CHAPTER - I

1.0 INTRODUCTION

1.1 HISTORICAL BACKGROUND
1.2 ADULT EDUCATION UNDER FIVE YEAR PLANS
1.3 ADULT EDUCATION PROGRAMMES AND EIGHTH FIVE YEAR PLAN
1.4 IMPLEMENTATION OF NATIONAL ADULT EDUCATION PROGRAMME IN PHASED PROGRAMME
1.5 NATIONAL LITERACY MISSION
   1.5.1 TOTAL LITERACY CAMPAIGN (TLC)
1.6 POST LITERACY PROGRAMME FOR NEO-LITERATES
1.7 NEED OF LITERATURE FOR NEO-LITERATES
1.8 ROLE OF EDUCATIONAL TECHNOLOGY IN ADULT EDUCATION PROGRAMME
1.9 PROGRAMME LEARNING - ITS CONNOTATION
1.10 NECESSITY OF ENVIRONMENTAL EDUCATION
1.11 JUSTIFICATION OF THE PROBLEM
1.12 STATEMENT OF THE PROBLEM
1.13 DEFINITIONS OF THE TERMS
1.14 OBJECTIVES OF THE STUDY
1.15 HYPOTHESES OF THE STUDY
1.16 DELIMITATION OF THE STUDY
   1.16.1 CONTENT OF THE STUDY
   1.16.2 SAMPLE OF THE STUDY
CHAPTER - I

"No nation can leave its security to the police and the army to a large extent. National security depends upon the education of citizens, their knowledge of affairs, their character and sense of discipline and their ability to participate effectively in security measures ".

- Kothari Commission

1.0.0 INTRODUCTION :

Education is the basic need of life, it is a means of primary enlarging horizon and enlightening the mind to enable the individual for the maintenance and improvement of the modern social system. To educate the common man to understand his rights and duties to enable him to lead a fuller and richer life, is the urgent and basic responsibility of democratic government.

The provision of free and compulsory education to all the children upto the age of fourteen years is a part of Directive Principles of the Constitution of India. Persistent efforts towards the achievement of this goal have been made
since independence. Accordingly Adult Education Programme was introduced for the persons beyond the age of fourteen years.

1.1 HISTORICAL BACKGROUND:

Adult Education Movement in India has experienced many ups and downs. Literacy and post-literacy work for common man and woman was started during the last quarter of the 19th Century. It took the shape of a mass movement in 1937 after the installation of Congress ministries in the provinces. It was for the first time in the history of India that Adult Education became the responsibility of the government as a part of educational system. Therefore, organised work in the field of Adult Education was taken in hand. The post-literacy work, however, was a weak link in the chain. More than six percent increase in the literacy figures during the decade 1931-41, however, seems to a great extent due to the mass literacy movement. After the resignation of the Congress Government in 1939, the movement came to an abrupt end and the fervour and enthusiasm for literacy education
subsided. The growth rate of literacy came down to 0.57% in the decade 1941-51. Before India became free, voluntary organisations took up the work for the promotion and expansion of adult education. The period 1937-42 was a bright period for Adult Education. The remarkable increase of 70% in the literacy figures in the decade 1931-41 was due to the effort in the field of Adult Education and several other educational forces and movements. During 1942-47 the movement dwindled with the decline of national morale but never again did it lose its respectability and there was a promise in the period that the advent of the national independence would also bring new life to the adult education movement. As a result of various attempts made in the country, 29 lakh adults were made literate during 1937-42, there were only 1.31 lakh centres, in which 15 lakhs adults were made literate, during 1942-47.

1.2 ADULT EDUCATION UNDER FIVE YEAR PLANS:

Sustained efforts were made in Five Year Plans, to achieve the goal of literacy. The programme of adult education was included in First Five Year Plan (1951-56) on small scale. Establishment of Janta Colleges and National Fundamental Education Centre (1956) was an important step in Adult Education. The first formal attempt to set-up a full fledged Department of Adult Education was made by the University of Delhi in 1950. Central Social Welfare Board was set-up under the Chairmanship of Shrimati Durga Bai Deshmukh. During the plan period 55 lakh
adults were enrolled in literacy classes run by the State Education Department and 12 lakh in the classes run by Development Departments, out of which 35 lakh were reported to have been literate.

