The primary objective of environmental education is to create awareness about the various environmental problems and to provide knowledge about the total environment. Environmental education is a lifelong process which uses a broad range of teaching and learning techniques, with emphasis on practical activities and first-hand experience. Experiential learning is the learning in which learner constructs knowledge, skills and values from direct experiences outside a traditional academic setting. It has been justified that children learn better through experiential learning as compared to traditional learning methods. Taking into consideration this aspect the investigator felt a need to study the effectiveness of experiential learning strategies for enhancing environmental awareness among class V students. Also it was noticed after reviewing the literature that very few studies have been conducted in this regard. Thus, the investigator selected the present problem.

Keywords: experiential learning strategies, environmental awareness

Introduction

The life on planet earth has evolved to its present stage through millions of years of interaction between the organisms and its environment. Man is an inseparable part of the environment because he had been dependent on nature since his evolution. Nature has given a precious gift to the mankind in the shape of the environment. He has an exceptional ability to influence and transform his surroundings as he is the best creativity of Almighty. He can develop and enhance the quality of life for him and for others. He has the tendency to use his ability in both ways i.e. positive and negative. When he opts for positive way, he contributes in the environmental development but when he opts for the negative way, he induces harm to the environment.

The word 'environment' has been derived from the French word 'environer' meaning to encircle or to surround. Hence 'environment' is the particular surroundings in which organisms live and interact with the non-living things as well as the other living things. So, it is the interaction between the living and the non-living things in the particular area to perform their important activities of life. Environment may be defined as the sum total of all surroundings of living organisms, including natural forces and other living things, which provide condition for development and growth as well as of danger and damage. It consists of biotic and abiotic components. Biotic includes all the living things, whereas abiotic components include the non-living things and the physical factors of the environment i.e. soil, light, water, temperature etc.

At primary level, children learn by doing, using their senses, exploring their environment of people, things, places and events. They learn from first-hand and concrete experiences as well as vicarious forms of experiences, (e.g., storytelling,

listening to another person, reading a book and looking at pictures, watching television or listening to the radio). Experiential learning is the process of learning through experience and is more specifically defined as "learning through reflection on doing". It is the process through which a learner constructs knowledge, skills, and values from direct experiences. In Experiential learning, the student manages their own learning rather than being told what to do and when to do it.

The focus of experiential learning is placed on the process of learning and not the product of learning. Experiential learning occurs when carefully chosen experiences are supported by reflection, critical analysis and synthesis. Experiential learning can be divided into two major categories: field-based experiences and classroom-based learning. Field based learning is the oldest and most established form of experiential learning. Field based learning includes internships, practicums, cooperative education and service learning. Classroom-based experiential learning can take a multitude of forms, including role playing, games, simulations, presentations, case studies and various types of group works. Experiential learning methods are particularly useful for skill development because they provide learners with an opportunity to practice their skills and reflect on experience.

It is widely accepted that environmental education and experiential learning strategies are very closely connected. Experiential learning as part of Environmental education restores the relationship with natural and built environments and with community members. It allows students to develop awareness of what is happening in their surrounding environment. By taking part in hand on environmental education activities, students are more likely to take personal interest in the environment and the related issues.

Need and Importance

The biggest problem we are facing today is the environmental degradation which has become major threat to the mankind. The reason behind this increasing degradation is the rapid industrialization, urbanization, use of fossil fuel, construction of dams, over use of fertilizers and pesticides. Increasing population has led to degradation of forest, land, water, soil and natural resources. To save the earth's environment from further degradation, it has become very important to make people aware about the environmental issues. Thus environmental education is the need of hour for facing the environmental challenges. It is the only weapon which can develop knowledge, understanding, skills and awareness among the people to face the challenges of environmental hazards. So, environmental education i.e. EVS is introduced as a compulsory subject right from the beginning of primary classes. Experiential learning is the process based on pedagogical principle of "learning by doing" as the students acquire knowledge after having experienced or done something new. Experiential methods facilitate learners to open up their senses to nature and bond with it, to increase their receptivity toward environmental reality. Learning through experiential practice helps in development of skills such as confidence, independence and students' autonomy and enhances positive attitudes toward learning.

