

THE EVALUATION PROCEDURES USED IN TEACHING ENVIRONMENTAL EDUCATION AT THE ELEMENTARY LEVEL IN ASSAM

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Abstract

Periodic assessment/evaluation of learning outcomes helps in deciding the attainment of students in the subject area, suitability of learning experiences provided, learning strategies adopted and the appropriateness of the curriculum in general. In this regard, it is an integral part of curriculum construction and renewal process. In Environmental Education, evaluation concerns with objectives in Cognitive, Affective and Psychomotor domains and hence a teacher should make use of a range of assessment techniques for measuring these learning outcomes. The document 'Habitat and Learning' of the National Curriculum Framework (NCF, 2005) highlights this by stressing "since the development of appropriate attitudes, skills and values is to be the most significant component of EE in schools, developing a scheme to assess student's achievement on these aspects will perhaps be the most crucial in determining the success of interventions through the EE curriculum". This brings forth the need for grounding student teachers in the use of various evaluation techniques by actually providing them with situations to understand and practice these techniques and tools as part of "Continuous and Comprehensive Evaluation process" in Environmental Education. This would help the student teachers understand the present learning levels of children but also how to use them in their day-to-day classroom practice. Based on the text and curriculum, written tests, examinations can be conducted to evaluate one's understanding, perceptions, applied knowledge about the subject and the values which one committed for, could be done through summative evaluation. In formative evaluation, apart from measuring the performance through the marks obtained ones' understanding about the surrounding environment, environmental concerns, observing best practices and processes can be assessed. This method can be applied to evaluate practice lessons, usage of innovative methodologies, experiments, group studies, brainstorming, observation, interviews, field visits, educating the mass/community etc., which establishes linkage with the immediate environment, and how they develop their perceptions and communication skills in the classrooms. This can help evaluate broadly inside and outside classroom learning. The assignment of developing projects should be based on teacher learners' immediate environment. It can be taken up by individual or by group. But it is desirable that the topic which they select should be such that they experience in their day to day life. Through this students' performance/ efficiency can be assessed. Whether such innovative practices have been used in Assam is very much questionable. Therefore, this study entitled 'The Evaluation Procedures Used in Teaching Environmental Education at the Elementary Level in Assam.'

Keywords: Environmental Education, Evaluation, Teaching Strategies.



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Teaching-learning in Environmental Education encompasses a wide range of activities to help develop children's understanding and skills. Children construct their own

knowledge of the environment and progress on their learning continuum at their individual pace. When such is the dynamism involved in children's learning, the question that crops up is, should all children be assessed at a single point of time and that too through a single mode or tool of assessment. Considering the dynamic nature of children's learning, the NCF has emphasized the concept of dynamic assessment. It recommends use of variety of methods of assessment – oral and written.

According to Sapra (1994), Evaluation in Environmental Education is not easy because of its unique characteristics. As multi-disciplinary and integrated approaches followed in environmental education teaching, teaching- learning in EE takes place in a variety of non formal situations, laying greater emphasis on effective and psychomotor domains than on cognitive domain. Furthermore, the students come from varying socio economic background. The main aim of Environmental Education curriculum for upper primary level in Assam-the aim of teaching Environmental Education is to develop among the learners an awareness and understanding of the environment and an ability to act by way of preventing or solving environmental problems. Keeping this aim in view it is essential to evaluate whether the learners have achieved the competencies fixed in the curriculum of Environmental Education.

Evaluation is an indispensable part of teaching-learning process. The progress of learners can be evaluated through Continuous Comprehensive Evaluation, Periodical Evaluation, Unit Evaluation, Group Evaluation, Self Evaluation etc. There is a provision for holding Periodical Evaluation at an interval of three months to measure knowledge, awareness and understanding of environmental problems achieved by a learner skillfully through oral and written test. In certain situations, where it is not possible to measure attitudinal changes, value inculcation related to environmental issues and actions through simple tests, the teacher may design situation reaction tests asking the students' reactions from the alternatives provided considering himself in that particular situation.