During Second Five Year Plan Period (1956-61), 1,62,000 literacy centres were opened. The position regarding other schemes of Social Education indicates that during the last year of the second plan (1960-61) there were 15,326 reading rooms, 41,211 youth clubs had 8,95,700 members, 18,487 mahila mandals had 2,63,800 members, 8,93,092 gram sahayak camps were held and 5,75,800 persons were trained. During the Second plan, 216 condensed courses were started in 14 states and 3 union territories. The Ministry of Labour established the Central Board of Worker's Education and set-up Regional Workers' Education Centres in different regions of the country. It was in 1959, for the first time after independence that the idea of mass-movement for literacy was experimented in Satara district of Maharashtra under the name of 'Gram Shiksha Mohim', which won the UNESCO award for the year 1972. Over a million people were made literate during the Gram Shiksha Mohim. Total number of 40,53,530 adults were reported to have been literate during Second Five Year Plan Period.

The Third Five Year Plan (1961-65), stated that the introduction of Panchayati Raj at the district and block levels and the important role assigned to village panchayats render
it imperative that in as short period as possible a substantial proportion of the adult population should become capable of reading and writing. Every effort should be made, it said, to raise the percentage of literacy to 60 by 1971, 80 by 1976 and to achieve centpercent literacy in 20 years. The importance of follow-up work was also emphasised, and a sizeable amount was set apart for production of material for neo-literates and its distribution through a network of libraries at local level. At the end of the third plan, the need for a massive programme for literacy was felt and it was also realised that for adult education to be successfully implemented, a different administrative structure and more financial outlay was necessary.

The Fourth Five Year Plan (1969-74), proposed to launch a mass adult literacy movement. The Plan also suggested the setting up of a National Adult Education Board and corresponding State Boards. The Programme of functional literacy had covered about 30 lakh farmers during the Fourth Five Year Plan and about 50,000 attended the functional literacy classes every year.

The Fifth Five Year Plan (1974-79), clearly emphasised the need to develop and exploit fully the potentialities of Adult Education for economic and social development. The educational strategy in the Fifth Plan was built on the assumptions that formal and non-formal education should be
correlated and integrated. It is proposed to integrate adult education with all development programmes where large masses are involved as producers or beneficiaries. The agencies concerned should be responsible for organising adult education programme for their clientele. They should be assisted by the Education Departments which will produce material suitable for neo-literate. Adult Education Programme was included in Minimum Need Programme in the Fifth Plan, and was listed at Point No. 16 of the 20-Point Programme, and is at present at Point No. 10 of the New 20-Point Programme.

The Sixth Five Year Plan (1979-83) laid emphasis on minimum essential education to all citizens, irrespective of their age, sex and residence. Non-formal education for adults, particularly in the productive age group 15-35 years, would receive priority in the Sixth plan, in view of its potential for immediate impact in raising the level of productivity in the economy.

It was Kothari Commission (1964-66) which for the first time thought it desirable to have some targets for the removal of illiteracy. The Commission expressed the view that 'with planned efforts it should be possible to raise the national percentage of literacy to 60% by 1971 and 80% in 1976'. It recommended that 'every possible effort should be made to eradicate illiteracy from the country as early as possible and that in no part of the country, however, backward, should it take more than 20 years to do so'.
On October 2, 1978, one of the most ambitious Adult Education Programme was launched with the object of providing adult education to 100 million adults in the age-group of 15 - 35 years within five years. In this programme three components - Awareness, Functionality and Literacy - have been included to make literacy relevant to the learner's needs and aspirations. This programme is of ten months duration. A 'Mass Functional Literacy Programme' was launched on May 1, 1986, involving 2,00,000 National Social Service (NSS) students and 1,00,000 non-NSS students in the Universities. In this programme the student volunteers were expected to teach 2 - 5 adult illiterates each in the neighbourhood according to their convenience. Similar group of illiterate population covered through projects like each-one-teach-one by volunteers.

In May 1986 the Government of India announced its New Education Policy. It envisaged that adult education would be a means for reducing economic, social and gender disparities. The programme will lay emphasise on skill development, creation of awareness among the learners of the national goals, of development programmes and for liberation from oppression. It would be a phased time-bound programme, covering 40 million by 1990 and another 60 million by 1995. The past programmes had suffered due to excessive dependence on administrative structures and lack of involvement of the mass organisations, media and the educational institutions. This imbalance will be corrected, by involving mass organisations and the entire educational system,
all developments departments "will be expected to utilise the adult education programme for the furtherance of their objectives".