Review of the related literature

The review of related literature is of paramount importance for researchers. The investigator must be aware of the new researches conducted in the field of study in the past. He knows the area untouched or unexplored and has an idea of the scope of subject or the study in all aspects.

Mehra and Kaur (2010) compared the effect of experiential learning strategy and traditional learning method on enhancement of environmental awareness of 120 fourth graders with internal and external locus of control. The obtained data was analysed with the help of three-way analysis of variance. The major findings of the study were: (i) students when exposed to experiential learning strategy yielded better mean gain on environmental awareness scores as compared to the traditional learning method; (ii) students with internal locus of control yielded better mean gain on environmental awareness scores than the students with external locus of control; and (iii) the students performed better at comprehension level of objectives than at knowledge level of objectives with regard to mean gain on environmental awareness scores.

Doris (2013)^[6] investigated the effectiveness of three selected instructional approaches viz. self-learning material, audio-visual and fun activity approach in order to develop the environmental awareness among the IX grade students. A standardised questionnaire on environmental awareness was used as a research instrument. Environmental awareness scores were analysed using descriptive statistics and an effectiveness index. A probability sample of 144 students (72 girls and 72 boys) was selected for the purpose. Research outcomes showed that most of the students had average or high level of environmental awareness. The value of effectiveness indices indicated that the fun activity approach was most effective followed by the study material approach

and the audio-visual approach.

Tholia and Laur (2015) conducted a comparative study of environmental awareness among male and female senior secondary school students. The sample consisted of 200 male and female senior secondary students of Rohtak district of Haryana state. Environmental Awareness Ability Measure (EAAM) tool by Praveen Kumar Jha was used to collect data. The results revealed that male students had better understanding of environmental awareness as compared to the female students.

After reviewing the above cited literatures it is concluded that various studies have been conducted regarding outdoor environmental education programme for enhancing environmental sensitivity, environmental awareness and responsible environmental behaviour among school students but very few studies are conducted to know about the effectiveness of experiential learning strategies for enhancing environmental awareness among class V students. Hence, the investigator selected the present problem that tends to examine the effectiveness of experiential learning strategies for enhancing environmental awareness among class V students.

Objectives of the study

1. To develop instructional material for implementing experiential learning strategies for class V students in Environmental Studies (EVS).
2. To compare the effectiveness of experiential learning strategies and traditional learning methods for enhancing environmental awareness among class V students.
3. To compare the effectiveness of experiential learning strategies and traditional learning methods for enhancing environmental awareness among boys and girls.

Hypotheses of the study

1. There will be no significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V students in EVS.
2. There will be no significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of class V boys and girls in EVS.

Design of the study

The major objective of the study is to study the effectiveness of experiential learning strategies for enhancing environmental awareness among class V students. To achieve this aim experimental approach has been adopted. There are two groups of students in this study i.e. experimental and control group. 50 students are randomly assigned to both the groups. The experimental group is taught by using experiential learning strategies whereas traditional learning methods are used for teaching the control group. The steps adopted in the execution of the study are presented.

Analysis and Findings

Analysis and interpretation of data was collected using experiential learning strategies and traditional learning methods and through administration of environmental

awareness test for enhancing environment awareness among class V students. Investigator tabulated pre-test and post-test scores of experimental and control group. Each group was statistically analyzed to test the hypotheses of the study. As there are 30 items in Environmental Awareness Test so the total score of 30 was categorized as shown in Table-1.

Table 1: Categorization of Environmental Awareness Scores

Range of scores	Level of awareness
0-10	Low
11-21	Average
22-30	High

Table 1 shows the categorization of environmental awareness on basis of range of scores where 0-10 indicates low level of environmental awareness, 11-21 indicates average level of environmental awareness and 22-30 indicates high level of environmental awareness respectively.