Teacher's observation is one of the most credible evaluation techniques which can be used for assessing skills, attitudes and values developed through Environmental Education among the children. The teacher may observe the pupils both in real as well as simulated situations; but it should be ensured that proper records of observations are maintained in respect of each student and these observations are as objective and systemic as possible. The evaluation of values can be done with the help of grades. The drawbacks and weaknesses of

learners in the subject EE can be identified by evaluating in written and oral form as well as by observing in different situations viz.- project work, group discussions, field trips etc. performed by the learners inside and outside the classroom.

On the basis of the result of evaluation, steps can be taken for remedial teaching for the slow and weak learners. Teachers can prepare some additional activities for fast learners. Involvement of guardians and community members in the process of evaluation of learners will help in qualitative improvement of education. The guardians and parents should always be acquainted with the success and failure of the learners and the life of the teachers can be well organized with their help and co-operation in many aspects NIEPA (1994).

A variety of quantitative and qualitative techniques have to be evolved for evaluating students' performance in scholastic and co-scholastic areas. In order to assess and evaluate learners' knowledge and awareness, attitudes and skills, continuous and comprehensive evaluation (CCE) is necessary. The objectives of the evaluation process are to:

- assess the learners' awareness and knowledge at different stages;
- assess behavioural changes in learners focusing on the development of skills and attitudes and the inculcation of habits and values;
- diagnose difficulties/weaknesses in learning and, thereby, teaching; and
- serve as a mechanism for improving the EE delivery system.

EE could be assessed on the basis of field activity notes, project findings, presentations and reports prepared by students and also through the question-answer type tests. Grading of children's performance is preferred in assessing the qualitative aspects of the subject. At the elementary stage, evaluation is to be continuous and comprehensive, based on both knowledge and activity. The knowledge aspect may be assessed through written tests whereas the practical aspects could be assessed through other techniques. At the secondary stage, EE will focus on both the theory and practical aspects. The theory aspect is to be assessed through external examination while the practical aspect is to be internally assessed. At the higher secondary stage, both the theory and practical aspects of EE are to be assessed externally.

There are two alternative views regarding the strategies of evaluation in EE. The dominant view supports this evaluation to be at par with that in other subject areas considering EE as a compulsory subject. It recommends its own evaluation system with weight age given to theory and practical aspects both in school and public examinations. The

other view puts emphasis on internal evaluation. It further underlines that there is no necessity for conducting any public examination, since the very spirit of the subject would get lost in this exercise. So, variety of techniques needs to be adopted for continuous and comprehensive evaluation of the cognitive, affective and conative aspects of the learners at different stages of school education NCERT (2004).

Rajput *et al* (2003), Goswami *et. al.* (2006-2007), Hazarika .(2007),Musial (2009), Hazarika (2009), Das (2010), Devi (2010), Sarma (2010), Sarma (2010), Kimaryo (2011), McBeth (2011), Ghosh (2014), Panda (2014) etc. are some of the very much related studies with evaluation procedures used by the teachers in teaching Environmental Education.

METHODOLOGY USED IN THIS STUDY: Descriptive Survey Method was used in conducting this study.

POPULATION: The population of the study comprised all the Elementary School teachers who teach Environmental Education in Elementary Schools in four districts (Jorhat, Kamrup, Lakhimpur and Cachar) of Assam. Total number of Elementary Schools in Jorhat, Lakhimpur, Kamrup and Cachar districts are- 476, 744, 460 and 574 respectively. The number of teachers who teaches Environmental Education are- 2270, 4856, 3445 and 2777 for these four districts. Thus, in this study the population consisted of 13348 assistant teachers of Elementary Schools who deal with Environmental Education. The population of experts in Environmental Education was 425 number of teacher educators who were working in DIETs, CTEs in these four districts of Assam considered as the expert's populations.

SAMPLE: To make the sample is a representative one, fifty assistant teachers from each districts was selected purposively. Thus total 200 teachers constituted teachers sample. Besides, 20 experts were selected purposively. Thus, total 200 assistant teachers constituted teacher's sample. Similarly 20 experts were selected purposively.

