3.0. **Introduction**: Like between Education and environment is as old as human civilization with improvement in technology and invention, the interaction between man and nature became weaker. Schools were away from the Environment and community with the availability of systematic and comprehensive knowledge from the text books. The pedagogical movements launched during 18th and 19th century could not re-establish the relationship between child and the nature. Even, efforts made by John Henry and Mahatma Gandhi could not bring education out of four walls of School building permanently. Facilities available in the modern class room situation could not incorporate ideas of “Nature Study”, field Study,” or “out door Education”. On the other hand, the gap between education products and environmental necessities became much wider to threat existence of mankind in this planet.

Researches on environmental studies received momentum through out the world since 1970. Under the leadership of UNESCO regional workshops, seminars and conferences are being organised from time to time to provide new direction to the programme with the introduction of the subject in the School curriculum, researches in the areas of formulating objectives, selection of contents, methods of teaching, development of instructional materials, teacher training programme and evaluation procedure have been initiated in different countries. The subject have now occupied central place both in formal and non-formal system of education.

In this Chapter an attempt has been made to review the work that has been done in the areas of the Environmental studies. The work has been divided into two main sections as (i) Review of studies done Abroad and (ii) Review of studies done in India.

3.1. **STUDIES DONE ABROAD**: Some of the studies conduct outside India are as follows:-

Elizabeth Perrott (1970) placed Environmental Studies in School curriculum increased awareness has also made its impact on the Schools and characterised by their inter-disciplinary nature, and their suitability of the involvement of pupils in individual studies. Presentation deals with (1) Environmental studies in the Schools, (2)
independent studies by children (3) teacher as an organiser of independent studies (4) New Methods of professional training.

The empirical studies showed that environmental studies can be carried out in the Schools, that the use of individual methods does not require a greater allocation of time than in given to class teaching and that it is possible to meet examination requirements by using these methods. With the development of new methods of training to assist the teacher in the organization of this type of work in the School and a re-organization of the School day in secondary Schools, the major obstacles to implementation of environmental studies would be removed.

Carson S. MCB(1978) at the Primary stage environmental studies seen as involving pupil in personal experiences of the environment by direct exploration. It designed to encourage the primary children to come for more expertly directed studies have root in the Sciences and one in the humanities in which most people look at the environment in real life.

Kent(1988) curriculum statement emphasises that environmental education is neither a subject nor a syllabus but rather one function of whole curriculum. It is recognised that the teaching strategy should contain three elements, (1) the environment as a medium for education using real life situations, (2) the environment as a subject for investigation and (3) education for conserving and improvement by studying contemporary issues.

Suad Suad, saide (1995) University of Ottawa conducted study, the Venezuelan environmental education teacher training programme. An analysis of professional and environmental competencies. The purpose of this research was to describe and analyse the environmental education teacher training competencies model in Venezuela. More specifically, the study concentrates on the Universidad Pedagogica Experimental Liberator (UPEL). This University is the leading institution of the teacher training in Venezuela.

The UPEL Environmental Education Teacher training model consists of 21 (twenty one) competencies associated with five environmental education areas. This model is examined using the UNESCO model as an international standard, the later of which consists of twenty eight competencies associated with professional and environmental education areas. Examination of the UPEL model also involves as
assessment of the perceptions of Venezuelans concerned with environmental education with regard to the relevance of the UPEL models Venezuela environmental reality.

The methodology applied in this study is set in the context of a content analysis of major UNESCO and UPEL model documents and a survey of key Venezuelan individuals, UPEL environmental education professors and UPEL teacher candidates who have already taken environmental education.

In this analysis a literature review also serves as an important source of information. Themes included in this review are associated with environmental education, the training of teachers in environmental education, competency based teacher training, the Venezuelan experience and the UNESCO and Venezuelan teacher training models.

The research stresses the description, analysis and interpretation of relevant aspects related to the UPEL competencies model and its relevance to Venezuelan reality. In light of major conclusions and implications of those aspects as set of recommendation is drawn. For example, this study reveals a critical need for research and evaluation of environmental education teacher training competency models. In the context of the comparison between the UNESCO and UPEL models. Significant differences in their structure and content have been found. The UPEL models lacks a set of basic professional and environmental education competencies required for training effective environmental educators who are able to contribute to the prevention and solution of environmental problems. In the context of the assessment of perceptions it has been found that key individuals, as well as professors and students of environmental education believe that UPEL model is not relevant to the country’s problems and needs. It appears that in addition to the deficiency in competencies, a lack of logistical support in the implementation of the model is also a serious weakness. Results of this study reveal an immediate and critical need for necessary adjustments to the UPEL environmental education teacher training model.

