

A Study of Good Practices Followed for Sustainable Development by Secondary Schools and their Effects on Students' Sustainable Behavior

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Abstract

The number of research in sustainability development is increasing along with the importance of sustainability. This phenomenon inspires the researcher to establish an ex-post facto survey research that delivers results in terms of effect of good practices on students' sustainable behavior. The aim of this study consisted in assessing students' sustainable behavior on some aspects i.e. knowledge, attitudes and behavior. The collection of data was undertaken via the completion of a self-made questionnaire, which was designed to include the following dimensions: knowledge, attitudes and behavior and the focus/target group for was constituted by 200 secondary school students. On the basis of findings of the study, the conclusion was drawn that the effect of good practices lie impact on students' sustainable behavior. At last, we found that the good numbers of good practices in schools lie more impact on students' sustainable behavior rather than where the good practices have found in least numbers in schools. In addition, the result showed that respondents' area of study has influenced regarding knowledge, attitudes and behavior concerning sustainable development. The implication of the result in our study contributes to the direction of future research in the discipline of sustainability.

Keywords : Sustainable development, Good practices, Sustainable behavior, Secondary school

Sustainable development is a need of today's society. It is an umbrella term which spread in almost all the areas. In last some years its importance has been raised in the field of education also. Education for sustainable development (ESD) promotes learners with understanding, competency, moral values and attitude to make valuable decisions and take responsible actions for environmental integrity, economic viability and society. It is a dynamic concept that builds a new vision of education to strengthen people to take responsibility for creating a sustainable future. Sustainable education promotes good quality of education and recognized as an integral element of sustainable development. Its overall aim is to empower people to act for positive environmental and social change inferred a participatory and action oriented approach. UNESCO (2002) Sustainability is the process of maintaining change in a balanced environment, in which the exploitation of resources, the direction of investment, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations. While the concept of sustainability is a relatively new idea, the movement as a whole has roots in social justice, conservationism, internationalism and other past movements with rich histories. By the end of the twentieth century, many of these ideas had come together in call for "Sustainable Development".

According to Brundtland Commission-(1987): "Sustainability is defined as,"Meeting the needs of the present without compromising the ability of future generations to meet their needs."

John Ehernfeld (1896) defines sustainability as the possibility that human and others forms of life on earth will flourish forever.

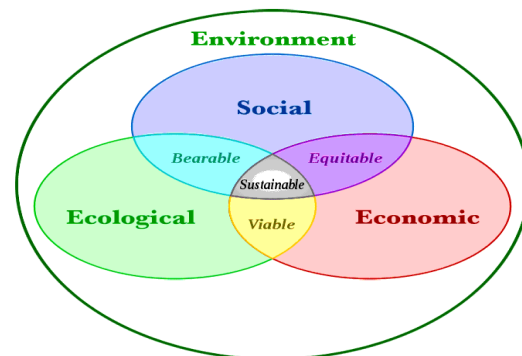


Fig.1.0 pillars of sustainability

The three pillars of Sustainability as described by Brundtland Commission Report (1987) are:-

1.Environmental Sustainability:- To consumed natural resources by humans in such a way which are able to replenish themselves and are also maintained environment integrity.

2.Economical Sustainability:- Across the globe, humans are able to maintain their independence and access to the resources .i.e. financial and others to their needs.

3.Social Sustainability:- People have enough access of resources in order to keep their communities and families safe and healthy. All the basic requirement and universal human rights of people are attainable. In healthy society, people have personal, labour and cultural rights are respected even all people are secured from discrimination.

These are the mainly three pillars of sustainable development which plays a key role to maintain sustainability. In a present scenario, people acknowledge the importance of sustainability for

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upcoming future. These are sustained in environment only by doing good practices.

Significance of the study

Education is an essential tool for achieving sustainability. Education at all levels can shape the world of tomorrow, equipping individuals and societies with the skills, perspectives, knowledge and values to live and work in a sustainable manner.

Good practices in education as the wide range of individual activities, policies, and programmatic approaches to achieve positive changes in student attitudes or academic behaviors. With the help of good practices in education we can not only promote skills like critical thinking and imagining future scenario but also promote efforts to rethink educational programs and systems that currently support unsustainable societies.

