

Analysis Of Primary Classes Textbooks With Reference To Environmental Awareness

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Abstract

This paper focuses to know about the suitability of content of prescribed textbooks of primary classes in generating environmental awareness among the students. The textbooks play a crucial role in generating educational interactions in the classroom between teacher and learner & assumes a place of paramount importance in the field of formal education. Content of textbooks of different subjects was analyzed by using an Analysis Sheet.

The content of text-books of major subjects prescribed by different boards of school education for class V was found to be suitable and sufficient to provide full opportunities to make children environmentally aware. Researcher is quite hopeful that the findings will contribute to the achievement of goals of Environmental Education.

Keywords- Textbooks, Primary Classes, Environment

Primary education is that foundation on which construction of strong and beautiful building of education depends. The primary stage is considered to be a sensitive stage for learning and for forming attitudes. Once the correct attitudes and values are implemented in the impressionable minds, they will carry them in later life. Many Psychologists support early childhood as a significant time, when lifelong habits & attitudes are formed. **Bloom's** (1964) *Stability and Change in Human Characteristics* argues that the human organism is most sensitive to environmental inputs during periods of rapid growth which occur in the early years (**Zigler and Berman 1983**). **EE must** be instilled in children when they are very young; a late start makes it difficult to break through already formed habits and attitudes, and the stereotypes and images which the learner has absorbed from his daily life, with the help of mass media (UNESCO, 1985), **Miller (1975) found that a significant portion of the development of** attitudes towards environmental conservation and pollution happens at elementary school level. That is why, imparting EE to primary school children assumes great significance. Piaget has identified four successive stages which he believes are the principal means of knowing his environment -

Sensory Motor	0-2 years
Pre-operational	3-8 years
Concrete operational	0-12 years
Stages of formal operation	13-15 years

At primary level children would be divided between second and third stages. This is the best suited period for generating environmental awareness because the children are perceptually oriented, curious, active and they can perform elementary logical operations. Besides this language is also very important at this stage because when children try to think of the right word for the meaning they wish to convey and in that process they increase their own understanding of the ideas involved. For this reason, much effort should be made in the course of early exploratory words to the concrete objects they find and handle. Textbooks can play a vital role to utilize these characteristics of primary school children for generating environmental awareness among them. Therefore, there should be a thorough review of textbooks of all the subjects and efforts should be made to make them environment oriented at primary level, so that the appropriate attitudes, values, feelings and worthy motives towards the environment can be inspired, instilled and nurtured. **Researcher was quite hopeful that the findings would contribute to the achievement of goals of Environmental Education.**

OBJECTIVES OF THE STUDY

1. To analyse the content of text-books of major subjects (Hindi, English, Science, Social Science) prescribed by UP board for primary classes V in relation to environmental concepts.
2. To analyse the content of text-books of major subjects (Hindi, English, Science, Social Science) prescribed by CBSE board for primary classes V in relation to environmental concepts.
3. To analyse the content of text-books of major subjects (Hindi, English, Science, Social Science) prescribed by ICSE board for primary classes V in relation to environmental concepts.

Sample

For the critical evaluation the text books of Class V of all the major subjects (Hindi, English, Social studies, Science) prescribed by U.P., CBSE & ICSE boards respectively were included and only thematic (content) part of books was taken into consideration.

Method

content analysis method was employed.

TOOL

To collect the relevant data according to aims and objectives of the study, no ready-made tool was available therefore researcher made an Analysis sheet for critical evaluation of text-books.

TECHNIQUE

For analysing the content of textbooks, descriptive statistics was used.

Analysis and Interpretation

TO ANALYSE THE CONTENT OF TEXT-BOOKS OF MAJOR SUBJECTS (HINDI, ENGLISH, SCIENCE, SOCIAL SCIENCE) PRESCRIBED BY U.P. BOARD FOR CLASS V IN RELATION TO ENVIRONMENTAL CONCEPTS -

The environmental content of text-books of all the major subjects (Hindi, English Science, Social Science) of Class V in relation to environmental concepts has been shown in table.