The document entitled 'Programme of Action', states Eradication of illiteracy will be launched as a Technical and Societal. For planning and implementation of Adult Education programme at the state as well as national level, autonomous commission will be set-up headed by the Chief Minister and the Minister of Human Resource Development, respectively. The principal aim of the New National Programme of Adult Education including literacy, to the population in 15 - 35 age-group, which numbers about 100 million.

1.3 ADULT EDUCATION PROGRAMME AND EIGHTH FIVE YEAR PLAN:

The main focus of the Eighth Five Year Plan is on human development. Universalisation of elementary education, eradication of illiteracy in 15 - 35 age-group and vocationalisation of higher secondary education are the three priority objectives of the Eighth Plan. In regard to literacy "the emphasis would be on sustainability of literacy skills gained and on the achievement of goals of remediation, continuation and application of skills to actual living and working conditions'. It is expected that about 1108 crore illiterates in 15 - 35 age-group would have to be covered by the end of the Eighth Plan to achieve hundred percent adult literacy. The Plan proposes to cover 80 percent of the target through campaigns and the
remaining through Mass Programme of Functional Literacy (MPFL). Nehru Yuvak Kendras and Rural Functional Literacy Programmes (RFLP'S) in tribal and hilly and sparsely populated areas through the Plan has suggested the possibility of retaining the centre-based programme, in general it has not supported the continuation of the programme. Eight Plan also proposes that literacy programmes will be launched in districts/regions which are educationally backward or have low female literacy. By the close of the Eighth Plan, 345 districts including about two-thirds of all districts in the educationally backward states would be covered by the Total Literacy (Tl) campaigns. The strategy for backward districts would be two-fold. First, a few blocks would be selected where the literacy campaign can achieve success within a reasonable period. The demonstration effect of the blocks would influence the backward blocks which, in course of time, could develop appropriate literacy programmes. Secondly, the voluntary base in educationally backward districts being somewhat weak, ways and means of identification, strengthening and expansion of the same would be evolved in consultation with the respective State Governments. It is also necessary to develop technical competence among voluntary agencies so that the partnership between the Government and the operating agencies becomes meaningful. Particular attention would be paid to the availability of a variety of quality materials in adequate quantity to the neo-literates. Reputed printing presses and publishers would be motivated to print gratis literacy materials,
posters and charts. The content of adult education would also include inculcation of values like secularism, national integration, scientific temperament, small family norm, concern for environmental conservation, cultural appreciation and so on.

1.4 IMPLEMENTATION OF NATIONAL ADULT EDUCATION PROGRAMME IN PHASED PROGRAMME:

The Adult Education Programme is conducted in three stages:

(i) Stage one is for illiterates to provide basic knowledge of three R'S Reading, writing, Arithmetic.

(ii) Stage two is termed as post-literacy stage in which adult learners who have left formal school system before or after completing primary school are included.

(iii) Stage three is designed to enable the neo-literates to make effective use of literacy and numeracy skills achieved and is devoted to the improvement of these skills through self-learning.

Out of these three stages of the programme the researcher intends to concentrate on stage three i.e. neo-literacy stage. The third stage is as important as other two.
stages. The number of neo-literates is increasing each year and by the turn of the decade it is expected that there would be about 110 million neo-literates, who would have graduated in the Adult Education Programme. They form priority group and will need learning and reading material.

1.5 NATIONAL LITERACY MISSION:

In 1988, a big resolve to eradicate adult illiteracy in a time-bound manner was taken with the launching of National Literacy Mission on 5th May 1988. Since then the crusade against illiteracy has been mounted with great zeal and commitment. One specific feature of National Literacy Mission is that it seeks to involve scientific institutions/methods for removing the inadequacies of the earlier programmes. The goal of National Literacy Mission is to impart functional literacy to 80 million illiterates in 15 - 35 age-group by 1995\textsuperscript{14}. The focus is on rural areas with a special concern for women and persons belonging to the scheduled castes/scheduled tribes.

After the launching of National Literacy Mission, there have been numerous significant developments. Some of these are:

1. Mass mobilization through country wide organisation of Bharat Gyan Vigyan, Jatha and Jathas in the 5 states of Assam, Bihar, Madhya Pradesh, Orissa and Uttar Pradesh by organisations of Gandhian and Sarvodaya workers.
2. Adaption of an area specific, time-bound result oriented approach to eradication of illiteracy using Total Literacy Campaigns as the major strategy of implementation in villages, blocks, districts and state.