The significance of the study lies in the fact that Good practices are being practiced by various CBSE schools functioning in Agra .Some of these are focused on sustainable development. How effective they are is the question. The study will bring to light the good practices of institutions for sustainable development of the surrounding areas, it will also highlight students’ attitude and behavior towards sustainable life style.

- Educationist, Teachers and policy makers will benefit by the knowledge of innovative skills and activities carried out in the classroom.
- Administrators will be aware of the contribution of educational institutions towards sustainable development.
- It will also motivate parents, students and society as a whole to adopt sustainable life styles and behavior.

Good practices for Sustainable development:-

Good practices for sustainable development is about skills, knowledge, process, values and ethics. It is mainly focus about the successful experience that has been tested and reflected in different environment. At all levels, education can shape the world of tomorrow, helping individuals and societies with the skills, perspectives, knowledge and values to live and work in a sustainable manner , Good practices for sustainable development deserves to be shared and adopting behaviors and practices that enable people to live a full life without being sacrifices need of upcoming generation.

Statement of the problem

A Study of Good Practices followed for Sustainable Development by Secondary Schools and their effects on Students’ sustainable behavior.

Objectives

- To identify Good practices for sustainable development adopted by various schools in Agra.
- To study the effect of Good practices for sustainable development on students’ sustainable behavior.
- To compare the sustainable behavior of boys and girls studying in secondary schools.

Hypotheses

In line with the objectives of the study, the following hypothesis are formulated:-

1. There is no significant effect of Good practices for sustainable development on students’ sustainable behavior.
2. There is no significant difference between the sustainable behavior of boys and girls studying in secondary schools.

Method

In this study there are two variables, First is independent variable i.e. Good practices for sustainable development and second is dependent variable i.e. sustainable behaviour. To carry out present research Ex-post facto survey method was used. Ex-post facto survey is a quasi experimental study examining how an independent variable, present prior to the study in the participants, affects a dependent variable.

Sample

Justification of sample selection:-

CBSE board schools were selected for the study because CBSE has recently launched new initiative (DIKSHA) for sustainable development in schools. Hence, 2 CBSE schools of Agra were randomly selected for the study. 200 students from CBSE schools of Agra were also selected by random sampling method. In each school 100 students has been selected.

Tools

Two self constructed tools were used in this study:-

- Observation matrix for Good practices for Sustainable Development
- Self constructed scale for students’ sustainable behavior.

To analyze and interpret the data obtained by the researcher (mean, median, standard deviation, t-test and anova) statistical techniques was used.

The analysis and interpretation gives shapes and form to aims and objectives of the study. Keeping in view the objectives and variables of the study the data was analyzed under following heading:

- Nature of distribution of scores
- Analysis of data

Results and Discussion

Nature of the distribution of Students’ scores of on Sustainable Behavior Scale

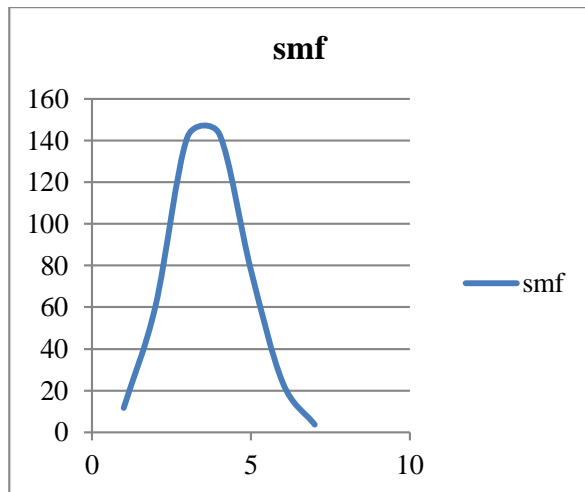
Table 1: The Frequency distribution of Students’ scores on Sustainable behavior scale

C.I	F	Smf
111-120	2	11.66
100-110	11	60.66
91-100	49	141.66
81-90	89	143.33
71-80	38	77.66
61-70	10	23.66
51-60	1	3.66

On the basis of obtained scores, following statistical values were calculated for further analysis.