Table 1

Percentage of Coverage of Natural and Manmade Environmental Concepts in the Particular Subjects'Book Prescribed by U.P. Board for Class V

SUBJECTS	Topics related to Natural Environment & their coverage percentages	Topics related to Manmade Environment & their coverage percentages	Total number of chapters
HINDI	1.हम सब सुमन एक उपवन के 2.में ऋतुओं में प्यारा बसंत 3.फूल बनेंगे हम 4.फूल 5.हरियाली 6.मेरा गाँव 7.वृक्ष हमारे जीवन साथी 8.जंगल (33%)	1.प्रदेश दर्शन 2.शक्ति श्रोत रिहंद 3.वैज्ञानिक रमन 4.बिहू 5.गुरु नानक 6.मोहम्मद साहब 7.सरदार भगत सिंह 8.बाल सभा (33%)	24
ENGLISH			

SCIENCE	1. जन्तुओं और पौधों के लक्षण	1. कुपोषण और उसके प्रभाव	15
	2. जन्तुओं और वनस्पतियों में अनुकूलन	2. भोजन करने की आदतें और	
	3. बीज तथा उनका अकुरण	खाद्य पदार्थ का संरक्षण	
	4. मानव कंकाल और गतियाँ	3. परिवेशीय स्वच्छता	
	5. मनुष्य और उसका भोजन	4. वायु प्रदूषण	
	6. संक्रामक रोग	5. बल कार्य तथा ऊर्जा	
	7. मृदा संरक्षण	6. सरल मशीनें	
	8. वायु	(40%)	
	9. छाया व ग्रहण (60%)		

SOCIAL SCIENCE	1. प्राकृतिक रचना	1.हमारा देश भारत	20
	2. जलवायु	2.कृ ष	
	3. प्राकृतिक वनस्पति	3.उद्योग धंधे	
	4 मट्टी	4.भारत के राज्य और	
	5. सचाई व जल वद्युत	संघीय क्षेत्र	
	6. खनिज पदार्थ	5.हमारी दुनिया	
		6.क्लाईव	
		7.मराठा शक्ति -	
		बाजीराव प्रथम	
		8.हैदर अली टीपू	
		9.लार्ड व लयम बैंटिक	
		और राजा राम मोहन राय	
	(14%)	10.नवजागरण	
		11.महाराजा रणजीत	
		संह	
		12.प्रथम स्वतंत्रता	
		संग्राम	
		13.महात्मा गांधी	
		14.स्वतंत्रता के बाद	
		(40%)	

HINDI TEXT-BOOK

The perusal of the above table reveals that the Hindi text-book of class V of U.P. Board contains an equal percentage of units covering natural (66%) and manmade (65%). environment. Hum Sab Suman Ek Upvan Ke, Mein Rituaon Mein Nayara Basant, Phool

Banage Hum, Vraksh Hamare Jeevan Sathi, were some poems, essays , bibliography to expose the natural environment in a very attractive manner. By reading them one can be fascinated by nature, and lessons related to manmade environment like Pradesh darshan. Vagyanik Raman. Rihand, Bihu, Guru Nanak, Mohammad Saheb, Sardar Bhagat Singh, Bal Sabha were meant for providing the knowledge about scientific & technological advancement of our country. Our cultural festival, Our great freedom fighters, Social reformers and Political system of India were the topics in the Hindi text book of class V to develop nationalism as well as for making aware about the customs & modes of a society.

SCIENCE TEXT-BOOK

Like the text-books of class III & IV, the science textbook of class V was very rich in covering the concepts of the natural environment (60%), the man made environment was also covered in appropriate portions (40%). Table 4.1.1.3 reveals that natural environment based subject matter was related with Plants, Animals, Man, Soil conservation, Air, Shades & Eclipse. While Food habits, Malnutrition, Environmental Sanitation, Air pollution, Simple machines, Force, Work and Energy were the main chapters representing manmade environment. It appears very relevant for class V because at this stage children can think, reason out and understand the consequences of scientific advancement and its related factors in the perspective of environmental quality.

