The unprecedented growth of population in recent years has been rightly termed as 'Population Explosion'. Population explosion is one of the most fundamental of human problems. It affects every aspect of man's personal as well as public life. Population is a complex phenomenon in which a large number of elements, biological and psychological, social and economic, moral and material, political and administrative are inextricably entangled.

Population explosion is accentuating and aggravating the most explosive problem for Biologists, Mathematicians, Statisticians and Demographers as the phenomenon of growing population runs into astronomical figures, explained through the law of geometric progression whereas natural resources increase in production only in arithmetical progression.

Ecologists and environmentalists warn that a grave catastrophe has been hanging over the head of humanity like the democle's sword. A point of no return is not very far off even if man is going to plead his innocence and ignorance.

Population is the most pressure mounting phenomenon of the day. The world population plan of action adopted at the world Population Conference held at Bucharest in 1947, states in unequivocal terms that educational institutions in all countries be encouraged to expand their curricula to include a study of population dynamics and policies including
appropriate family life, responsible parenthood and relation of population dynamics to socio-economic development and to international relations.

GENERAL BACKGROUND:

In India there had been a phenomenal rise in population in the last few decades. The total population of India is 15.53% of the world population. In the census that was conducted in March 1971, the population of India was 548 million. The world population was estimated to be 4492 million in 1981 when India accounted for 668 million. However, as per UN estimates the world population has crossed the five billion mark in mid 1987 and the population of India till then must have been around 780 millions. At this rate of increase the country's population may reach the incredible figure of one billion before the end of this century. The population is growing annually at a rapid rate of 2.5%. Eighty nine member countries of the UN out of 130 have lesser population than the yearly increase in the population. Every seventh person in the world is an Indian today. The increased facilities simply do not keep pace with the needs of the growing population.

The first census in India was taken in 1871 which showed population of India as 203 million. According to Kingsley Davis (1951), the well known demographer, since the ancient times, India has had the legacy of being a thickly peopled country. The excavation at Harappa and Mohanjodaro reveal that as far back as the third and fourth millennium B.C., India had a
highly developed civilization and quite a few large and densely populated cities. Some three to seven thousand years ago, there were people possessing a technology to support a heavy population i.e., around 300 B.C. the population of ancient India was between a hundred and 140 million.

In 1600 A.D. population of India was a hundred million as estimated by Moreland, Davis and Nath. After examining, documents reveal that the population of the country did not vary greatly between the early Hindu period and the advent of Mohammadans, the death rates were high and fluctuating, while birth rates though high were more or less stable.

From 1871 onwards, the base for the study of population of India becomes more firm as the actual counts rather than the estimates are available, for example in 1871-72 census which gave a total of 203.4 million omitted certain territories which in 1881 gave a total population of 236 million. The growth rate of population of India computed on the basis of adjusted figures indicated that between 1867-71 and 1881 population increased at the rate of .9% annually while during 1881-1891 it increased by 9.4%. During the next decade i.e. 1891-1901, the population growth rate went down to 1.0 per cent as there were series of famines which were mainly attributed to weak monsoons Kingsley Davis (1951) estimated about 19 million persons perished. This means decades of marked increase have regularly alternated with decades of slight increase.
ESTIMATES AND CENSUS RETURN OF INDIA'S POPULATION FROM 300 B.C. TO A.D. 1901

<table>
<thead>
<tr>
<th>YEAR</th>
<th>POPULATION IN MILLIONS</th>
<th>AVERAGE ANNUAL GROWTH RATE DURING PRECEDEING PERIOD.</th>
</tr>
</thead>
<tbody>
<tr>
<td>300 B.C.</td>
<td>100-140</td>
<td>-</td>
</tr>
<tr>
<td>1600 A.D.</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>1800 A.D.</td>
<td>120</td>
<td>.90</td>
</tr>
<tr>
<td>1834 A.D.</td>
<td>130</td>
<td>.24</td>
</tr>
<tr>
<td>1835 A.D.</td>
<td>130</td>
<td>0.00</td>
</tr>
<tr>
<td>1855 A.D.</td>
<td>175</td>
<td>2.97</td>
</tr>
<tr>
<td>1867 A.D.</td>
<td>194</td>
<td>0.86</td>
</tr>
<tr>
<td>1871 A.D.</td>
<td>255</td>
<td>6.84</td>
</tr>
<tr>
<td>1881 (a)</td>
<td>250</td>
<td>-0.20</td>
</tr>
<tr>
<td>1891 (a)</td>
<td>279</td>
<td>1.10</td>
</tr>
<tr>
<td>1901 (a)</td>
<td>238.4</td>
<td>-1.59</td>
</tr>
</tbody>
</table>