Table 2 showing Mean, Median, Standard Deviation, Skewness, Kurtosis of Students' scores of on Sustainable Behavior Scale

Mean	Median	Standard Deviation	Skewness	Kurtosis
86.23	86	9.70	-0.22049	0.179699



Graph 1: Showing the curve made by the Students' scores of on Sustainable Behavior Scale
 The above graph showed the curve which is made from the frequency distribution Students' scores of on Sustainable Behavior Scale. The total sample of the students was 200 and the mean of the students' sustainable behavior was 86.23 and standard deviation was found to be 9.70. The perusal of the above graph showed that most of the frequencies were in the range of 81-90 and 91-100. The curve is leptokurtic in nature (kurtosis 0.179699) which indicates that most scores are lie in the range 91-100 and the distribution was found to be negatively skewed (Skewness value -0.22049)

Objective 2. To identify Good practices for sustainable development adopted by various schools in Agra.

For achieving the above objective, scores were obtained on an observation matrix of good practices adopted by two schools selected for study in Agra. According to the objectives of the study, Good practices for Sustainable development adopted by 10 schools which are randomly selected. To fulfill this objective researcher went to schools and observed the whole school on the various aspects i.e. Social sustainability, Ecological sustainability, Economic sustainability and Spiritual sustainability.

On the basis of these aspects (Social, Ecological, Economic and Spiritual sustainability) The SWOT (Strength, weakness, opportunity, threats) analysis has been done of all these school. Using SWOT analysis,

the study aimed to identify gaps in the existing school practices and to improve them.