Finally, it is expected that this research, concerned as it is with the quality of environmental education teacher training will provide the necessary incentives and information for Venezuelan decision makers to improve the UPEL environmental education teacher training model.
Dierberger, Betsy S. (1998) University of Nebraska Lincoln conducted research on Determination on informed choice and pathways leading to selection of the environmental studies major.

The reasons why students select the Environmental Studies (ES) major at the University of Nebraska were investigated. A survey was used to determine factors to influence and carrier awareness as measures for making and informed choice in selection of a major. In addition, pathways of selection of the ES major were determined. Thirty five students participated in interviews. Student interviews were conducted to determine the “life-world” of the students during the decision making process leading to the selection of major. Interest in environmental issues, the challenge of solving environmental problems and a desire to make difference in the environment were factors identified as positively influencing selection of this major. Environmental carrier attributes which influenced choice of major were variety of tasks and use of Science skills.

Faculty advisor perception of carriers and advisor understanding of why students select the ES major were explored. Faculty advisors recommended selection of the ES major to the students who demonstrated a clear interest in natural resources. Faculty advisors and students selected carrier and job requirements.

Informed choice was defined as evidence of student self-knowledge of interests, abilities and aptitudes and evidence of awareness of carrier opportunities in environmentally related areas. Students expressed self-knowledge of factors influential in major selection and carrier awareness. Therefore, the students did make informed decisions for selection of the ES major.

Interview themes suggested three pathways for the selection of the ES major. (1) Direct choice (2) Focused choice and (3) Delayed choice. Direct choice occurs then a student with ES interest selects the major and enrolls as a new student. Focused choice occurs when students have life or School experiences that narrow their interests and carrier goals, leading to selection of the ES major at new student enrolment or when current students change to the ES major. Delayed choice occurs when current students have negative School experiences and desire to change their academic major to ES.
Stevens, Robert Henry (1998) University of California Studied, American Indians, Alaska Natives and Native Hawaiians and other indigenous people have engaged in ongoing struggles with numerous anthropologists and archaeologist regarding authority and jurisdiction over human remains and cultural resources claimed by the tribes, nations and communities of indigenous peoples. Debates and discussions raise problems and questions which requires a deeper level of enquiry as to the nature of the concerns and disagreements. The present volume reassess some of these issues, to promote understanding of deferring perceptions, fields of research and ideologies.

In the course of considering these issues, a cultural research design was developed to attain research validity within indigenous peoples and academic communities. The research design was implemented, tested, reviewed and replicated in conjunction with sovereign American Indian indigenous peoples in local communities. The communities of indigenous people are viewed as valid sources of cultural accounts, who have social and epistemological authority regarding their cultural knowledge, practices and properties. Cultural texts produced by these communities are valuable for development of cultural and transcultural understanding. Acknowledgement of the importance of the indigenous community in this regard is explored in relation to a people’s exercise of cultural sovereignty.

Cultural and ethnographic authority are inherent within and exercised by, the indigenous community; community and cultural Scholars exercise cultural self-determination as they plan, authorised conduct, and review research procedures and outcomes, mindful of concerns for protection of confidentiality and the community’s specific and/or collective intellectual property rights.

Research results are useful in promoting indigenous group’s cultural continuity, they are also important for education, public and environmental laws and policy and other contexts. A specific research design presented in this volumes was tested in indigenous communities who used the research design to address some of their basic concerns, including repatriation, historic preservation, cultural resources, language education and environmental studies.

This volume systematically places the needs and concerns of the indigenous people as a priority. By attending their narrative and discourse and assisting the people
rather than impeding them in their exercise of cultural sovereignty, researchers can serve indigenous communities as locally defined and envisioned.


Man kind’s survival is intervene with the state of environment. Human activities have a great impact on the environment, while the environment, again, determines the quality of human’s life. This study aims to aid mean kind, through environmental education to environmentally sound behaviour with an eye on sustainable development.