Table 2: Level of Environmental Awareness of EG and CG at Pre-Test Stage

Range of scores	Frequency		%age of students		Awareness level
	EG	CG	EG	CG	
0-10	0	0	0%	0%	Low
11-21	49	40	98%	80%	Average
22-30	1	10	2%	20%	High

*EG- Experimental Group; CG- Control Group

Table 2 shows the level of environmental awareness of two randomly selected groups at pre-test stage. Further it shows that 0% students of experimental group (EG) and control group (CG) are in 0-10 range of scores and 98% students of EG and 80% students of CG group are in 11-21 range of scores and 2% students of EG and 20% students of CG group are in 22-30 range of scores.

Hypothesis 1

There will be no significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V students in EVS.

Table 3: Level of Environmental Awareness of EG and CG at Post-Test Stage

Range of scores	Frequency		%age of students		Awareness level
	EG	CG	EG	CG	
0-10	0	0	0%	0%	Low
11-21	0	33	0%	66%	Average
22-30	50	17	100%	34%	High

*EG-Experimental Group; CG- Control Group

Table 3 shows the level of environmental awareness of two randomly selected groups at post-test stage i.e. after providing treatment to both the groups. Further it shows that 0% students of EG and CG are in 0-10 range of scores and 0% students of EG and 66% students of CG are in 11-21 range of scores. While 100% students of EG and 34% students of CG fall in range 22-30 range of scores.

Table 4: Level of Environmental Awareness of EG and CG at Post-Test Stage

Group	N	Mean	S.D	t-value	Level of significance
EG	25	28.72	1.25	22.7	Significant at 0.01 level
CG	25	20.62	2.17		

*EG- Experimental Group; CG- Control Group

Table 4 shows the mean and standard deviation of EG and CG group at post test stage. The mean and standard deviation of experimental group (EG) are 28.72 and 1.25 respectively. Mean and standard deviation of control group (CG) are calculated to be 20.62 and 2.17 respectively. The t-value of EG and CG is found to be 22.7 which is significant at 0.01 level. So, hypothesis 1 is rejected.

Hypothesis 2

There will be no significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of class V boys and girls in EVS.

Table 5: Level of Environmental Awareness of Boys of EG and CG at Post- Test Stage

Group	N	Mean	S.D	t-value	Level of significance
EG	25	29.2	0.87	26.35	Significant at 0.01 level
CG	25	21.24	1.26		

*EG- EXPERIMENTAL GROUP, CG- CONTROL GROUP

Table 5 shows the mean and standard deviation of EG and CG of boys at post test stage. The mean and standard deviation of boys of experimental group (EG) are 29.2 and 0.87 respectively. Mean and standard deviation of boys of control group (CG) are calculated to be 21.24 and 1.26 respectively. The t-value of EG and CG of boys is found to be 26.35 which is significant at 0.01 level.

Table 6: Level of Environmental Awareness of Female Students of EG and CG of Female Students at Post-Test Stage

Group	N	Mean	S.D	t-value	Level of significance
EG	25	28.24	1.57	15.84	Significant at 0.01 level
CG	25	20	2.09		

*EG- Experimental Group; CG-Control Group

Table 6 shows the mean and standard deviation of EG and CG of girls at post test stage. The mean and standard deviation of girls of experimental group (EG) are 28.24 and 1.57 respectively. Mean and standard deviation of girls of control group (CG) are calculated to be 20 and 2.09 respectively. The t-value of EG and CG of girls is found to be 15.84 which is also significant at 0.01 level.

Thus from Table 5 and 6 it is concluded that the t-value of both boys and girls of EG and CG are found to be significant at 0.01 level. So, hypothesis 2 is rejected.

Findings

1. There is significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V students in EVS.

2. There is significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V boys and girls.

Conclusion of the study

1. There is significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V students in EVS. This shows that the students taught EVS by experiential learning strategies exhibited higher level of environmental awareness as compared to those who were taught EVS by using traditional learning methods.
2. There is significant difference between experiential learning strategies and traditional learning methods for enhancing environmental awareness of the class V boys and girls. This shows that boys exhibited better environmental awareness as compared to the girls.

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