

ACHIEVEMENT OF MINIMUM LEVELS OF LEARNING IN ENVIRONMENTAL EDUCATION IN RELATION TO THE SCHOOL ENVIRONMENT AT PRIMARY STAGE

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Abstract

The present study was conducted at 240 students of fifth class selected randomly from the four government schools of Jalandhar district. Then they were randomly divided into two groups viz-a-viz as one group of students was taught with Objective Based Instructional System (experimental method) and second group was taught with conventional method. Before the execution of experimental method, a pre-achievement test was administered to the students in both experimental and controlled group. After the completion of experiment, the post achievement test and school environment Questionnaire was administered to the students of both groups to check the attainment of the set objectives. Then the collected data was scored and 2X2 ANOVA was employed. Significant difference was observed in achievement of minimum levels of learning of the students taught with objective based instructional system (experimental method) and conventional method. However interaction effect of both the variables (Objective based instructional system and school environment) showed insignificant difference upon achievement of minimum levels of learning of the student

Keywords: *Learning, Minimum Levels of Learning, Objective Based Instructional System (O.B.I.S), School Environment, Environmental Education*

Introduction

Minimum Levels of Learning (MLLs) were proposed by NCERT in 1978 in connection with the UNICEF. The National Policy on Education 1986, and the Programme of Action 1992 also recommended that Minimum Levels of Learning (MLLs) should be laid down and children's learning should be assessed in terms of achievement of these MLLs. NCERT then prepared another document for MLLs at Primary Stage. MLLs were prepared class wise in 1992 to put into practice the recommendations of NPE 1986 but under NCF(2005) recommendations these were prepared stage wise. Singh (2007) stated that minimum level of learning are the learning competencies expected to be mastered by every child by the end of a particular class or stage of education. Minimum levels of learning are the balanced criteria to be followed for judging the adequacy of the curricular inputs and the learning outcomes to be expected. Minimum Levels of Learning is a strategy which involves combining Quality with Equity. Quality means laying standard for all children and these must be achieved by all

children. So, MLLs imply that each and every child should have access to education of comparable standards. These MLLs are the competencies each child should possess in the different school subjects viz. Maths, Science, S.St etc. Expected competencies should be base for formation of learning objectives. Further the teaching objectives should match with the learning objectives and guidelines should be there to test the learning outcomes. Hence the MLL's should be able to emphasize upon competencies, teaching methods and approaches and evaluating learner's performance.

Swan (1969) is of the view that environmental education enhances people's awareness about the environment and its challenges and helps in development of skills and expertise to address these challenges. Pradhan (2002) opined that Environmental Education is that education which can make a man conscious of environment and environmental problem. UNESCO (1977) proposed in Tbilisi Report Recommendation that environmental education is to form new guidelines and patterns of behaviour of individuals, groups, and society as a whole, towards the environment. Bowers and Burkett (1998) found that building features and conditions, relating to human comfort, influence student achievement. Hartford (2010) believed that schools must create healthy learning communities that are physically, emotionally and intellectually safe, clean and secure because such environments enhance student learning.

Objectives of the study

The present study has been designed to achieve the following objectives-

1. To specify behavioral objectives in the terms of minimum levels of learning.
2. To develop lesson plans based on minimum levels of learning in environmental education.
3. To study the achievement of minimum levels of learning of the students taught with objective based instructional system (experimental method) and the students taught with conventional method.
4. To study the achievement of minimum levels of learning of the students in relation to their school environmental.
5. To compare the achievement of minimum levels of learning of the students taught with objective based instructional system (experimental method) and conventional method

Hypotheses of the study

The present study had been designed to test the following hypothesis:-

1. There is no significant difference achievement of minimum levels of learning of the students taught with objective based instructional system (experimental method) and conventional method.
2. There is no significant difference in the achievement of minimum levels of learning of the students belonging to rich school environment and poor school environment.
3. There is no significance difference in the achievement of minimum levels of learning of the student taught with objective based instructional system (experimental method) and conventional method in relation to their school environment.

Methodology

Sample

In order to conduct the study on fifth class students, four government schools of Jalandhar City were randomly selected. From each school, two intact sections consisting of 60 students were taken. One section was considered as control group (which was taught by the regular teacher through conventional method) and the other as experimental group (which was taught by the investigator by O.B.I.S.) Thus, sample of the study was restricted up to 240 students of fifth class.

Tools of the study

The following tools were used to collect the data in the present investigation:

- 1) Tool – I: Lesson Plans based on minimum Levels of Learning in Environmental Education (prepared by the investigator).
- 2) Tool – II: Student Achievement Test (Prepared by the investigator).
- 3) Tool – III: School Environment Questionnaire (Prepared by the investigator).

Statistical techniques employed

The following statistical techniques were employed to analyze the data:

- Means and standard deviation had employed to understand the nature of data.
- Two way analysis of variance (ANOVA) for 2×2 factorial design had been employed

Design of the study

- For the present study, the experimental and control group design was used to conduct the study. In the present study 2×2 factorial design was employed on the achievement gain scores which was studied as dependent variable.
- O.B.I.S. (Experimental method) and conventional method were taken as treatment variables. School environment was studied as classificatory variable viz-a-vaz as rich school environment and poor schools environment.