SOCIAL SCIENCE TEXT-BOOK

In social science textbook manmade environment was covered in quite a high proportion (67%). Socio-cultural environment of the country has been emphasized in the prescribed textbook of social science. Hamara Desh Bharat, Krishi, Udhog - dhande, Hamari Duniyan, Maratha Shakti Bazirao etc. were the topics covering man made environment, Topics on natural environment like Climate, Soil, Irrigation & water electricity, Minerals Natural vegetation were also given to realize the importance of natural resources and natural phenomenon and its importance for human beings. Knowledge and awareness about the natural & socio-cultural environment may be introduced in students through the social science text book of class V of UP board Therefore, it can be said that the books of major subjects are having appropriate topics in relation to environmental concepts.

TO ANALYSE THE CONTENT OF TEXT BOOKS OF MAJOR SUBJECTS (HINDI, ENGLISH, SCIENCE, SOCIAL SCIENCE) PRESCRIBED BY CBSE BOARD FOR CLASS V IN RELATION TO ENVIRONMENTAL CONCEPTS -

Percentage of coverage of environmental concepts related to natural and manmade environment have been presented in the following table.

Table 2

Percentage of Coverage of Natural and Manmade Environmental Concepts in the Particular Subjects'Book Prescribed by CBSE Board for Class V

SUBJECTS	Topics Related to Natural Environment and their Coverage Percentage	Topics Related to Manmade Environment and their Coverage Percentage	Total of Number of Chapters
HINDI	1.आया बसन्त 2. अन्डमान निकोबार 3. झाड-झंखाड से बगीचा (10%)	1. पुस्तकें 2. देश हमारा 3. धरती पर के बच्चे 4. उमंग का त्यौहार-बैशाखी 5. चचा चराग की दीपावली 6. इंडोने शया 7. अंतरिक्ष के बढ़ते चरण 8. प्रदूषण के आ वष्कारक (31%)	29

<p>ENGLISH</p>	<ol style="list-style-type: none"> 1.The Blue whole 2.Bronto 3.The Sun 4.How Strange it is 5.River 6.Thunderstorm 7.The Contrary chameleon 8.This Wonderful World 9. The Earth Is Just Words Ours <p>(28%)</p>	<ol style="list-style-type: none"> 1.Chronicle in Rock 2.Curiosity 3.Communication: Just Words 4.I Hate my Friend 5.Come Meet Them <p>(16%)</p>	<p>32</p>
<p>SCIENCE</p>	<ol style="list-style-type: none"> 1.Life of Earth 2. Life Functions 3.Plant Distribution 4. Plant Reproduction 5. Life-Styles 6. Survival 7. Bones & Muscles 8. The Brain & Nerves 9. Natural Resources 10. Air 11. Shadows & Eclipses <p>(69%)</p>	<ol style="list-style-type: none"> 1Food, Health & Disease 2.Pollution 3.Force 4Energy Sources 5.Machines <p>(31%)</p>	<p>16</p>

SOCIAL SCIENCE	<ol style="list-style-type: none"> 1.The Earth & Solar System 2.The Globe & the Motions of the Earth 3.Latitude Longitude & Time 5.Climate 5. Climatic Regions of World 6. India - Their Locations & Neighbours <p style="text-align: right;">(25%)</p>	<ol style="list-style-type: none"> 1.Lte in Hot-wet land (Zaire) 2.Lite inSaudi Arabia 3.Life in Saudi Japan 4.Life in italy 5.Life in Argentina 6.Lite in Canada 7.Life in Polar Region 8.Means of Transport in the the world 9.Means of Communications in the world 10. Our National Goals 11.Our Constitution & Govt 12. Our Fundamental Rights & Duties 13.Govt. at centre 14.UNO 15. The story of Scripts & Numbers 16. Great Explorers of World 17. Great Men of the world 18.Remember <p>Geographical terms & facts.</p> <p style="text-align: right;">(75%)</p>	24
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HINDI TEXTBOOK