3. Implementation of the programme largely through voluntary participation.

4. Introduction of a new pedagogy for literacy known as the Improved Face and Content of Learning (IFCL).

5. Developing a culture of partnership between administrative and voluntary bodies.

All these were aimed at creating a demand for literacy or, in other words, motivating the clientele group which is crucial for the success of any literacy endeavour.

The following table shows the population and progress of literacy rate :-
<table>
<thead>
<tr>
<th>NO.</th>
<th>Year</th>
<th>Population</th>
<th>Literates</th>
<th>Illiterates</th>
<th>Percentage Literacy</th>
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<td>60</td>
<td>301</td>
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<tr>
<td>2</td>
<td>1961</td>
<td>445</td>
<td>106</td>
<td>333</td>
<td>24.1</td>
</tr>
<tr>
<td>3</td>
<td>1971</td>
<td>548</td>
<td>161</td>
<td>387</td>
<td>29.4</td>
</tr>
<tr>
<td>4</td>
<td>1981</td>
<td>683</td>
<td>244</td>
<td>439</td>
<td>36.2</td>
</tr>
<tr>
<td>5</td>
<td>1991</td>
<td>840</td>
<td>378</td>
<td>462</td>
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</tr>
</tbody>
</table>

1.5.1 **TOTAL LITERACY CAMPAIGN (TLCs):**

After National Literacy Mission was established the most significant development was the launching of a mass campaign for total literacy in Ernakulam district of Kerala on January 26, 1989. 216 Total Literacy Campaign (TLC) projects have been approved involving 240 districts (either fully or partially) in the states of Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Maharashtra, Madhya Pradesh Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. Currently, approximately 31 million learners in the 9 - 45 age-group are learning with the help of about 4 million volunteers\(^{15}\). They are in different stages of learning but it is estimated that about 15 million of them have already acquired the threshold level of literacy and numeracy. Post-literacy and continuing education activities are being launched even as TLCs make significant progress in an area. The objective is to cover 345 districts during the Eighth Plan and make 100 million people\(^{16}\) functionally literate.

There are certain characteristic features of Total Literacy Campaigns. These campaigns are area specific, time bound, volunteer based, cost effective and outcome oriented. They are implemented through the district level literacy committees which are registered under the Societies Registration Act as independent and autonomous bodies. The leadership to this body is provided by the District Collector/Chief Secretary, Zila Parishad (District Council). The targets of the programmes
emanate from the grass-roots level on the basis of a
detailed door to door survey. Every learner enrolled in the
campaign is expected to achieve certain predetermined and
measurable levels of literacy and numeracy at the end of the
campaign. The learner is placed at the focal point in the
entire process which, through compact duration and continuous,
going evaluation, helps to heighten learners' motivation and
improve the pace of learning. Though the Total Literacy Campaign
(TLC) is meant to impart functional literacy, it also
disseminates a 'basket' of other socially relevant messages
such as universal enrolment and retention of children in Schools,
immunisation, propagation of small family, norms, promotion of
maternity and child care, women's equality and empowerment,
peace and communal harmony etc.

1.6 POST-LITERACY PROGRAMME FOR NEO-LITERATES:

There are many adults who acquire literacy through
adult education programme but fail to retain it as they do not
find any opportunity to use it in their daily life. Such adult
learners are called semi-literates, neo-literates. The provision
of illiteracy classes might help illiterate adults, but it cannot
prevent others from falling into the trap of illiteracy and
ignorance. For that population of adult learners diversified
programme of 'Post-literacy' and 'Follow-up Programme' was
introduced. These programmes are therefore organised after the
literacy drives are over. The main purpose of post-literacy programme is to help the neo-literates in order to raise the literacy level acquired to such an extent that learners become fully capable of applying acquired skills for improvement of their own conditions. Not only that post-literacy programmes are also helpful to sustain the learning interests of neo-literates. The establishment of Jan Shiksha Nilayam is the welcome step to organise post-literacy and continuing education programme on permanent basis for neo-literates in particular and all the people in general. It should always be kept in mind that post-literacy and follow-up classes are needed in communities even before literacy classes or campaigns are started. This type of programme becomes a source of motivation to the neo-literates to never stop learning. This indeed opens the gate of life-long education. It is that magic lantern which will lighten a million lamps and remove all areas of darkness.

1.7 NEED OF LITERATURE FOR NEO-LITERATES:

Need for the literature for neo-literates was felt during the Second Five Year Plan (1956-61). The Ministry of Education developed a programme for production of literature, but the produced literature was not satisfactory, as given by Dutta, S.C. in his book 'History of Adult Education In India'. Literacy status of neo-literates have also shown that due to lack of continuous support in sustaining literacy skills and for want of suitable climate and environment for developing
reading habit, neo-literate tend to return to illiteracy stage after a short-time. They need constant supply of reading material in large quantities on all the topics that touch the life of the people including relationship of humanity with environment.