SELECTION OF THE SCHOOLS : A sample of 100 schools were selected from four districts Viz. Cachar, Lakhimpur, Kamrup and Jorhat District of Assam by using purposive sampling technique. The researcher had selected twenty five schools from each district purposively. In selection of the schools care was taken to select schools from different educational blocks of each district to make it representative, after discussion with a number of experts in the field and educational administrators.

SELECTION OF TEACHERS: The study involves a total sample of 200 teachers of Elementary Level teaching Environmental Education in class V, VI and VII in the year 2016-17 by purposive sampling technique. The investigator had gone to the selected schools to collect data and due permission was sought from the District Elementary Education Officer (DEEO), and Deputy Inspector of the respective districts. Then, proper rapport was made with the teacher so that the selected teachers answer the tools without any hesitation. In selection of the teachers, the researcher gave importance in two aspects- [i] Experience in dealing Environmental Education and [ii] Experience of training on Environmental Education.

TOOL USED IN THE STUDY: An Unstructured Interview Schedule was used in carrying out the study. The Interview Schedule consisted six dimensions Viz. (i) Assessment procedures, (ii) Weightage on Environmental Education in the question papers, (iii) Assessment of Projects/ Activities (iv) Assessment of co scholastic aspects of Environmental Education, (iv) Continuous and Comprehensive Evaluation in assessment of Environmental Education, (v) Remedial teaching, (vi) Suggestion to improve the evaluation procedures on Environmental Education,

FINDINGS OF THE STUDY:

(i) Presently, evaluation in the sample schools was done four times in a year– first periodical evaluation (after three months), second periodical evaluation (after six months), and third periodical evaluation (after nine months) and fourth periodical evaluation at the end of the year. The question papers were designed and examined by the teachers in the respective schools. The results were recorded in a specific format (Evaluation Register) supplied by the Sarva Shiksha Abhijan. This was the evaluation process going on in the elementary schools of Assam. The evaluation scheme consisted of four periodical evaluations and designed for 50 marks to each paper in each periodical evaluation. At the end of the year, grade was given to each by adding his or her marks in four periodical evaluations. The grading in the scholastic achievements were directed as Grade A (81-100) %, Grade B (61—80)%, Grade C(41—60)% and Grade D-below 40%. In case of co-scholastic achievement grading was directed as Grade A – very good, Grade B - good, Grade C-medium and Grade D-weak.

Table No.1 Evaluation Register of the Students

Name of the school: _____							Reports on achievements of student						
Name of the student: _____													
Class _____							Academic Year: _____						
Scholastic Aspects							Co- Scholastic Aspects				Individual-Social qualities		
subjects	P-1 M-50	P-2 M-50	P-3 M-50	P-4 M-50	TotalM- 200	Grade A/B/C/D	Dimension s	P1Gr	P2Gr	P3Gr	P4Gr	Remark	
Language							Creative Writing					Regularity	
Mathematics							Games Indoor					Cooperation	
English							Outdoor					Emotion control	
Social Science							Music					Sympathy	
							Dance						
Science							Acting					Leadership	
Hindi													
Health Education													
Art Education							Yoga						
Signature of the parents							Signature of the teacher						
Date-----							----- Signature of the Head teacher						

P-1 --Periodical 1, M-50----Marks-50, Gr--Grade

(i) All the teachers opined that there was no separate question paper on environmental education in periodical evaluations. The questions on environmental education were integrated in the question papers of Science, Social science, Assamese and English.

Table-2 The weightage given on environmental education questions in the question papers of different subject

Science	12%--15%
Social Science	12%--15%
English	0—5%
Assamese	0—5%

(ii) Teachers viewed that weightage given on environmental education questions in the question papers vary from subject to subject. In the subjects like science and social science weightage given was 12%-15% and vary low weightage 0-5% was given in language subjects.

