

Green School Curriculum and Curricular Practices Quest for Sustainable Development

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Abstract

Education is one of the most important tools for the progress of the nation. Environmental education has always been a priority area in curriculum development programmes. Environmental education is not just about learning. It is about understanding the environmental issues confronting our planet and changing our behaviours as well. Developments in science and technology have not only made human living more comfortable but created several problems to ecological balance and to the environment. Hence, environmental education should equip children to transform scientific knowledge into optimum utilisation without affecting the environment. This could be achieved when inter and intra disciplinary approaches are practiced. Progress and development have become synonymous with the introduction of new technologies and products, aimed at making life better, safer and more viable. But, there have been instances where apparently useful products and technologies have turned out to be capable of inflicting extremely detritus impact on environment and development in the long run. Realising the importance of preparing younger generations to protect environment and maintain ecological balance for sustainable development, school curriculum from time to time emphasises the need for promoting environmental awareness to develop environment friendly behaviour. Keeping this rationale as the base, the researcher conducted the research on awareness about green school curriculum and curricular practices for sustainable development among elementary school teachers. The sample of 50 elementary school teachers from Wardha were selected using random sampling method for this study. The collected data were subjected to qualitative analysis. The

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results of the study inferred that elementary school teachers though not fully aware about green school curriculum but have an idea of integrating specific subject content to environmental issues.

Environmental concern is one of the important aspects of education. Integration of these environmental concerns in school curriculum and curricular practices has become inseparable in present education system for sustainable development. This issue at present is not only interdisciplinary in nature but a paradigm shift has taken place where it is considered as transdisciplinary. Not a single curricular area remains untouched with these issues. It is well known that this issue cuts across curriculum. At present, sustainable development is the main aim for the societal upliftment. The World Summit on Sustainable Development (WSSD) in Johannesburg in 2002 catalysed the efforts to bring about a shift from 'educating about the environment' to 'educating for sustainability'. This shift reflected the international climate of thinking about sustainable development as, 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

The Decade of Education for Sustainable Development (DESD) launched by the United Nations in 2005 aimed at integrating the principles, values and practices for nurturing sustainable development (UNESCO, 2005). This required infusing appropriate processes in

the school curricula. Article 51A of the Constitution has made it a 'fundamental duty of every citizen to protect and improve the natural environment including forests, lakes, rivers and wildlife'. Various education commissions, besides the National Policy on Education, 1986 and Programme of Action, 1992, have reiterated the growing need to address the environmental concerns.

Keeping in view the wider perspective of the environment and recommendations of the UNESCO, 2005, the curriculum development at the national level took cognizance and Education for Sustainable Development (ESD) was the core of the curriculum for each subject area developed by NCERT (towards a green school resource book on ESD for elementary school).

GREEN SCHOOL CURRICULUM

It is a well known fact that the curriculum is the core to every school, it initiates directed and structured implementation of the curricular and co-curricular aspects promoting the holistic development of the students. Greening the school campus and making students aware about environment and its role in the sustainable development is the major objective of the green school curriculum. Thus, the green curriculum prepared for school is

called green school curriculum. Green curriculum enables students to learn from the nature and natural processes (The C.A.S School, Green Curriculum).

The major characteristic of green curriculum is to incorporate issues of environment and sustainable development in school. It encourages a greater understanding of the environment and ecological issues. The students are provided with the space in curriculum and its transactional practices to own their learning and understanding about the environment as well as nature. The ultimate goal of green curriculum is action, i.e., action to improve the environment, prevent its degradation and sustain its well-being.

Implementation of green school curriculum developed a proactive behaviour towards environment. It also affected school curriculum, its activities and the community where the curriculum was implemented. Thus, inclusion of green school program plays an important role in the development of eco-friendly behaviour among the students (Marcus, 2012).

CURRICULAR PRACTICE

Curricular practices are the activities in which students are actively engaged and exposed to, during teaching learning practices. The school environment provides enormous teaching-learning opportunities. Students gain first-hand experience from their surroundings that go

beyond the classroom and as a teacher we need to think of strategies of engaging them with it. Green school practices will develop a new generation who will have greater awareness, positive feelings, understanding and appreciation for life and environment (Razak, Iksan and Zakaria).

The green school will promote students learning outside the periphery of the classroom and they will develop a sense of commitment and responsibility which will empower students with positive attitude towards environment and sustainable development (Ahmad et al., 2019).

For students, direct engagement with their surroundings can be a powerful way of learning about the environment because it helps them realise that their actions can make a difference. The sense of action and achievement will not only motivate children, but also create a sense of empowerment, a feeling that 'we can make a difference' will develop a positive attitude among students towards green environment.

NCERT ON GREEN SCHOOL CURRICULUM

Towards A Green School: Resource Book on Education for Sustainable Development for Elementary Schools was developed by NCERT in 2017 considering the role of ESD towards achieving MDGs.

This curriculum steps towards creating awareness about ESD among different stakeholders in

school education. It focuses on treating ESD as an integral, holistic part of school curriculum, teaching-learning practices and school and home environment of every learner. Considering it a joint responsibility of every individual, it aims to involve the entire school community (children, teachers, principal, support staff) and the neighbourhood to work together through participatory, practical and collaborative approaches. It will also help all stakeholders of school education to realise that it does not require additional physical or human resources to understand and practice the principles of sustainable development within the available resources.