According to survey conducted in Thailand in 1969 it was found that 33% of people who completed primary education relapsed into illiteracy for want of reading material. But in a parallel situation in 1983 when reading materials were supplied to primary school completers only 18.33% reverted to illiteracy states. Similar is the experience of Burma, Philippines, Vietnam etc. The report of National Training Seminar for Training/General Associates of State Resource Centres, Bangalore, November 22 - 27, 1984, shows that the number of neo-literate is increasing each year and by the turn of the decade it is expected that there would be about 110 million neo-literate, who would have graduated in the 'Adult Education Programme'. They form priority group and will need learning and reading material. So, it is strongly felt suitable reading material for neo-literate should be made available in good quality without which the Adult Education Programme would suffer enormous loss in human efforts and financial inputs. Therefore, the researcher intends to concentrate on neo-literacy stage of Adult Education Programme.
1.8 **ROLE OF EDUCATIONAL TECHNOLOGY IN ADULT EDUCATION PROGRAMME**

With the explosion in population and information, and creeping in of technology, tremendous changes have taken place in the field of education. Technology is that branch of advanced scientific knowledge which deals with industrial art, applied science, sophisticated engineering software and hardware, etc. and the application of that knowledge for practical ends in a particular field. The present century is rightly called 'The Technology Century' due to the influence of advancements in the fields of science and technology on the varied aspects of life, resulting its modernisation. It is the remarkable product of creative thinking and labour, and is becoming the main beneficiary of new discoveries in pure research which greatly determines its development. As Anil Bordia says; "We are using the word 'technology' not in its literal sense of application of science, but application of a set of new techniques, new methods, new pedagogy, new ways of dealing with adult learning". The field of education has also been influenced by the increased use of science and technological advancements in the field of education is so great and profound that it has given rise to a new discipline called 'Educational Technology'. The concept of Educational Technology refers to the application of technological principles to the solution of practical educational problems on the one hand and to the development of electro-mechanical instruments for educational
purposes on the other. It signifies a system or technological approach to the problems of education. Arthur Melton (1959) also observed that an educational technology is based on the assumption that the psychology of learning encompasses all forms of relatively permanent behavioural changes which result from experience, including of course, the experiences of the child in the school. Francis Mechner (1965) believes that he can build in student a complex repertory of knowledge or behaviour by applying a few basic principles of learning psychology in addition to a little art and intuition. In this sense the educational technology is the application of the psychology of learning to practical teaching situations.

The input of science and technology and pedagogical research can greatly be applied to improve the quality of the literacy programmes. The National Policy on Education and the document entitled 'Programme of Action' clearly states that the science, technology and modern research have not been applied to literacy programmes in the past. The main objectives of introducing technology in Adult Education Programme is promoting a qualitative change in their living and working conditions. The National Literacy Mission is a technological Mission with a view to applying technology and scientific research for the improvement of Adult Education Programme in terms of physical environment, infrastructural, pedagogic, training and management.
As reported in 'Employment News' dated 11 June, 1988, there are at present 2.62 lakh Adult Education Centres in the country involving 80 lakhs persons per year. However the quality of training of functionaries was found to be poor. Mass-media does not provide enough support. Post-literacy programme and programmes of continuing education have not been very effective. Learners participation has been irregular and there have been considerable drop-outs who relapse to illiteracy. It was, therefore decided that more effective programme of continuing education should be launched. It has been reported that teaching-learning material which are being supplied for or used in adult education centres are inadequate, irrelevant and poor in quality. Few studies on educational technology have been conducted in India, taking different dimensions of educational field. The findings of these studies are satisfactory. It is expected that educational technology will produce effective results in preparation of post-literacy material and will definitely strengthen the programme of Adult Education.

1.9 PROGRAMME LEARNING - ITS CONNOTATION:

The first impact of present technology is the trend towards a mass instructional technology which is governed by machines and systems. The term 'Programmed Learning' is nevertheless more accurate as this is learner-oriented system with emphasis on the method by which material can be presented so as to be auto-instructional. The first use of term programmed
instruction is associated with B.F. Skinner. On the basis of his extensive research on rats and pigeons developed a theory of learning called operant conditioning. By putting the principles of operant conditioning in teaching to human beings. He evolved a teaching-learning model which is popularly known as Programmed Instruction.

