

**A STUDY ON THE STATUS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT
IN SECONDARY SCHOOL BIOLOGY CURRICULUM**

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Abstract

This study aims to investigate the opinion of teachers on status of education for sustainable development in secondary school biology curriculum. This study was descriptive in nature and the data were obtained using survey method. A total of 60 school teachers respond to survey, several data analysis procedure were used i.e. Percentage analysis and t-test. Findings of the study revealed that majority of the teachers have favorable opinion to status of education for sustainable development in biology curriculum and in significant role of locale of the schools.

Key words: Education for sustainable development, secondary school biology curriculum.

Introduction

In the world globalization and digitalization results, cultures mix, economies grow and communication speeds up, the mega trends leads to humanity is altering the planet's climate, animals and landscapes in unprecedented ways and threatening all life on earth. Students need new perspectives to be able to understand the changing world and sustainability education provides alternative approach aiming to educate students as global citizens for sustainable development.

Education for sustainable development is an interdisciplinary learning methodology covering the integrated social, economical and environmental aspects of formal and informal curriculum. The Brundtland commission defined sustainable development as meeting the needs of the present generations without putting at risk the capacity of generations to come in meeting their own requirements. Integrating key sustainable development issues into teaching and learning. This may include, for example instruction about climate, disaster risk reduction biodiversity, poverty reduction and sustainable consumption. Education for sustainable development consequently promotes competencies like critical thinking, imagining future scenarios and making decisions in a collaborative way.

Need and Importance

Education for sustainable development empowers learner to take informed decisions and responsible action for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity. The basic aim of education at any level is to enable the learner to make sense of life, and to develop the potential for peaceful coexistence with nature. Education is critical for achieving environmental and ethical awareness, values, attitudes, skills and behavior with sustainable development and for effective public participation in decision making. The concept of sustainable development is dynamic, and the important component to be kept in mind are society, environment, economy and culture in an embedded dimension.

Environmental education has been in vogue since human being having been interacting with the around them and teaching their children to do the same. Rural people everywhere have good perception of their surrounding natural system and deep reverence for the system. They are having passed down both their understanding and reverence carefully from generation to generation through oral communication. Vipindernagara and Dhillon(2007)observed a significant variation in the awareness on environmental education of secondary and elementary school teachers with the former scoring high.Asha(2008) found out that the environmental awareness for promoting human health and quality of life of teacher educators was high in female and urban teachers than male and rural teachers .

Bagoly-Simo(2014)study will focus on how sustainable development is understood and education for sustainable development implement the curriculum .Robert Laurie(2017)identified the need to integrate education for sustainable development across all subjects to provide professional development teachers to ensure education for sustainable development policy implementation and to adopt education for sustainable development management practices to support education for sustainable development in the curriculum in order to broaden education for sustainable development across countries.

The findings of the study may provide insight in to the curriculum development process in secondary education. Since curriculum development is a continuous process, necessary changes are part and parcel in order to make the curriculum more responsive to changing demands and to ensure its relevancy.

Statement of the problem

Environmental problems are of global concern. Realizing its importance, sustainable development has been introduced in schools from lower to higher education level. Any organized teaching and learning situations can be construed basically as consists of a specific curriculum ,which in turn would include the syllabus ,the instructional materials and the transactional strategies. Therefore it is imperative to analyze the content of education for sustainable development in secondary level and accordance with the syllabus prescribed by SCERT. Hence, the study entitled as **“A STUDY ON THE STATUS OF EDUCATION FOR SUSTAINABLE DEVELOPMENT IN SECONDARY SCHOOL BIOLOGY CURRICULUM.”**

Objectives

1. To find out the opinion of teachers on the status of education for sustainable development in secondary school biology curriculum.
2. To compare the urban and rural teachers opinion on status of education for sustainable development in biology curriculum.

Hypotheses

1. The opinion of teachers is favorable on the status of education for sustainable development in secondary school biology curriculum.
2. There is no difference between urban and rural teachers opinion on status of education for sustainable development in biology curriculum.

Method of the study

Survey method is adopted for the study.

Sample

The population includes 60 biology teachers selected as the sample of the study.

Tools used

To assess the teacher’s opinion on the status of education for sustainable development in secondary school Biology curriculum opinionnaire was used in the study.

Procedure for data collection

Before administration of the tools, the nature of data and purpose of research were discussed with the school principals and sample population. After the administration of the tool to the selected sample the scoring was done strictly, the opinionnaire consist of 30 statements and each item has 4 alternatives and comments were converted in to scores as per 4 point Likert type rating scale. The points were strongly disagree(1)disagree(2)agree(3)strongly agree(4).The scores was analyzed to calculate the mean, standard deviation and t-test was used o compare the opinion of teachers on status of education for sustainable development in secondary biology curriculum.

Statistical analysis

- 1. Percentage analysis
- 2 .t- test

Analysis and interpretation

Objective-1

To find out the opinion of teachers on the status of education for sustainable development in secondary school biology curriculum.

Hypothesis- 1

The opinion of teachers is favorable on the status of education for sustainable development in secondary school biology curriculum.