To attain this, the different environmental problems and their causes are sorted out first. Then the factors that can lead to environmental degradation are investigated. From this, it is quite clear that in the future, the world and the RSA will be more densely populated because more polluted be ecologically less stable and will therefore be more sensitive to natural disasters.

Because environmental education can make a positive contribution to this, a short historical survey of environmental education is given. The role and contribution of some international organisations is investigated. Development in the RSA are surveyed and the influence of the earth summit on environmental education in the RSA is analysed.

At birth mankind is thrown into the world from where he can escape only at death: In this world in which he has to stay, he must give meaning to his existence, while also trying to improve the environment to guarantee the survival of coming generations. Bearing in mind the educational and environmental relationship between any human being and his environment, the essential characteristics of environmental education are exposed in order to set possible conditions for authentic environmental education. Special emphasis is placed on environmental behaviour aimed at sustainability.

All this culminates in environmentally sound behaviour that acts as the over all aim for environmental education. Because man’s environmental ethics determines his behaviour towards the environment, three different approaches to environmental ethics are distinguished. Emphasis is placed on the necessity for environmental literacy. In order to try to understand man’s behaviour towards the environment, three styles of
environmental behaviour are analysed. For further clarification of environmental behaviour two Scientific earth genesis hypotheses are also described.

In conclusion, this study leads to certain principles that can lead to the development of environmentally sound behaviour aimed at the sustainable survival of mankind.


Environmental Education emerged as a subject of a global discourse in the early 1970s, coinciding with the beginning of China’s gradual re-opening to the outside world. By the 1980s, global discussion of the sustainable development lead emerged, focusing on the need to integrate economic and environmental consideration in formulating environmental policy. During these decades, models of environmental education(EE) were developed and diffused by international organisations and elements of these models were adopted in China in planning for environmental education. By the early 1990s, a decision had been made to “infuse” environmentally related materials through out the curricula in Chinese Schools.

This research draws on classroom observations and teachers interviews in Schools which had been early pilot EE sites. Several themes in their teaching of environmental studies emerged at these pilot EE Schools: (1) Attempts were made to make environmental education relevant to the lives of students. (2) EE was tailored to the specific circumstances of the surrounding area which the School served; (3) Students directed “action” research was encouraged; (4) a global view of the environmental protection was promoted; and (5) Attempts were made to bridge environmental materials across the curriculum.

Data from an environmental questionnaire collected in fifteen High Schools in the Chendgu region of Sichuan province is analysed. Students in six pilot EE Schools had significantly higher total mean scores on environmental knowledge scale than did students from the nine non-pilot EE Schools in the sample. Difference in attitudes towards environmental protection while statistically significant, were weaker than difference in environmental knowledge.
Lin, Emily Shu-ying (2000) University of Toronto conducted research on Environmental Education in Pre-Service Teacher Training programmes in Canada.

Continually identified as one of the key agents of change, teachers play an important part in promoting and improving the capacity of individuals to address environmental and development issues and problems. The preparation of pre-service teachers is especially critical in achieving environmental and ethical awareness as well as in developing the values, attitudes, skills and behaviours conducive to a sustainable future. However, despite being re-recognized as a major priority for research and action in many major international conferences on environmental education, Environmental Education research in Pre-Service programmes has been given little attention in Canada. The only systematic national evaluation of environmental education at the teacher preparation level in Canada was conducted by John Towler (1980-81), twenty years ago. Since Towler's (1980-81) survey, there have been few investigations examining the status of environmental education in Canada Pre-Service teacher preparation programmes. Towler surveyed Pre-Service teacher education programmes across Canada and reported that many of the respondents at that time did not indicate a high level of commitment to implementing environmental education in teacher programmes, despite the call for increased environmental education at all levels of education. This present study was an attempt to assess the status of environmental education at the teacher preparation level since Towler's study. A national survey using a modified version of Towler's questionnaire was distributed to all Pre-Service teacher training institutions across the Canadian provinces to determine the present level of environmental education which pre-service teacher receive in teacher preparation programme. In addition, two case studies examining the design, content, and methods of two Pre-Service teacher education courses specialisation in environmental education were conducted to understand and describe the nature of environmental education currently found in Pre-Service teaching programmes. (Abstract shortened by UMI).