Since 1901-21 increase in population was very little, i.e., only 5.7% or 13.7 million persons, whereas increase was rapid between 1921-51 i.e., increase of 43.7% or an addition of 110 million. It was at the phenomenal rate of 11.1% or an addition of 220 million between 1951-81. As a consequence during these years, total increase was 186.84 per cent or 322.7 million persons. Moreover, the country has a young population as per 1981 census, nearly 43% of total population was in the age group of 0-14 years, 45% in 15-49 years and 12% in the fifty and above age group. Thus young and more fecund people predominate in the population. Hence the proportion of people entering into the reproductive age group is rapidly increasing resulting in the increase in population at a higher rate.

**SOURCE:** Kingsley Davis, The population of India and Pakistan, Princeton University Press, 1951, p.25

**B.D. Misra, An Introduction to the study of Population, South Asian Publishers Ltd., New Delhi, 1983.**
** POPULATION OF INDIA AND ITS GROWTH BETWEEN 1901-1981

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TOTAL POPULATION IN MILLIONS</th>
<th>DECENNIAL INCREASE DURING THE DECADE</th>
<th>DECENNIAL GROWTH RATE DURING THE DECADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1901</td>
<td>238.4</td>
<td>2.4</td>
<td>1.0</td>
</tr>
<tr>
<td>1911</td>
<td>252.0</td>
<td>13.7</td>
<td>5.7</td>
</tr>
<tr>
<td>1921</td>
<td>251.3</td>
<td>-0.8</td>
<td>-0.3</td>
</tr>
<tr>
<td>1931</td>
<td>279.0</td>
<td>27.7</td>
<td>11.0</td>
</tr>
<tr>
<td>1941</td>
<td>318.7</td>
<td>39.7</td>
<td>14.2</td>
</tr>
<tr>
<td>1951</td>
<td>361.1</td>
<td>42.4</td>
<td>13.3</td>
</tr>
<tr>
<td>1961</td>
<td>439.2</td>
<td>78.1</td>
<td>21.6</td>
</tr>
<tr>
<td>1971</td>
<td>548.2</td>
<td>108.9</td>
<td>24.8</td>
</tr>
<tr>
<td>1981</td>
<td>683.8</td>
<td>135.6</td>
<td>24.8</td>
</tr>
</tbody>
</table>

In recent years population growth has become one of the crucial human problems. The number of the people in the world was growing at a staggering rate. It took one entire period of the history of this planet until 1850 to attain a population of one billion but second billion took only seventy five years. In nineteen sixty eight it was 3.5 billion. If the trend continues the world population will shoot up to seven billion. Today every ticking of the clock adds 2.2 people to the population. The rhythm increased to 2.7 by 1980 and would increase to 3.3 by 1996 and 4.4 by 2000 if the same rate continues. One of the major causes of this rapid population growth has been a sharp decline in the death rate though the birth rate has remained almost the same in the last few decades. Major communicable


diseases like cholera, malaria and small pox have been nearly brought under control and measures to eradicate them are being put into effect. The use of antibiotics, vaccination and other health measures have reduced infectious diseases. In fact mortality has fallen considerably in the last fifty years. And in response to these improved health conditions life expectancy has arisen. Dr. Viscaria (1971) of Bombay University has attempted an estimate of population increase and density per square mile. If the annual rate of growth remains constant at the average figures (estimated for 1961-70, i.e., 2.38 per cent) the following table gives its estimate:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>POPULATION IN MILLION</th>
<th>DENSITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>557</td>
<td>452</td>
</tr>
<tr>
<td>1981</td>
<td>707</td>
<td>574</td>
</tr>
<tr>
<td>1991</td>
<td>897</td>
<td>728</td>
</tr>
<tr>
<td>2001</td>
<td>1,138</td>
<td>923</td>
</tr>
<tr>
<td>2051</td>
<td>3,740</td>
<td>3035</td>
</tr>
<tr>
<td>2101</td>
<td>12,295</td>
<td>9975</td>
</tr>
</tbody>
</table>

The estimate of population in 2101 an increase of 73% over 1971 population.

These figures certainly point out the necessity of treating this problem on an emergency basis and start an all out effort on several fronts. The implications of population pressures are becoming more colossal and pressing in India.

Rapid population growth is a threat to economic development, specially with respect to per capita economic growth. The larger the population the lesser there is to distribute to the people. India has registered remarkable progress in both the industrial and agricultural sectors during the last Forty-two years of political freedom. Although the availability of goods and services has increased, the per capita consumption has not increased at all. Take any aspect of Indian life, economic, social, educational, the same story is repeated - the increased facilities simply do not keep pace with the needs of growing population.