Table No 3 Achievement Test in environmental education

Written Test	100%
Oral Test	66%
Observation	36%
Homework	45%
Any Other	Nil

(Due to more than one response by the same respondent total is not 100%)

(iii) All the teachers opined that they were conducting written test to evaluate the achievement in environmental education. 66% of the teachers commented that that they were conducting oral test, 36% of the teachers opined that they were evaluating the students by observation and 45% of the teachers opined that they evaluating the students with the help of homework.

Table No.4 Tests conducted in the current year

Unit Test	3%
Weekly Test	17%
Monthly Test	54%
Periodical Test	100%

(Due to more than one response by the same respondent total is not 100%)

(iii) All the teachers opined that they were implementing periodical evaluation. 54% of the teachers commented that that they were implementing monthly test, 17% of the teachers opined that they were implementing weekly test and 39% of the teachers opined that they were implementing unit test.

Table-5 Status of Environmental Education questions in the question papers

Objective type questions	More than 25%
Very short answer type question	More than 40%
Short answer type question	Less than 35%
Essay type question	Nil

(iv) All the teachers found that distribution of environmental education questions in different Question papers were as- objective type questions were more than 25%, Very short answer type questions were more than 40%, short answer type questions were less than 35% and essay type questions were almost nil in the Question papers.

Table No. 6 Weightage to objectives on Environmental Education in the question papers

Knowledge	More than 75%
Understanding	Less than 25%
Application	Nil
Skill	Nil

(v) All the teachers found that distribution of knowledge level environmental education questions in different question papers were more than 75%, understanding level question

were less than 25%, skill and application level question were almost not available in the Question papers.

Table No. 7 Uses of examination results

For promotion to the next class.	100%
For grading the school	16%
For remedial teaching	73%
For improvement of teaching by teachers	77%
For monitoring and planning	23%

(Due to more than one response by the same respondent total is not 100%)

(vi) All the teachers opined that examination results were used to promote the students to the next classes, 16% opined for grading the school, 73% commented for remedial teaching, 77% opined for improvement of teaching and 23% commented for monitoring and planning.

Table No.8 Identification of deficiencies of the students

Teacher pupil interaction	72%
Parent teacher interaction	4%
Tests	93%
Observation	31%
Any other	Nil

(vii) 72% Of the teachers felt that deficiencies of the students were identified by teacher pupil interaction, 4%opined through parent teacher interaction, 93% opined through tests and 31%commented through observation.

(viii) Though, a few of them expressed that the results were used for identifying hard spots and remedial teaching, they could not express properly how the results of these examinations could guide them to plan remedial measures.

(ix) 29% of the teachers viewed that they had assigned individual as well as group project work and activities on environmental education. These project works and activities were graded by the respective teachers. But these grades were not considered in the periodical evaluations and no scope in the evaluation register.

(x) All the teachers viewed that they had organized no activities like role-play, value clarification and group discussion to assess the values and skills of the students on environment related issues. Some environmental education related activities i.e. gardening,

plantation, health and hygiene camps etc. were conducted in the schools. But these were not evaluated as there was no scope in the evaluation register.

(xi). Most of the teachers viewed that they have been grading the co-scholastic aspects of Environmental Education with the help of observation. But they were having some problems in filling up the column of co-scholastic area. They did not have any guideline or training on scoring or grading this area. Usually the students who scored good marks in the scholastic area were given good grades.

(xii) All the teachers opined that their school had not taken initiative to rate the attitude of the students on environment related issues. Teachers also viewed that they did not feel necessary because there were no instructions and no scope in the evaluation register.

(xiii) The majority of the teachers had very little knowledge on continuous and comprehensive evaluation.

It was observed that the majority of the teachers had very little knowledge on continuous and comprehensive evaluation. Continuous evaluation is that evaluation where regular assessment is done to find the progress of the child and it is comprehensive when all the areas of development is considered. This process of evaluation was totally lacking in the elementary schools. The co-scholastic area of the Environmental education curriculum was not getting any importance in the evaluation process. In pupils achievement data reporting cards there was no separate column to grade their development in skills and attitude regarding environmental issues. The teaching-learning process was guided by the process of evaluation. As the co-scholastic area had no weightage in the evaluation process it was natural that it was not getting proper place in the school programmes as well. In the question papers of the periodical evaluations, it was noticed that very less weightage had been given to environmental education. In upper primary section though environmental education was an important component of the curriculum, no attempt had been made to engage each and every child in environmental education activities and to inculcate in them a positive attitude towards environment. The evaluation process in the elementary schools was focusing only on scholastic part of the curriculum that too in a very mechanical manner.