Tooker, Gail Patricia (1999) University of Maine conducted study on Experiences and factors influencing in New York state Public and Middle Schools to focus on Environmental Education in their Teaching.
This study focuses on how fourteen elementary and middle level teachers in New York close to teach environmental topics as part of their Science curricula. Prior research suggested that factors influencing teachers to make curricular decisions are different from those that motivated them to become teachers in the first place (Expinet et al. 1992). This was supported by the results of this study, which found that most of these teachers made the decision to begin teaching environmental education (EE) including participation in EE-oriented in-service programs, media coverage of environmental issues, encouragement experiences in childhood or early adulthood with the environment and/or with EE.

Studies examining experiences that influence people to practice “environmentally responsible” behaviours (Chawla, 1995, MC Garry, 1994, Tanner, 1994) suggested that positive childhood contacts with nature were important predictors for such behaviours in adulthood. Findings of this study were largely consistent with these results, however, this sample of teachers views their childhood nature experiences as being mostly responsible for the development of their appreciation of the environment, while their actual decision to begin teaching EE was primarily influenced by other experiences as discussed above. This study also examined how these teachers prepared themselves for teaching EE. The findings indicate that these teachers used a wide variety of preparation strategies. A minority reported becoming prepared for teaching EE through their pre-service teacher education programs. These results were in agreement with prior findings that most teachers education programs in this country do not include a focus on EE. Even where preparation of EE is includes, it has been rated by the participants as in adequate (Designer, 1990 McKeo-wn-Tce, 1995).

The sample was established via nomination by EE experts in New York and written invitation. Seven males and seven females representing grades K. through 8th volunteered to participate. Data on potentially influential experiences and demographic factors were gathered via written questionnaire and structured interviews and were analysed using conventional qualitative analysis techniques.

Sall, Amadou Bocar Cire (1999) University of Tennessee conducted research on the status of Environmental education in Elementary and Middle Public Schools of East Tennessee.
World wide efforts are being made to improve the quality of human life and achieve these ends, education’s must prefer individuals to become environmentally literate citizens and will informed decision makers and a fast changing technological world. This descriptive study used surveys to determine the status of EE in East Tennessee School systems as perceived by elementary and middle school teachers. Through this study, information was provided about what is being done and what needs to be done to improve environmental education in the State of Tennessee. A valid and reliable instrument, developed and used in Wisconsin, was mailed to 158 elementary and middle school teachers 316 schools in 33 East Tennessee public School systems. Out of the 958 surveys mailed, 432 were returned.

The research findings suggest that teachers believes that it is important to take time to environmental education classes was calculated. Results indicates that there is a positive behavioural correlation between environmental education and academic classes.

However, there were many uncontrolled variables which necessitate further study. One example is the arbitrary standard among teachers for evaluating conduct grades. Conduct grades can also be subjective. In further studies, a standardised tools for evaluating conduct grades would be essential.

Boswel, Michael R(2000) the Florida State University, study reveals.

This study examines, through case study analysis, the influence of the emerging concepts of sustainable development and ecosystem management on environmental planning in the south Florida ecosystem. These new concepts are offered as the solution to most problems associated with human interactions with the natural environment and moving forward with programs intended to implement these new concepts. The Theory behind these concepts challenges many tenets of our current system; therefore, environmental planning must respond with a critical self analysis. The Primary study question is: To what extent is environmental planning being redefined by the emerging frameworks of sustainable development and ecosystem management? The study contains a two-part analysis to answer the research questions: (1) a theoretical analysis of whether sustainable development and ecosystem management constitute a new environmental planning paradigm, and (2) an empirical analysis of whether environmental planning practices. Shows evidence of adoption of the new paradigm.
The theoretical analysis begins with an examination of planning theory and the philosophical and methodological dimensions that define planning. These dimensions include: questions of knowledge, conception of nature, ethical foundations object of planning, public participation, decision method, planners role, and questions of action. The theoretical analysis shows that the attributes of the planning are sufficiently different from those of the existing environmental planning paradigm that they constitute a new competing environmental planning paradigm.

The empirical analysis is a case study using pattern-matching as the analytic tool. Pattern-matching is used to compare empirical evidence against the two environmental planning paradigms. Data is gathered from three sources: documentation, archival records, and interviews of the participants in the planning process. The units of analysis include the significant environmental planning events in the South Florida ecosystem from 1970 to 1998, these are primarily ecosystem restoration plan.