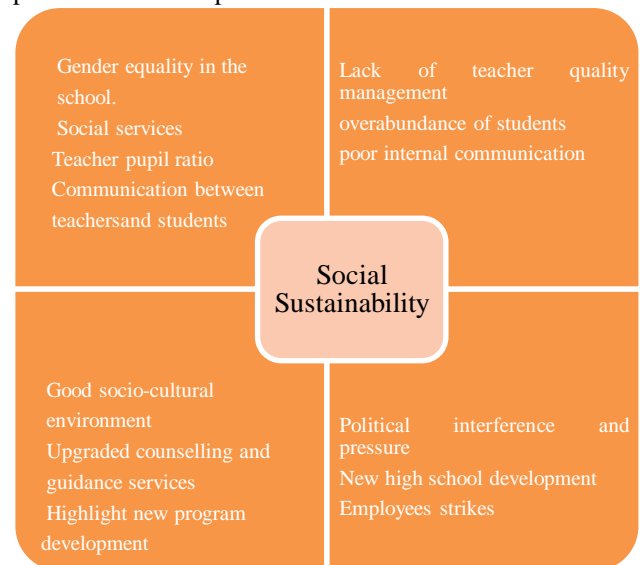


Fig. no. 2.0 Swot analysis of schools on the basis of Social sustainability

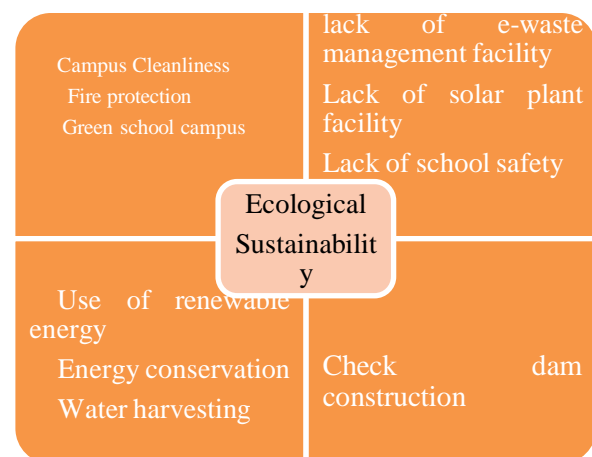


Fig. no. 3.0 Swot analysis of schools on the basis of Ecological sustainability

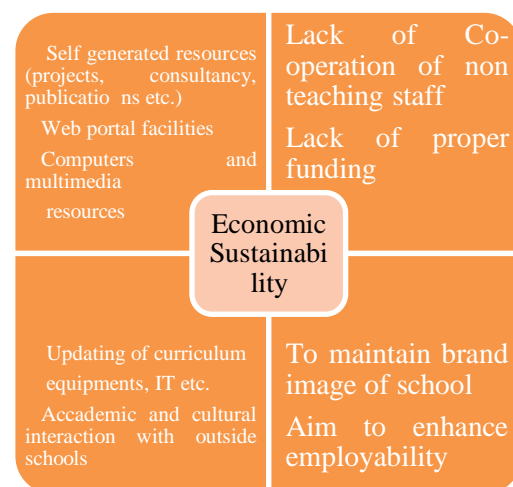


Fig. no. 4.0 Swot analysis of schools on the basis of Economic sustainability

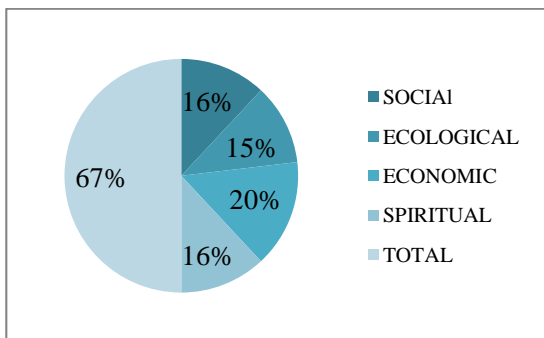


Fig.no. 5.0 Swot analysis on the basis of Spiritual sustainability

Thus,these all are the SWOT analysis of various schools on the basis of some aspects(social, ecological, economic and spiritual development) of good practices which has been done in the schools. It will help to find out the gap of existing practices and provide ways to improve it.

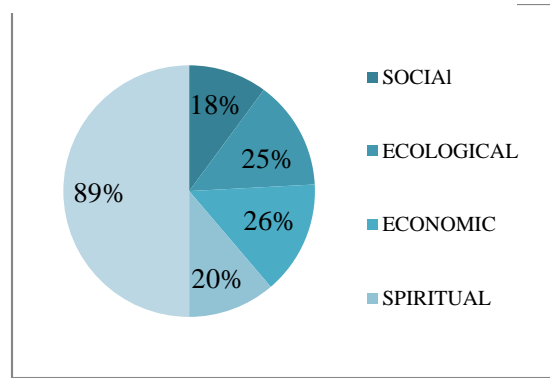
3. To study the effect of Good practices for sustainable development on students’ sustainable behavior.

According to the objective of the study, two schools were selected by randomly method. These are the data of Good practices which is running in the schools on the basis of various aspects i.e.(Social, ecological, economic and spiritual) sustainability.Which are represented by the figure 6 and 7.



School no.1= Chaudhary Beere Singh School

Fig. no. 6 Showing the percentages of Good practices of school no.1



School no.2 Agra Public School

Fig.no. 7 Showing the percentages of Good practices of School no. 2

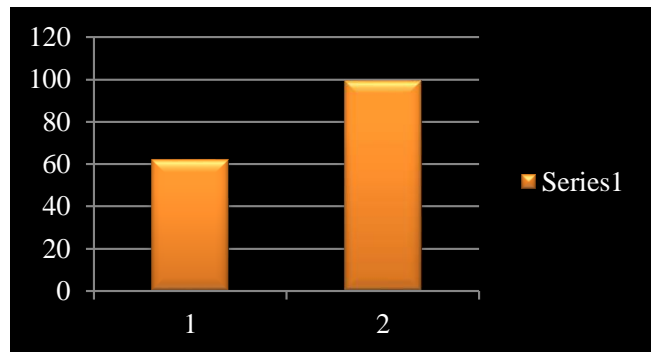


Fig. no.8 Showing the mean value of Good practices on Students’ Sustainable behaviour

Table 2: Descriptive statistics for the Distribution of Students’ Sustainable behavior scores

According to the objective of the study, two schools was selected by randomly method. These are the data of students’ sustainable behavior studied on the basis of the score of mean, median, mode standard deviation and anova was computedwhich is represented by the table 2.