Results and discussion

In order to analyze the data, the means and standard deviation for 2×2 factorial design on achievement gain scores have been presented in Table 1 below :-

Table- 1

Means and Standard Deviations of achievement gain scores in relation to School Environment

	Experimental Group	Control Group	Mean Total
Rich School Environment	$M_1 = 12.62$ $N_3 = 48$ $\sigma_1 = 4.09$	$M_3 = 8.12$ $N_3 = 48$ $\sigma_3 = 2.95$	$M_R = 10.37$ $N_R = 96$
Poor School Environment	$M_2 = 10.04$ $N_2 = 48$ $\sigma_{\square\square\square\square\square\square\square\square}$	$M_4 = 4.22$ $N_4 = 48$ $\sigma_{\square} = 1.67$	$M_P = 7.13$ $N_P = 96$
Mean total	$M_E = 11.33$ $N_E = 96$	$M_C = 6.17$ $N_C = 96$	$N=192$

In order to analyze the data, the gain scores were subjected to ANOVA (Two Way). The result have been presented in the Table 2 below :-

Table – 2

Summary of ANOVA for 2×2 factorial design on achievement gain scores

Source of Variance	df	SS	MSS	F-ratio
SSA	1	503.76	503.76	41.8**
SSB	1	1276.18	1276.18	105.90**
A×B	1	20.06	20.06	1.66
WSS	188	2265.9	12.05	
Total	191	4066.5	21.29	

****significant at 0.01 level of confidence.**

Instructional method (A)

It may be observed from the table 2 that F-ratio for the difference between means of the two treatment groups namely, O.B.I.S. (Experimental Method) and Conventional Method was found to be significant at 0.01 and 0.05 level of confidence. Thus the result did not support the hypothesis (1) viz; “There is no significant difference in the achievement of minimum levels of learning of the students taught with O.B.I.S. (experimental method) and conventional method.”

Further the Table 1 it is reveals that Mean of Experimental Group is higher than the Mean of Control Group which indicates that O.B.I.S. (Experimental Method) is significantly responsible for achievement of minimum levels of learning among the primary school students in environmental education.

School Environment (B)

It may be observed from the table 2 that F-ratio for the difference between means of two group viz-a-viz rich school environment and poor school environment, was found to be significant at 0.01 and 0.05 level

of confidence. Hence, data provide sufficient evidence to reject the hypothesis (2) viz “There is no significant difference in the achievement of minimum levels of learning of the students belonging to rich school environment and poor school environment.”

This indicates that the achievement of minimum levels of learning belonging to Rich school environment, Poor school environment differ on the means scores of environment education subject. Further the examination of the corresponding group mean scores from Table 1 suggests that students of rich school environment were found to achieve better than the students of poor school environment.

Korir and Kipkemboi (2014) found that that school environment and peer influence made significant contribution to the students’ academic performance.

Ibrahim, Abubakar & Bichi (2015) found that students from schools with adequate learning facilities, favorable learning environment and good teacher student relationship perform well.

Instructional Method and School Environment (A×B)

The Table 2 shows that the F-ratio for the interaction between instructional system and school environment was found to be not significant even at 0.05 level of confidence which means that effect of instruction was not qualified by school environment. Hence, data does not provide sufficient evidence to reject the hypothesis (3) viz : “There is no significant difference in the achievement of minimum levels of learning of the student taught with O.B.I.S (experimental method) and conventional method in relation to their school environment.”

Findings of the Study

- Teaching through O.B.I.S. was found to be more effective than conventional method with respect to achievement of MLLs.
- O.B.I.S (Experimental method) yielded higher value score than conventional method.
- Students belonging to rich school environment were found to achieve MLLs better than the student of poor school environment.
- O.B.I.S. (Experimental Method) was found to be significantly responsible for achievement of MLLs among the primary school students.
- No significant difference was found in the achievement of MLLs of the student taught with O.B.I.S. (experimental method) and conventional method in relation to their school environment.

Conclusion

The study suggests that teaching in school should be done through O.B.I.S. The MLLs should be framed for each subject and accordingly then O.B.I.S. should be prepared. Teacher must correlate his/her topic with actual situation and needs of the environment and must develop awareness, skills, attitude among students to make them more informative about environmental concept, issue and their solution. Schools must provide proper environment like well equipped libraries, competent and effective teachers and congenial teaching learning environments. Hence the present study is modest contribution and was conducted with objective to study achievement minimum levels of learning in environmental education in relation to the school environment at primary stage.

Limitations of the Study

- The study is delimited to the fifth class students of government schools of Jalandhar district
- The study is delimited to fifth class students and to certain topics in the subject of environmental education viz. Environment, Care of Organs, Our Food, Building in the community, We Celebrate, Recreation in the Locality.

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