The empirical analysis shows that environmental planning in the South Florida ecosystem is being substantially redefined by the emerging frameworks of sustainable development and ecosystem management. Despite this substantial redefinition of environmental planning, however, the theoretical principles of sustainable development and ecosystem management have not been fully adopted.


Traditionally, literary criticism has focused on nature almost exclusively as a human creation, arguing away the existence of a transcendent, static, “cold pastoral” vision of nature. Such an approach is in complete, however, because discounting the transcendent vision of nature fails to address such significant issues as how the physical world affects humanity and the physical consequences that result from humanity’s conception of the natural world. This study proposes that a more ecologically informed approach would be to understand the natural world in terms of an interaction pastoral in which humanity is, of necessity, in continuing conversation with the physical world, understanding it, misunderstanding it, shaping it and being shaped by it. This conversation is illustrated by close readings of texts about Coopertown, New York, written by three generations of the Cooper family. The first text, A guide in the wilderness, written by William Cooper, Coopertown’s founder, presents the physical world as a sort of elegant...
machine, converted to human purposes by the insightful, masterful land lord, an exploration of physical, historical, economic, and political record reveals the aspects of nature that cooper’s paradigm demanded he efface. The pioneers the novel by James Fenimore cooper, William cooper’s son reveals an emotional engagement with the landscape surrounding Coopertown, a sense of connection with and attachment to this particular ecosystem. Ultimately, however, James Cooper’s attempts to reconcile his attachment to place with an ideology of property lead him in several novels, to identify attachment to place as a sentiment that authorises ownership of property. Finally, in Rural Hours, Susan Fenimore Cooper, James’s daughter, interprets the natural world in the light of the ideology of the domestic realm, creating a sort of domestic pastoral in which the physical world is understood and appreciated as a number of the domestic circle, a strategy that acknowledges the importance of an ethical relationship between humanity and the rest of the physical world and seems to anticipate the ecological conception of the earth as household.

3.2: STUDIES DONE IN INDIA:

Education commission(1964-66) emphasising need for Environmental studies, proposal freedom of individual institutions to frame their own curriculum depending upon local needs and available resources. The curriculum at lower primary stage(Grade-I to IV) included (a) one language, (Mother tongue)regional language), (b) Mathematics,(c) Study of environment, (d) Creative activities (e) Health education.

Khuntia(1980) and Das(1981) have independently developed environmental concepts development tasks for grade 5 children at different levels of concept attainment. Saxena et al. (1981) have developed and standarised an Environmental Awareness test for the children of grade 3,4 and 5.

Madhyastha(1982) has advocated the use of environment both as a means and end of education. Environment can be used for development of basic skills(language, mathematics, modelling, ability to use pictorial representation and collection and use of environmental resources) study skills(mapping, observing, collecting, classifying, experimenting and historically interpreting) and social skills(health, personal hygiene, cleanliness of surroundings and conservation and judicious use of environmental resources.
Education commission(1964-66)(Kothari Commission) recommends, environmental activities will lead to study of natural and physical Sciences, history, geography and Civics. Construction and creative skills will provide the basis for the practice of simple arts and crafts and the practice of healthy living will serve as the foundation for environmental education. Environmental education is problem centered, interdisciplinary, value oriented, community oriented concerned with man’s survival.


The objectives of study were: (i) To know the components of environment in which children from rural® and Urban(U) areas were lacking and the areas in which the students—from both the streams were acquainted, (ii) to compare the environmental awareness of school going children(F) and children studying in non-formal education centre(NFR) and (iii) to suggest means for developing environment based curriculum for universalization of elementary education.

The study was conducted on 115 students of standard-IV, twenty from rural schools, thirty five from Urban schools and sixty from the non-formal education centres. An environmental questionnaire by Rajput and his associates was administered on the sample. The performance of students of the three groups was compared. Differences were tested for significance by T-test. First and the last ten ranking questions for each of the groups were identified and compared.

It was found (i) The differences between FR and FU on environmental non-formal education content.

The materials analysed in detail included relevant text books (Classes-III to V) at the national level, Kerala and Tamil Nadu. A few books in regional languages were also analysed. Collateral materails from the USA, the USSR, the UK, France, UNSECO and other developed systems were also analysed. In addition to analysis and critical appraisal, interviews, observation and focus group discussion with teachers, non-formal Science education workers and administration officers were conducted.