Table-1: Level of opinion of teachers on status of education for sustainable development in secondary school biology curriculum.

Sl.No	Categories	High %	Average %	Low %
1	Urban	10	73	17
2	Rural	17	66	17

Fig-1: Graph showing the level of opinion of teachers on status of education for sustainable development in biology curriculum.

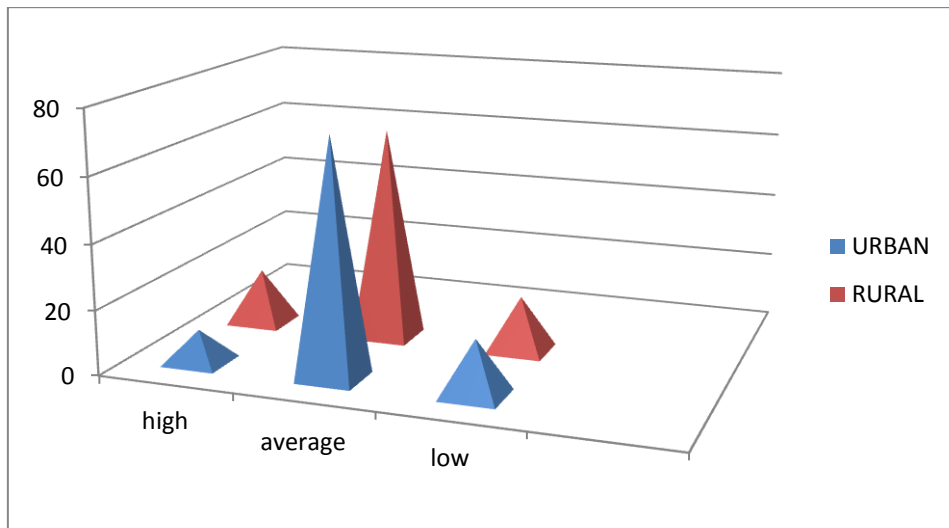


Table (1) Fig (1) shows that 73% of urban and 66% of rural teachers have average favorable opinion on status of education for sustainable development in secondary biology curriculum. At present there are opportunities available within the secondary curriculum and to promote education for sustainable development. School can nurture a new generation of scavy citizens to support sustainable future. Every student in every country learning about sustainable development from well trained teachers equipped with the appropriate curricula and resource.

Objective-2

To compare the urban and rural teachers opinion on status of education for sustainable development in biology curriculum

Hypothesis -2

There is no difference between urban and rural secondary teachers opinion on status of education for sustainable development in biology curriculum.

Table-2: Standard deviation and t-test of opinion of teachers on status of education for sustainable development in biology curriculum.

Sl.No	School Locale	Standard Deviation	t-test	Level of significance
1	Urban	4.45	1.31	Not significant
2	Rural	4.2		

Table (2) shows that the mean score of urban and rural teachers opinion on status of education for sustainable development in secondary school biology curriculum. Standard deviation score of urban teachers(30) 4.45 and rural teachers (30) 4.2.t-test computed for comparison of mean score of urban and rural teachers value was calculated to be 1.31 which is insignificant at .01 and .05 level of significance. Therefore the hypothesis is no difference between urban and rural teachers opinion on status of education for sustainable development in biology curriculum is retained. Teacher should take a leading role in pursuing the action on sustainable development and environment education, whether acting as individuals infusing environmental perspectives into their classes.

Limitations

1. Present study limited to secondary biology teachers only.
2. Sample for present study comprised 60 secondary biology teachers. The sample is only a very small portion of the entire populations of teachers in state. Therefore research studies with much larger sample size would be required to ensure appropriate generalizations of the findings of the study.
3. Very little time was made available for conduct of the study.
4. Study limited to Kerala state syllabus.

Educational implications

1. The current curriculum and text books should be reviewed to improve the quality of curriculum.
2. Ministry of education should offer special training for curriculum experts and to develop the policy of curriculum development process.
3. Effective, purposeful training and awareness programmes are to be timely conducted.
4. The text books must be framed in line with the issues which are discussed at national and international levels of country.
5. The competence for Education for sustainable development does depends on awareness of students thus it is necessary for students to get good exposure to national and international level issues.

Further research studies

1. The study was conducted on the status of education for sustainable development on biology curriculum. Further and related studies are recommended to be carried out in the related science curriculum so that the curriculum should be compared.
2. The curriculum of primary and higher secondary level can be studied to see their relevance to education for sustainable development.
3. This study can be replicated with different mode of data collection like: focus group, individual interviews of students, teachers and other stakeholders of education.
4. This study can be done on other religious and cultural groups and their education system to find their relevance to education for sustainable development.

Conclusion

Education for sustainable development isn't only about being environmentally-friendly. It also involves developing life skills including leadership, communication, management and personal development. The nature of the curriculum and flexibility of the class timetabling allow the teacher to focus on the interrelationship between subject areas which makes the integration of an education for sustainable development easier. The result of the study concluded that secondary biology teachers have favorable attitude on status of education for sustainable development in secondary school biology curriculum and there is no significant difference in opinion with reference to locale of the school.

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