The second crucial problem which the country is facing is that of providing adequate food for more and more people. While the achievements of the green revolution have been spectacular for the welfare of the millions of Indians, it was still modest in terms of actual needs. According to U.N. Expert Committee findings 2,200 calories per day is the minimum needed to maintain adequate health. In India, the average is much lower, about 1900 calories; according to F.A.O. estimates food production must be tripled by 2,000 to maintain the present

sub-standard nutritional level. Dr. Norman Borland (1971), the Nobel Laureate pointed out to curb the frightening power of human reproduction.

"The economy in developing countries is thus put to additional pressures by the growing numbers, new demands for more schools, more job opportunities, more health facilities, more transport facilities and housing and so on. Thus it is not only economic standards that are affected by rapid growth of population but the quality of life as a whole. Water and air pollution, transportation congestion, shortage of housing, overcrowded schools, unemployment, limited civic amenities are the problems that bother. Recently there had been a tendency of flocking to cities, while this urbanization has resulted in the development of industries, swelling numbers have created environmental problems.

On a thorough enquiry into the problem of population pressures, it is clear that it is not a problem that could be solved by scientists. The question is not whether births and deaths will be brought into balance but when and how and at what level. It is more a social problem with cultural, economic and political implications, which has to be tackled at human, individual level. This can be achieved only when caught young.

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and through proper education develop right attitude amongst the vast population which has yet to enter fertility age group and thus strengthen and enlarge the area of commitment towards checking population growth. It is here that population education becomes relevant as a motivational instrument that will prompt the younger generation with a desire to adopt small family norm. This desire should grow out of both the concern for 'overpopulation' and 'quality of life'.

**POPULATION EDUCATION DEFINED:**

Thus population education involves a complete programme of education designed to help people understand the nature, causes and consequences of population growth. The word population and education in this context evoke the totality of problems of life. It is a programme of education in changing socio-cultural styles with available economic resources.

The subject of population education is claiming the attention of different disciplines such as statistic, economics, applied economics and sociology. In these circumstances, population education may convey different meanings to different academicians. Generally speaking, it may mean making people aware of the population problems and educating them to recognize the economic significance of a planned family.

One of the pioneer in this field is Sloan Wayland (1960), and it is to him that the term population education appears to be owed.
To K. Seshagiri Rao (1971), population education can be defined as an awareness of population problems in the broad perspective of building a social order of equality and economic justice leading to a welfare state, through the process of internalisation of positive attitude and emphasizing the belief that man can control and determine the course of action of himself, of his family and of his country.

Prof. Noel David Burleson (1970) refers the term 'Population Awareness' as the factual knowledge about population dynamics required to understand the nature and magnitude of the burden imposed by rapid population growth.

The country is faced with a new challenge which arises out of the enormous increase in population, the needs of which are not being met adequately by economic development inspite of two decades of planned economic growth.

Since the growth of population is a major defiance that the country is countenancing, the task of education is to help the growing citizens to meet the controverts and demands which arise from changing social situations.

The national seminar on population education held at Bombay in August 1969 defined it in terms of objectives: The objective of population education should be to enable the students to understand that family size is controllable, that population limitation can facilitate the development of a higher quality of life in the nation and that a small family size can contribute materially to the quality of living for the
individual family. It should also enable the students to appreciate the fact that for preserving the health and welfare of the members of the family, to ensure the economic stability of the family and to assure good prospectus for the younger generation, that the Indian families of today should be small and compact.

The seminar is, therefore, of the opinion that steps should be taken to educate the students at various levels to encounter these commination. since the growth of population is a major stump that the country is visaging the members of seminar agreed that population education should be an integral part of education at all levels.

According to Viederman (1970), "Population education is defined as the process by which the student investigates and explores the nature and meaning of population processes, population characteristics, the causes of population change and the consequences of these processes, characteristics and changes for himself, his family, for society and for the world."

According to Massialas (1969), "Population education is defined as the teaching and learning of reliable knowledge about the ways of enquiring into the nature of human population and the natural and human consequences of population change."

According to population Reference Bureau (1969), "Population Education seeks to bring about a realization of the individual, family, social and environmental effects of the
explosive increase in human population, the rapid shifts in concentration and distribution of people, the implications of changing age and other demographic patterns, and the conceivable options that may be open to mankind to cope with the consequent problem. While it is not confined exclusively to a particular age group it is focussed primarily on students who will become the principal child bearer within one or two decades."