The main findings of the study were: (i) A very few genuine EE-type activities as understood in modern developed systems, seemed to be undertaken in the primary
schools. (ii) The effective lead materials (Text Books) at the national level seemed to have some worthy aspects such as process approach in Science, activization, some directives to observation and visits, stimulating questions with open tables to fill in the answers, thought excursion through the country profusely illustrated with pictures (in History portion) clear verbal processing and the like. (iii) The national level text books lacked the higher specifications commonly adopted in modern EE procedures and in open, multidisciplinary approaches to the environment. Defects such as pre-empling investigations (by suggesting the answers), premature precision(over looking the initial phase of romance in environmental exploration). Simulations and artificial situations even when natural situations were available in the environment, defective concept processing(particularly) in astronomy, physics, geology, and geography), over use of technical terms (in food and health), non-recognition of the time demnsion in rural observations in astronomy, botany etc. non-recognition of the developments in genetic epestimology, adoption of spectator approach where participant approach was possible, insufficient in respect of work culture were frequent. (iv) The NCERT’s curriculum frame-work which had obviously guided to text books gave nagative guidelines (What EE is not) but distict position guidelines were lacking. The lead paper by the NCERT of December 1981, on EE, was an analysis of conference reports (from Stockholm) and some generalized theory, but was not on modern EE curriculum in transaction. An upward environment as reference point rathian than actual ground level EE. Material production process also seemed to be reflected. (v) As regards to the State-level text books, some of the drawbacks of the national level books were carried over and some of the marits seemed to have been missed like replacing open explanatory tables by closed pre-empling environmental exploration. (vi) The content loading of Science in Tamil Nadu was much less while activities were plentiful, yet it was formal Science and not EE. The Social studies portions in both the Southern status was heavily loaded with facts. (vii) Tamil Nadu also produced taluk-level and district level books for geography which did reflect concern about starting from the ground.(viii) Tamil Nadu books made a reference to the ancient Sangam classification of land, but it was a formed, sybolic and a looking-back reference. The difference in titles suggested a heavy carry-over of content and approaches from the past, even at the national level, (ix) Theoretical analysis of environmental knowledge, way-findings in a natural and man made environment,
cognitive mapping, spatial encoding and linguistic encoding, anticipation of alternative futures and Piagetian studies conducted in larger environments provided insight for organizing EE programmes. (x) Work at the Vikram Sarabhai Community Science Centre, Ahmedabad, Kerala Sastra Sahitya Parishad and workshops conducted with the British council collaboration in Tamil Nadu and Kerala were instances of functional EE starting from the ground environment and developing sophisticated and useful constructs. (xi) Some relevant models representing a synthesis between the modern EE theory and the local context and culture suggested.

PAI S.G (1981) conducted the study on preparation and try out of curriculum in Environmental studies learning of life long education for College students were: (i) to help students acquire and awareness of the interrelationships interactions and interdependence existing between biological and physical aspects of the total environment and sensitivity towards environment and its applied problems, (ii) to help students acquire strong positive attitudes, sound ecological values towards the needs for a better environment and the necessary motivation for activity participating in its protection and improvement and (iii) to help students develop skills necessary for solving environmental problems and taking preventive measures.

In the first phase, the curriculum was developed by studying and analysing the existing literature on curriculum development, the concept of life long education and environmental education. The draft curriculum was modified after the preliminary tryout. The study employed pretest-posttest experimental-control groups design. Seventy two students in the experimental and eighty students in the control group were involved in the study. The data were collected using Environmental Achievement Test, Unit test, Environmental Attitude Inventory and Environmental Activities Inventory. The collected data were analysed using f-test.

The findings of the study were: (i) There was significant difference in the performance of the experimental groups as compared with control group on knowledge scores and attitude scores. (ii) The experimental group had gained more than the control group in environmental activities inventory, indicating effectiveness of the curriculum. (iii) As a result of instructions for using the curriculum, students reflected clearer and more vivid images perceived in terms of their sensitivity towards the environment. (iv)
Unit-wise analysis of the performance group showed they had gained over all knowledge in environmental problems as a result of instruction for using curriculum.

EHSAN (1985) Delhi University conducted: An Evaluation study of the Environmental education programmes in the Primary Schools in Bangladesh.