The Resource Book suggests ways to transform the schools through practices of ESD in order to enable the children to grow in an environment that helps imbibe awareness, sensitivity and the necessary skills to be environmentally responsible citizens of earth. This resource book has four sections—

- ‘A green school: An introduction’ develops an insight of ESD, ‘Greening’ and ‘whole school’ approach as per national and international outlook.
 - ‘Understanding the green school curriculum’ helps to understand ESD in the context of curriculum.
 - ‘Promoting green practices: Within and beyond the school’ gives different strategies to transact a Green Curriculum.
- ‘How green is my school’ includes various case studies with examples of schools in reality that have demonstrated practices for ESD.

RATIONALE OF THE STUDY

Environmental concern has attracted the attention of all the countries globally. For sustainable development of any nation it is necessary that it takes into consideration the environmental issues. To save our environment so as to sustain it for future generation we need to relate it to our curriculum. Though environmental studies have become a compulsory subject of study at each level of education system, it is the duty of teachers and every functionaries of education system to integrate environmental issues in teaching learning process. For this, it is important for teachers to become aware of green school curriculum and the curricular practices.

OBJECTIVES OF THE STUDY

In order to investigate, researchers decided the following objectives for the study.

1. To study elementary school teacher’s awareness about factual knowledge in terms of green school curriculum for sustainable development.
2. To study elementary school teachers understanding about green school curriculum.

3. To study various curricular practices adopted by elementary school teachers to promote sustainable development.

METHODOLOGY

For the present study, descriptive research method was adopted.

Sample

Elementary school is the pivot area where most of the effective practices related to the environment can be inculcated among the students. To attain these objectives, it is important for the teachers to be aware as well as involve practices which are environment friendly which leads to sustainable development. Therefore, this study emphasised on the elementary teachers.

Random sampling procedure was adopted to draw out the sample for the study. Total 50 elementary school teachers from Wardha were taken as a sample. As green school curriculum emphasises that issues relating to the environment should not be limited to science or environmental studies only, it should also be made transdisciplinary. Therefore, the sample included not only science or environmental studies teachers but the sample included social science, language as well as mathematics teachers also.

Tool

For measuring the awareness about green school curriculum questionnaire was prepared based on

the resource book prepared by NCERT i.e. *Towards a Green School: Resource Book on Education for Sustainable Development for Elementary Schools*. The questionnaire consists of 10 questions related to factual knowledge about green school curriculum.

Semi structured interview was prepared to know the understanding of green school curriculum among elementary school teachers and curricular practices adopted by the teachers to transact green school curriculum.

Data analysis method

After collection of data, analysis was done qualitatively.

RESULTS AND DISCUSSION

- The first objective of the study was to study elementary school teacher's awareness about factual knowledge in terms of green school curriculum for sustainable development.

Table 1

Awareness about the Green school curriculum

| Awareness | No. of teachers | Percentage |
|------------------|------------------------|-------------------|
| Low | 12 | 24 |
| Moderate | 23 | 46 |
| High | 15 | 30 |

On the basis of the data obtained through the questionnaire, the first objective of the study was analysed it was found that 30 per cent of teacher's awareness was found to be high whereas 46 per cent of the teachers

have moderate awareness and 24 per cent teacher's awareness about green curriculum was found to be low. This difference in awareness could be because of their less exposure towards environmental issues in their subject specific curriculum as well as minimum exposure to documents related to green school, Education for Sustainable Development etc. Unawareness could also be resultant of lack of training in this issue i.e. green school.

- The second objective of the study was to study the elementary school teachers' understanding about the green school curriculum.

Table 2

Responses about significance of the Green school curriculum

| Responses | No. of teachers | Percentage |
|--|-----------------|------------|
| Holistic approach towards environmental studies | 10 | 20 |
| It connects environmental issues to different subject areas. | 21 | 42 |
| It brings environmental issues to classroom. | 12 | 24 |
| Miscellaneous (related to community) | 07 | 14 |

Though the factual knowledge about the green school curriculum was limited among elementary school

teachers, their understanding about the concept and rationale of the green school curriculum was found to be satisfactory. There were a few teachers whose understanding of the concept and rationale of green curriculum was not satisfactory. Analysis of some of the important excerpts of the interview.

On analysing the responses, it was found that 20 per cent teachers understand curriculum that is holistic in approach whereas, 42 per cent of teachers responded that green curriculum at school connects environmental issues to different subject areas. 24 per cent of the teachers are of the opinion that this curriculum brings issues related to environment in classroom. 14 per cent teachers responded differently to the question. Many teachers were of the view of integrating environmental issues with different school subject areas very few were there who could connect it to community, ethnicity, dignity of labour etc.