Programmed Instruction was introduced into education through psychology in a technical language and format and with hardware more suitable to the research laboratory than to school or home. The sole objective of programmed instruction is to improve the teaching-learning process with the use of educational technology. The first psychologist whose findings bear direct relevance to programming is E.L. Thorndike (1874-1949). He is well known for his "Law of Effect". The law states that learning which is accompanied by satisfaction on the part of the student is likely to be more permanent than learning which is accompanied by dissatisfaction. Successful actions are also more likely to be reported than those which bring displeasure or discomfort.

Five basic principles of programming are as follows:

1. The subject matter which is to be programmed is analysed thoroughly and divided into meaningful segments of information. One segment of information is presented at a time to the learner. This piece of information is called "frame".
(ii) There is an immediate confirmation of the right answers or correction of the wrong answer.

(iii) Programming provides active responding on the part of the learner. The learner remains busy and active when he/she works on a programme. Active responding on the part of the learner means involvement in the learning process.

(iv) The learner proceeds at his own pace. This takes care of the fact, that different learners have different rates of learning.

(v) Student testing is helpful for the teacher as well as for student. The teacher can assess the progress of his students. The teacher can find out the weakness of his programme and can modify the weak portion of the programme. The student can also evaluate his performance on the programme.

1.10 NECESSITY OF ENVIRONMENTAL EDUCATION:

In order to meet the demand of every day life and maintain mental equilibrium for the fulfilment of needs and wants of every citizen on earth, and for balance and harmony between humanity and environment, the areas of concern have
been eradication of basic causes of poverty, hunger, illiteracy, pollution and demination. Environmental Education envisages the environmental approach to education and more so a way of learning rather than a subject. It helps develop new knowledge, skills and values in a drive towards better quality of environment and higher quality of life. The goal of Environmental Education is to improve all ecological relationships including the relationship of humanity with nature, and people with their surrounding. Thus it may include conservation of energy and soil, protection of air, water and atmosphere from pollution, effective utilization of locally available resources, creation of conducive atmosphere for living through social and civic consciousness, and harnessing natural resources without any ecological imbalance.

The adult sees utility only in things that satisfy his aspirations and fit to his level of mental development, field of experiences and felt needs. Incentives may be in terms of resultant financial gain, social gain like enhanced prestiges or representation in social institutions, or fulfilment of spiritual aspiration. There is a natural urge for empathy and ego-satisfaction. The occupation of an adult learner is an important fact to be considered through which an adult educator can enter into his psychological world. Instructional packages for the development of their ability to read and write, and communicate in terms of their day to day life activities interest them much. So it necessitates to plan environmental education
programmes according to the interest, needs, attitudes, values, memorization ability, language skills, attitudes towards instructors, ways of looking at things and wide experience of the adult neo-literates.

The underlying principle of an environmental curriculum is "Education of the environment through the environment and for the environment". Here environment is used both as a means and as an end. In this process neo-literate can learn through investigation, and develops proper understanding of the environmental problems and healthy environmental attitudes so as to preserve, enrich and safeguard environment. The guiding principle of environmental education is that it considers environment in totality—natural, manmade, ecological, political, economic. Technological, social, legislative, cultural and aesthetic. It is a life-long process that requires inter-disciplinary approach to active participation and solution of problems.

1.11 JUSTIFICATION OF THE PROBLEM

A National Scenario is imperative to consider the major objectives of Environmental Education proposed for adult learners. A direct and continuing linkage between initial literacy instruction and post-literacy and continuing education should be provided to make the proper use of functional literacy and to give a shape to the dream of educated nation. In Indian context where more than 63% of the population is illiterate,
the urgency of environmental education for them is self-realised. Hence to give a shape to the dream of educated nation that emphasises an "Environmentally Literate Citizenary" and to provide mental nourishment to neo-literatees, there is an urgent need of literature based on their bio-physical environment. These attempts themselves justify the present need of Environmental Education as well as urgency to provide appropriate adult literature and the mental nourishment to the neo-literatees which will be tailor-made according to their existing physical environment. Adult learners as individual and social group will acquire an awareness and sensitivity to the bio-physical environment i.e. individual's health hazards in his own physical environment. They will acquire such knowledge and skills with understanding that will help to solve the environmental problems and lead to effective use of all regional and local resources so as to maintain harmony in the environment. They will develop positive social values, strong feelings of concern for the immediate environment, and motivation for active participating in its protection and improvement all leading to the development of an environmental ethics within. Attempts in the field of curriculum development and environmental education has been made in India. Generally these attempts are made at school level. Like school students, it is also essential to develop a well equipped curriculum for neo-literatees, directly related to their life experiences. Bearing this in mind the researcher felt the need to develop post-literacy material for the neo-literatees which they will read and understand
independently. These facts led the researcher to think and select a problem related to environmental education for investigation. The problem may formally be stated as:

1.12 STATEMENT OF THE PROBLEM:

Development of Post-Literacy Material of Environmental Education For Neo-Literates Through Programmed Text.