During the time of face to face interview with the teachers regarding conducting continuous and comprehensive evaluation on Environmental Education the teachers cited following problems –

- inadequate teaching staff
- overcrowded classroom
- excess workload for the teachers
- -engagement of teachers in other activities
- -poor attendance of students Inadequate infrastructure facilities

SUGGESTIONS OF THE TEACHERS :

- Teachers need to be oriented to focus on the assessment of co-scholastic aspects of the students on Environmental Education issues through appropriate training and supervision. The use of assignments, checklist, rating scales, projects and anecdotal records as techniques of student's assessment particularly relating to co-scholastic aspects of Environmental Education should be emphasized in teacher training programmes.
- All teachers must receive training on CCE for effective evaluation of scholastic and non- scholastic aspects of Environmental Education.
- supplementary reading materials on CCE with enough examples be prepared and distributed amongst the teachers, because most of the teachers revealed that they have been feeling cognitively isolated from the scheme. reducing teachers' non academic workload

CONCLUSION: Presently evaluation in the sample school is done four times in a year– first periodical evaluation (after three months), second periodical evaluation (after six months), and third periodical evaluation (after nine months) and fourth periodical evaluation at the end of the year. The question papers were designed and examined by the teachers in the respective schools. The results were recorded in a specific format (Evaluation Register) supplied by the Sarva Shiksha Abhijan. This was the evaluation process going on in the Elementary Schools of Assam.

- The evaluation scheme consisted of four periodical evaluations and designed for 50 marks to each paper in each periodical evaluation. At the end of the year grade was given to each by adding his or her marks in four periodical evaluations. The grading in the scholastic achievements were directed as Grade A (81-100) %, Grade B (61—80)%, Grade C(41—60)% and Grade D-below 40%. In case of co-scholastic achievement grading was directed as Grade A – very good, Grade B - good, Grade C-medium and Grade D-weak.

- All the teachers opined that there was no separate question paper on Environmental Education in periodical evaluations. The questions on Environmental Education were integrated in the question papers of Science, Social science, Assamese and English.
- Teachers viewed that weightage given on Environmental Education questions in the question papers vary from subject to subject. In the subjects like science and social science weightage given was 12%-15% and vary low weightage 0-5% is given in language subjects.
- All the teachers opined that they were conducting written test to evaluate the achievement in Environmental Education . 66% of the teachers commented that that they were conducting oral test, 36% of the teachers opined that they were evaluating the students by observation and 45% of the teachers opined that they evaluating the students with the help of homework.
- All the teachers commented that distribution of Environmental Education questions in different Question papers were as- objective type questions were more than 25%, Very short answer type question were more than 40%, short answer type question were less than 35% and essay type questions were almost nil in the Question papers.
- It was observed that the majority of the teachers had very little knowledge on continuous and comprehensive evaluation. Continuous evaluation is that evaluation where regular assessment is done to find the progress of the child and it is comprehensive when all area of development is considered. This process of evaluation was totally lacking in the elementary schools. The co-scholastic area of the Environmental Education curriculum was not getting any importance in the evaluation process. In pupils achievement data reporting cards there was no separate column to grade their development in skills and attitude regarding environmental issues. The teaching-learning process is guided by the process of evaluation. As the co-scholastic area has no weightage in the evaluation process it is natural that it is not getting proper place in the school programmes as well. In the question papers of the periodical evaluations, it was noticed that very less weightage had been given to Environmental Education. In upper primary section though environmental education was an important component of the curriculum, no attempt had been made to engage each and every child in Environmental Education activities and to inculcate in them a positive attitude towards environment. The evaluation process in the elementary

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