Table 3 Summary of ANOVA

Source	SS	df	MS	
Between-treatment s	70012.82	1	70012.82	$F = 432.36$
Within-treatment s	31898.6	19	161.10	
Error	16031.18	99	161.93	

The F -ratio value is 432.36176. The p -value is $< .00001$. The result is significant at $p < .05$.

In the above table 3, the mean value of group-1 students’ sustainable behavior was found to be 99.48 and the other group-2 mean value was 66.06. The standard deviation of group-1 was 12.8868 and group-2 was found to be 12.4955. Which has indicated slight homogeneity among the scores of students’ sustainable behavior of secondary school students. The scores of right hemisphere were found to be negatively skewed and leptokurtic in nature. The calculated F -value is 432.36176 which is more than p -value $< .00001$, the result is significant at $p < .05$ significant level and degree of freedom $(100-1) + (100-1) = 198$.

Statistically it is clear that there is significant effect of Good practices for sustainable development on students' sustainable behavior and null hypotheses "There is significant effect of students' sustainable behavior towards sustainable development" is rejected. It is concluded that two schools has selected, in which one school has low good practices and another one has high good practices. Which has showed the significant effect of good practices on students' sustainable behavior at secondary schools in which high good practices have done. Students of both the groups are not equally contributed to maintain sustainable development because of their behavior.

4. To compare the sustainable behavior of boys and girls studying in secondary schools.

According to the objectives of the study, Sustainable behavior of boys and girls studied on the basis of the score of mean, median, mode, standard deviation and t-value was computed which is represented by the table 3.

Table 4: Mean,SD and t value(N=100)

Secondary schools students	Mean	Median	SD	t-value
Boys	85.93	86	10.24	0.7434ns
Girls	86.38	86	9.14	

Table 4 reveals that mean of sustainable behavior of boys was 85.93 and girls was found to be 86.38. Standard deviation of scores on sustainable behavior for boys was 10.24, which is greater than the girls i.e. 9.14. It indicates the homogeneity among the scores of girls. The calculated t-value is 0.7434 on comparison of mean scores on sustainable behavior boys and girls is less than the table value 1.97 at the .05 significant level and degree of freedom (100-1) + (100-1) = 198.

Statistically it is clear that there is no significant difference between the sustainable behavior of boys and girls at secondary level and null hypotheses "There is no difference of boys and girls behavior towards sustainable development" is accepted. It is concluded that there is no significant difference between the sustainable behavior of boys and girls studying in secondary schools. Both boys and girls equally contributed to maintain sustainable development because of their behavior.

Conclusion

The investigator first studied the nature of distribution of scores which was found to fit for applying parametric was a basic preliminary step in the specific development of the problem. The purpose of the analysis was to summarize the computed

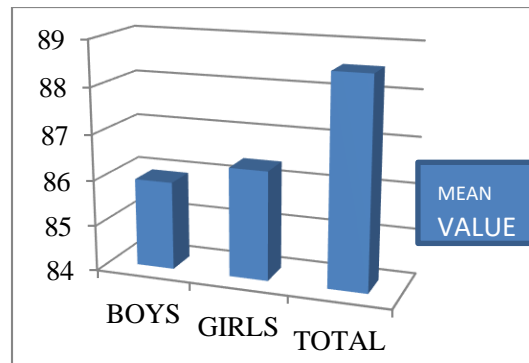


Figure 9.0 showing the mean value of boys and girls towards sustainable behavior

observation in such manner that they yield answers to research problem question and to know the status of good practices and sustainable development in schools. Finally, on the basis of qualitative and quantitative analysis, we can say that one hypothesis has been accepted and another one is rejected. So good practices were found to improve the sustainable behavior of students while no significant difference was found between boys' and girls' sustainable behavior.

Conclusively, it may be said that good practices for sustainable development lies effect on students' sustainable behavior. It helps to improve the sustainable behavior of students. This study shows that there is no such a difference between the behaviors of girls and boys. Good practices also be studied on the basis of these aspects (Social, Ecological, Economic and Spiritual sustainability) The SWOT (Strength, weakness, opportunity, threats) analysis has been done of all these school. Using SWOT analysis, the study aimed to identify gaps in the existing school practices and ways to improve them.

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