It is evident from the above table that the Hindi text book contains 10% content related to the natural environment & 31% content related to manmade environment. Aaya Basant, Andaman Nicobar, Jhar-Jhankhad Se Bageecha like topics represent neutral environment & its beauty in a very effective manner. These topics can be useful for attracting children towards nature. Cultural, Scientific & technological, Social environment of the country have been reflected in chapters like Umang Ka Tyohar - Baisakhi, Paryavaran Aur Pradusan, Bijali Ke Bulb Ka Avishkar, Chacha Chirag Ki Deepawali, Desh Hamara, Through these topics

positive attitudes and values can be developed in students for our country and its socio-cultural environment. It seems that Hindi textbook has sufficient environmental concepts.

ENGLISH TEXTBOOK

In the English text-book of CBSE board of class V, there were thirty-two chapters, out of which nine chapters were devoted in describing the bounties of nature and five chapters were based on socio-cultural environment. The Blue whale, Bronto, The Sun, River, Thunderstorm, The Earth is ours were the topics representing the natural and socio cultural environment. Altogether 44% subject-matter was related to environmental concepts. This percentage of environmental content of English textbook can be considered as quite satisfactory.

SCIENCE TEXT-BOOK

In science text book of Class V prescribed by CBSE board, major portion of content provides knowledge about various components of the natural environment -their interdependence, their functions & their effect on human beings. Chapters like Life on Earth, Life Functions, Plant Distribution, Life Styles, Survival, Natural Resources, Air were in the science text book to provide above mentioned information and knowledge about nature. Food, Health & Disease, Pollution, Energy Sources, Force, Machine were the topics representing manmade environment. Study of these topics leads the researcher to assume that these topics can be helpful in generating an awareness about health and hygiene, causes of diseases, and various kinds of pollution. Science book was found very rich in providing the environmental concepts.

SOCIAL SCIENCE TEXT BOOK

In the social-science text book as far as the coverage is concerned 25% content was based on the natural environment while the rest 75% topics were related to socio-cultural environment. Topics having environmental concepts of the natural environment were the Earth and Solar System, The Globe & the Motions of the Earth, Latitude, Longitude & Time, Climate etc..Chapters related to socio-cultural environment were Life in Different Parts of the World, Means of Transport & Communications, Our National Goals, Our Constitution, Rights & SH. Duties, UNO, Great Men of the World. Social life in different parts of the world, Modern means of transport and communication, UNO-its functions, Our political system, Famous personalities of the world have been discussed in these chapters.

About the books of major subject prescribed by CBSE board for class V, it can be said that the books were rich in content, and fulfil the requirement of knowledge at the particular age to make the children aware about the environment.

TO ANALYSE THE CONTENT OF TEXT BOOKS OF MAJOR SUBJECTS (HINDI, ENGLISH, SCIENCE, SOCIAL SCIENCE) PRESCRIBED BY ICSE BOARD FOR CLASS V IN RELATION TO ENVIRONMENTAL CONCEPTS

The results of this analysis for textbooks of the ICSE board are presented below in table.

Table 3

Percentage of Coverage of Natural and Manmade Environmental Concepts in the Particular Subjects'Book Prescribed by ICSE Board for Class V

SUBJECTS	Topics Related to Natural Environment and their Coverage Percentage	Topics Related to Manmade Environment and their Coverage Percentage	Total of Number of Chapters
HINDI	1. वही तो देश मेरा है 2. सूरज चमका 3. मुझे सीपी कहते हैं 4. हेमंत (14%)	1. लखने की कला 2. सर आइजक न्यूटन 3. चेचक का टीका 4. परिवर्तन 5. पंचायत 6. वर्मा (21%)	28
ENGLISH	1.The Black Cloud 2.Hundreds and Thundreds 3.The Vulture 4.The Rarest Animal of All 5.The Tide in the River 6.The Stormy Day (25%)	1. Not Such a Bad Thing After All 2.Jimmy Jet & the TV set 3.A Different Kind of School 4.Susruta (17%)	24