Table 3

Responses about what the Green school curriculum promotes

| Responses | No. of teachers | Percentage |
|---|-----------------|------------|
| Childs attachment to the environment/ nature | 20 | 40 |
| Physical and mental well being of the student | 10 | 20 |

| | | |
|--|----|----|
| Safe infrastructure in school | 11 | 22 |
| Miscellaneous (related to environment) | 09 | 18 |

The above table shows that 40 per cent of the teachers think that green curriculum in school brings a feeling of attachment between student and nature. 20 per cent responded that this curriculum enhances physical and mental well being of the student, 22 per cent responded that it promotes safe and healthy infrastructure whereas 18 per cent of the teacher's responded differently. The responses given by the teachers could be because of their preconceived concept related to green school or some exposure to this issue.

Table 4

Responses about effectiveness of the Green school curriculum in teaching and learning process

| Responses | No. of teachers | Percentage |
|----------------------|-----------------|------------|
| Highly effective | 30 | 60 |
| Moderately effective | 15 | 30 |
| Less effective | 05 | 10 |

Responses to this question reflect that 60 per cent teachers are of opinion that this curriculum will be highly effective in teaching learning process. The teachers are of the view that if this curriculum is implemented in the school the teaching learning

process as well as school environment will become effective whereas some teachers were of the opinion that it would be to incorporate it in each and every aspect in school due to infrastructural facilities as well as lack of human resources although it will provide effective opportunities to the students.

Table 5

Responses about the stances where the Green school curriculum could be effectively used

| Responses | No. of teachers | Percentage |
|--|-----------------|------------|
| Curricular activities (Classroom teaching) | 5 | 10 |
| Co-curricular activities (Playground, cultural activities) | 35 | 70 |
| Both | 10 | 20 |

Majority of the teachers responded that co-curricular activities are the stances when this curriculum can be effectively used. There are very few teachers near about 10 per cent of the total sample who responded that curricular activities are the stances where green curriculum can be used effectively as it takes time, energy and economic efforts to incorporate it in teaching learning process in the classroom. 20 per cent teachers are of the view that it depends entirely on the teachers will on how to integrate in curriculum.

- The third objective was to study various curricular practices adopted by elementary school teachers to promote sustainable development.

Thinkers like Rabindranath Tagore, Mahatma Gandhi commissions along with various policies like NPE, 1986 along with POA, 1962 emphasised on integration of environmental concerns at various school level.

Semi structured interview was conducted to know the curricular practices adopted during classroom processes. In this context, subject specific teachers were interviewed, where the majority of the language teachers responded that poetry, prose, grammar, discussion are the places where they try to incorporate sustainability issues i.e. society, environment and economy. Natures poetry or poetry related to nature, prose on environmental issues, sentences of the words etc. Although environmental consciousness is one of the major issues towards education for sustainable development.

Social science teachers responded that they can connect social issues to environment and sustainable development. Contents related to geography, civics, history, for example— natural resources, rocks, forest, battles, different periods like ancient, medieval, modern periods, civilisations, industrialisation, agriculture, community work, concept like Swachh Bharat Abhiyaan, etc.

are the content area where green school curriculum can be included in curricular practices and students can be made sensitive towards environment.

Maximum content area in science subject like pollution, pollination, food preservation, micro organism, diseases, health and hygiene etc. can be taught keeping green school curriculum in context. Maximum word problems in mathematics can be made making students sensitive towards environmental issues.

Along with these questions many questions related to sustainable development and green curriculum were asked to the teachers many teachers responded that sustainable development is the development in the present without compromising with the future. They also responded that this curriculum follows integrated approach to learning.

FINDINGS

Although, factual knowledge of the Green school curriculum is not known by the teacher but they are well aware about the environmental issues that can be incorporated during the classroom transaction. Knowingly or unknowingly they were able to link green curriculum in various curricular practices. Inter linkages of various subject areas to green curriculum was also made by the teachers. Although there were some problems in linking the curriculum but they try to develop a notion among students that various

subjects are linked to each other and all contributes towards sustainable development.

CONCLUSION

Green school curriculum helps in holistic development of the student. It develops sensitivity as well as attachment of the students towards the nature. It directs towards inclusive development. Therefore, we can conclude that green school curriculum—

- Enhances the environmental sensitivity during teaching in class by maximum utilisation of senses by formal or informal method.
- Indigenous knowledge about the environment is utilised during teaching learning process.
- It inculcates the awareness towards various issues of environmental problems.
- Involve the participation of students in various activities for environmental protection.
- Provide emphasis on the recycling of waste products.
- Motivate the students by giving some better examples related to protection, conservation of environment or by organising campaign.

- Give opportunities to the students, to know the importance of nature.

EDUCATIONAL IMPLICATIONS

The findings of this research could be helpful for teachers, students as well as administrators for facilitating Education for Sustainable Development.

- Green school curriculum is important for teachers as well as students therefore efforts should be made through seminar, conferences and workshop to disseminate the concept of green school curriculum and curricular practices.
- The challenges and barriers in implementing this curriculum could be worked upon by government as well as administrators so as to pave the path for sustainable development.
- The teachers should be provided with proper training towards executing green school curriculum for sustainable development.
- Practicing environmental sensitive activities by teachers will help to inculcate the same among the students.

In a nutshell, we can say that green school curriculum is crucial for the reduction of environmental problems and for enhancing sustainable development.

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