The specific objectives of the study were: (i) to examine the nature and scope of the existing environmental studies (Science) programmes in respect of the following components: (a) Objectives, (b) Content (c) Teaching learning strategies and (d) instructional media; (ii) to evaluate these components to the existing programmes in order to determine their strengths and weaknesses on the criteria given below: (a) Evaluation of objectives against the criteria: Whether stated clearly, precisely and in behavioural terms, coverage of cognitives, psychomotor and effective domains, whether appropriate and attainable, built up on pupils’ pre-programme level of understandings and important for further learning (b) evaluate the content against the criteria; relevancy, clarity, up-to-dateness, suitability to learners’ need, interest, ability and experience.

Vaghamare (1971) examined the exercises in history textbooks prescribed for standard-IV in Maharashtra. Manual (1982) analysed the textbooks in environmental studies of NCERT and found them to be defective in several respects.

A few investigations (Kushdil, 1960, Kamalakanthan, 1968, Rajput and other 1980, Malhotra, 1982, Patele 1967) were carried out to compare the traditional approach with an integrated approach or environmental approach. All these studies have shown that the traditional approach is ineffective. It is interesting to note that the term, “traditional approach” is used in these studies as well as demarketed and a clearly distinguishable teaching procedure, free from any ambiguity. This assumption is likely to be questioned. Further, in studies of this nature there is a very real need for removing or at least minimizing what are generally known as a placebo and the Hawthorne effects. Sequencing, content balance, development of Scientific attitude and process skills, evaluation of teaching learning strategies against the criteria: Whether leading to the attainment of objectives, whether helpful to provide guidance with regard to teaching methods, appropriate to the age, ability and interest of the children and use of strategies in the class during the environmental studies lessons, (d) evaluate of instructional media against the criteria of being relevant and interesting, feasible and practical for use.
The survey method was employed in the study. The study was conducted in three phases. The first was concerned with environmental studies (Science) for classes-III, IV & V. The second phase was solely concerned with opinion study of primary school teacher-educations and 75 primary school teachers. The data were collected through a questionnaire for both the primary teachers and teacher educators. The third phase was concerned with the development of modified programmes of environmental studies (Science) for classes-III, IV & V. A validity assessment questionnaire was used for both the primary teachers and teacher educators.

The findings of the study were: (i) The general programme objectives of teaching environmental studies (Science) had not been explicitly stated in the existing programmes. (ii) Although there was a mention of a few instructional objectives for each class-III to IV. These objectives had not been stated clearly, precisely and in behavioural terms. Most of these instructional objectives appeared to cover the cognitive domain only. (iii) All the respondents preferred to see modifications in the instructional objectives and according to them, each objective should be specific, stated in behavioural terms, with stress on the cognitive, psychomotor and effective development of the children. (iv) All content units of classes-III, IV and V were suitable to the learner's needs, abilities, interests and experiences. (v) The sequential arrangement of the content units of classes-III and IV programmes were not helpful to develop pupil's understanding. (vi) The survey showed that, although there was a balance of content between physical and biological Sciences in the programmes of classes-III & IV, little content balance existed in the class-V programmes. (vii) Respondents agreed that the programmes contents of classes-III, IV and V needed to be modified so as to make them more specific, clear and explanatory. The contents also needed to be psychologically and logically organized in order to maximize learning. (viii) For the newly developed programmes, results indicated that very programme objective was a acceptable objective of environmental studies (Science) which confirmed the validity of the programme objectives formulated by the researchers. (ix) The set of programme objectives had fulfilled the categories of environment education objectives as recommended by the UNESCO conference held at Tbilisi (USSR) in 1977. (x) According to the panel of experts instructional objectives appeared to cover the cognitive, psychomotor and effective domains. This showed that
the modified programmes would help to promote balanced development to the learners’ behaviour in the three domains. (xi) All the contents topics of the modified programmes were up-to-date and suitable to the learner’s needs, (xii) Responses indicated that the sequential arrangement of the content units would help in developing pupils understanding. (xiii) The experts programmes would offer content balance between the physical and biological Science Unit. (xiv) The teaching learning programmes were feasible and practicable for use by teachers in the school. (xv) All the experts felt that the suggested instructional media had been taken into account through locally available resources and low-cost material.

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