<p>SCIENCE</p>	<ol style="list-style-type: none"> 1. Plant Reproduction 2. Homes of Animals 3. Study of Rocks 4. Air around us 5. The Moon 6. More About our Body 7. States of Matters <p>(70%)</p>	<ol style="list-style-type: none"> 1.Reasons for Safety 2.Building A House 3,Simple Machines <p>(30%)</p>	<p>10</p>
<p>SOCIAL SCIENCE</p>	<ol style="list-style-type: none"> 1.Earth-Our Home 2.The Lines of Maps 3.Maps & Globes 4.Why Climate Varies 5.Climatic Regions of the World. <p>(26%)</p>	<ol style="list-style-type: none"> 1.Saudy Arbia 2.The Republic of Zaire 3.Green Land 4.Argentina 5.Important International Routes 6.Modern Means of communications 7.The Birth of the UNO 8.The Way that United Nations Works 9.The Spread of Knowledge 10. Living Longer & Healthier 11. The Age of Machings 12. Some Great Men of India 13. Some Great Men ofWorld 14. India Wins Freedom <p>(74%)</p>	<p>19</p>

HINDI TEXTBOOK

Observation of the above table indicates that 14% content of Hindi textbook represents the natural environment while 21% of total content was based on manmade environment. Topics

related to the natural environment were Sooraj Chamka, Mujhe Seepi Kahte Hein, Hemant, Wahi To Mera Desh Hein. These Topics seem to be sufficient in order to provide information about the natural environment. Sir Newton, Panchayat, Verma, Likhnei Ki Kala were related to socio-cultural environment. These topics can motivate the students to understand the role and contribution of the individual & social groups in the development & improvement of nature as well as of the social environment.

ENGLISH TEXTBOOK

The English text-book was found satisfactory in providing the knowledge of environmental concepts as it contains 42% matter related to the natural and manmade environment. The Black Cloud, Hundreds & Thundreds. The Vulture, The Rarest Animal of All, The Stormy Day were topics related to natural environment, in these topics knowledge about rare species of animals, wonders & mysteries of nature have been explained. Manmade environment based topics like Jimmy Jet & the TV Set, A Different Kind of School, Susruta showing mainly socio-cultural, scientific & technological environment. So it can be said that an English textbook can develop emotions, feelings & love for nature as well as a positive attitude for maintaining and improving the quality of the overall environment.

SCIENCE TEXTBOOK

Analysis of the textbook of science indicates that out of ten units, seven (70%) were found representing the natural environment by the topics like Plant Reproduction, Homes of Animals, Study of Rocks, Air Around Us, The Moon, More About Our Body. In these topics animal and plant kingdom, atmosphere, lithosphere were mainly emphasized. Content (30%) viz Reasons for Safety, Building a House, Simple Machines represented manmade environment. It may be thought that science textbook of class V can contribute a lot in the development of right attitudes, skills, understanding, feelings and responsibilities regarding the problems of environment.

SOCIAL SCIENCE TEXTBOOK

In the social science text book, 26% topics were related to the natural environment while 74% topics were based on manmade environments. Various Parts of World, Modern Means of Transport and Communication, Great Men of India and the World, India Wins Freedom were the topics providing knowledge about socio-cultural, scientific & technological, political, educational environment of the country as well as of foreign countries. Topics related to the natural environment were Earth, The Lines of Map, Maps and Globes, Climatic Regions of the World, Why Climate Varies? By giving the picture of foreign countries with our Zoo-geographical phenomenon it may be inferred that children can develop more clear concepts about the natural and socio-cultural environment.

On the basis of the findings of the study ,content of text-books of major subjects prescribed by different boards of school education for class V was found suitable and sufficient to provide full opportunities to make children environmentally aware.

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