1.13 DEFINITIONS OF THE TERMS:

The following terms needs clarification for conducting the present investigation.

POST-LITERACY MATERIAL:

Post-literacy may be defined as:

Systematically organised learning opportunities for persons who have had access to basic education through either primary education, adult education or any other systems. All those materials and structures, which enable the newly literate adult to keep up, use and develop the knowledge, he has acquired and the abilities generated in him through literacy teaching.

Here the term post-literacy material means to develop literature for the neo-literates which they will read and understand independently.

ENVIRONMENTAL EDUCATION:

Different researches and agencies have defined the term in different ways for their own purpose. Here the researcher
has selected two definitions which imbibed the basic meaning of Environmental Education.

Sharma, R.C. (1981)\textsuperscript{22}, has explained the term in following manner.

"Environmental Education is not an easy task, unlike other curriculum areas. It is universally accepted that environmental education should be interdisciplinary, drawing from biological, sociological, anthropological, economic, political and human resources".

Bandhu, D. (1981)\textsuperscript{23}, has explained the term in the following manner.

"Environmental Education is the process of recognising values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the inter-relations among man and his bio-physical surroundings. Environmental education also entails practice in decision making and self-formulating a code of behaviour about issues concerning environmental quality".

In the present study the term environmental education means the bio-physical aspect of the environment, which includes bio-physical environment, diseases propagating through it, agents of diseases and health hazard.
1.4.3 **NEO-LITERATES**:

Neo-literates are those adult-learners who have completed one year academic course at various education centres under the National Programme of Adult Education and who are able to read independently.

1.4.4 **PROGRAMMED TEXT**:

Programmed text means:

"Arrangement of material to be learned in a series of small steps designed to lead a learner through self-instruction, from what he knows to the unknown of new and more complex knowledge and principles".

1.5 **OBJECTIVES OF THE STUDY**:

The objectives of the study were as follows:

1. To develop the post-literacy material for neo-literates in the area of 'Food' through Programmed Text.

2. To develop the post-literacy material for neo-literates in the area of 'Water' through Programmed Text.

3. To ascertain the effectiveness of the developed post-literacy material for neo-literates in the area of 'Food' taught through Programmed Text.
The objective No. 3 constitutes its nine Sub objectives as follows:

(i) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Food' and 'Health' taught through Simple Text and Programmed Text.

(ii) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Balanced Diet' taught through Simple Text and Programmed Text.

(iii) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Healthy cooking' taught through Simple Text and Programmed Text.

(iv) To ascertain the effectiveness of developed post-literacy material for neo-literates in Digestive System taught through Simple Text and Programmed Text.

(v) To ascertain the effectiveness of the post-literacy material for neo-literates in 'Malnutrition' taught through Simple Text and Programmed Text.
(vi) To ascertain the effectiveness of developed post-literacy material for neo-literates in 'Vitamins' taught through Simple Text and Programmed Text.

(vii) To ascertain the effectiveness of the post-literacy material developed for neo-literates in 'Meal-Planning' taught through Simple Text and Programmed Text.

(viii) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Special Diet' taught through Simple Text and Programmed Text.

(ix) To ascertain the effectiveness of post-literacy material for neo-literates in 'Food' storage and Preservation' taught through Simple Text and Programmed Text.

4. To ascertain the effectiveness of post-literacy material for neo-literates in the area of 'Water' taught through Simple Text and Programmed Text.

The fourth objective also constitutes its nine sub objectives as follows:
(i) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Drinking Water' taught through Simple Text and Programmed Text.

(ii) To ascertain the effectiveness of the developed post-literacy material for neo-literates in 'Sources of Water' taught through Simple Text and Programmed Text.

(iii) To ascertain the effectiveness of the post-literacy material for neo-literates in Water and 'House-Hold Activities' taught through Simple Text and Programmed Text.

(iv) To ascertain the effectiveness of developed material for neo-literates in 'Proper Drainage System' taught through Simple Text and Programmed Text.

(v) To ascertain the effectiveness of developed post-literacy material in 'Hardness of Water' taught through Simple Text and Programmed Text.

(vi) To ascertain the effectiveness of developed post-literacy material for neo-literates in Water Pollution taught through Simple Text and Programmed Text.
(vii) To ascertain the effectiveness of developed post-literacy material for neo-literates in 'water Borne Diseases' taught through Simple Text and Programmed Text.

(viii) To ascertain the effectiveness of developed post-literacy material for neo-literates in 'Methods of Purification of Water' taught through Simple Text and Programmed Text.

(ix) To ascertain the effectiveness of developed post-literacy material for neo-literates in 'Storage of Water' taught through Simple Text and Programmed Text.

1.6 HYPOTHESES OF THE STUDY:

The main hypothesis related to research area 'Food' are as follows:

1) "There is no significant difference between the achievement score of neo-literates taught the topic 'Food & Health' through Simple Text and Programmed Text."

2) There is no significant difference between the achievement score of neo-literates taught the topic 'Balanced Diet' through Simple Text and Programmed Text.
3) There is no significant difference between the achievement score of neo-literates taught the topic 'Healthy cooking' through Simple Text and Programmed Text.

4) There is no significant difference between the achievement score of neo-literates taught the topic 'Digestive System' through Simple Text and Programmed Text.

5) There is no significant difference between the achievement score of neo-literates taught the topic 'Malnutrition' through Simple Text and Programmed Text.

6) There is no significant difference between the achievement score of neo-literates taught the topic 'Vitamins' through Simple Text and Programmed Text.

7) There is no significant difference between the achievement score of neo-literates taught the topic 'Meal Planning' through Simple Text and Programmed Text.

8) There is no significant difference between the achievement score of neo-literates taught the topic 'Special Diets' through Simple Text and Programmed Text.
9) There is no significant difference between the achievement score of neo-literates taught the topic 'Food Storage and Preservation' through Simple Text and Programmed Text.

The main hypotheses related to research area 'Water' are as follows:

1) There is no significant difference between the achievement score of neo-literates taught the topic 'Drinking Water' through Simple Text and Programmed Text.

2) There is no significant difference between the achievement score of neo-literates taught the topic 'Sources of Water' through Simple Text and Programmed Text.

3) There is no significant difference between the achievement score of neo-literates taught the topic 'Water and Household activities' through Simple Text and Programmed Text.

4) There is no significant difference between the achievement score of neo-literates taught the topic 'Proper Drainage System' through Simple Text and Programmed Text.
5) There is no significant difference between the achievement score of neo-literate taught the topic 'Hardness of Water' through Simple Text and Programmed Text.

6) There is no significant difference between the achievement score of neo-literate taught the topic 'Water Pollution' through Simple Text and Programmed Text.

7) There is no significant difference between the achievement score of neo-literate taught the topic 'Water Borne Diseases' through Simple Text and Programmed Text.

8) There is no significant difference between the achievement score of neo-literate taught the topic 'Methods of Purification of Water' through Simple Text and Programmed Text.

9) There is no significant difference between the achievement score of neo-literate taught the topic 'Storage of Water' through Simple Text and Programmed Text.
1.7 **DELIMITATION OF THE STUDY**:  

The study was delimited in term of content and sample.

1.7.1 **CONTENT OF THE STUDY**:  

The term Environmental Education includes several aspects. It was very difficult to cover all the aspects so the researcher confined her study to bio-physical environment. For the selection of the topics the researcher consulted the list of topics proposed by the Directorate of Adult Education, Govt. of India in 1984 for the preparation of post-literacy material for neo-literatees. (Appendix - 1)

The Researcher selected 'Food' and 'Water' which is given in point No. 4.2 in the list of Directorate of Adult Education, New Delhi, for the preparation of post-literacy material.

Hence the study was confined to bio-physical environment which includes the following areas: Food and Water.

1.7.2 **SAMPLE OF THE STUDY**:  

In order to evaluate the effectiveness of developed Post-literacy material a group of one hundred neo-literates was selected by Simple Random Sampling Method. 50 Women and 50 men were selected for the sample. The sample was drawn from the adult education centre of Agra district where post-literacy programme is being implemented.
REFERENCES


5. Ibid. p. 73.


16. Ibid. P. 64.


20. Ibid.