After over a decade of undertaking population education programme in quite a large number of countries in Asia and the Pacific, population education is still suffering from identity crisis. People are still asking what is population education? Is it family planning? How does it differ from sex education? Is it another name for teaching demography? Is it another term for population studies?"

To many people, population education is family planning, to some others, it is euphemism for sex education, further to many academicians, population education is synonymous to the teaching of demography or population studies.

Taken in isolation most of the concepts subsumed under population situation are the concerns of demographers, those on human reproduction of medical practitioners, and on family planning of those who want to arrest population growth through birth control. Population education, however, is an educational programme designed to study the population situation, human reproduction and family planning and their impact on quality of
life in the family, community, nation and the world.

Population education, therefore, is not family planning as latter is associated with such terms as birth control, birth planning, child spacing, fertility control/regulation, planned parenthood etc. The fact that population education is being juxtaposed with family planning, stems from the observations that many population education programmes especially in the out of school groups are addressing serious population problems arising from unplanned population growth and from massive numbers, posing grave danger on the caring capacity of some countries. However, this can not be said that family planning has no place in the population education programme. Family planning is very much a part of population education programmes in many countries as a means to enhance quality of life.

Population education is not a sex education, as the latter is mainly concerned with human sexuality, and reproduction and often treats the ethical issues relevant to sex related morality. Again, many population education programmes include sex education but are certainly not to be used interchangeably with population education.

Population education is not demography, as the latter deals with "the qualitative study of human populations and the changes in them that result from births, deaths and migration. Again demographic contents are part of population programme as quantitative changes of human population affect quality of life."
Population education is not population studies as the latter is more academic and research oriented. It covers the body of knowledge, concept and theories which describes and attempts to explain the dynamic of human population and their relationship with the social, cultural, economic, political and biological environment (UNESCO, 1978). Like demography, again population studies are a source of content for population education programmes.

Population education is a relatively new and worldwide term. And it is more logical to explain it in terms of objectives rather than by a single definition. One of the best such enumerations was compiled by Bhatia in 1969. His six primary objectives are:

1. Basic understanding of population dynamics including the growth rate and structure of population in the country in the context of world population.

2. Appreciation of the significance of the population characteristics for the present and future quality of life including economic development and the attainment of a high level of health, education, housing, diet and other amenities of life.

3. Realization, that the size of the family can be easily planned for the benefit of individual families and that large families are not necessary in the present day.
4. Understanding of the health risks involved for the mother and the child.

5. Appreciation of the small family as a setting in which a high quality of life for each person is more likely to be attained.


A somewhat more detailed enumeration of specific objectives was prepared by Tjokrowirono (Indonesia).

1. To understand the basic principles of demography.
2. To learn about the causative factors of rapid population growth.
3. To understand the impact of rapid population growth.
4. To understand the close relationship between the people's well being and socio-economic development.
5. To understand the meaning and significance of environmental harmony.
6. To learn that family size can be controlled, as opposed to fatalism.
7. To understand the significance of the small family "norm" and its relation to the quality of life.
8. To understand the far reaching consequences of population density and rapid growth to one's self and one's environment.
9. To realize that human behaviour has a direct influence on the social structure and on social change.
10. To change attitudes and instil a sense of responsibility towards the welfare of the nation and the world.

The 1981 conference of African Parliamentarians on population and Development devoted considerable attention to population education. The conference defined population education, as:

"an educational programme which helps individuals and groups ... to define for themselves the nature of the problems involved in demographic processes ... and to determine the means which society as a whole, and they themselves as individuals and/or groups, could use in order to react to those processes and influence them with a view to improve the quality of life, both present and future."

Population education therefore, is essentially related to human resource development. Thus population education is not only concerned with population awareness but also with developing values and attitudes so that both the qualitative and the quantitative aspects of life of people are taken care of.

Population education, as the name indicates, has come to be understood as an educational process seeking to change knowledge, attitudes and actions of the people on population matters in such a way that it improves the quality of human life. It includes both formal and non-formal education on the aspects like demography, biology of human reproduction, family planning methods and socio-economic implications of over
and underpopulation. In a way population education is education about the dynamics of human population.

It is evident that the educational activities with regard to school children, adolescents, teachers and parents have to be developed on a holistic approach where sexuality and family planning have to be integrated into all other fields of human activity. Sex should not be regarded as a specific item but as an integral part of human life.

A great deal of work also serves to accentuate the importance of teaching in affecting felt need. The teachers must have an understanding of the essential conditions that influence learning and bring about awareness. However, it requires a gifted, prudent and thoroughly acquainted, understandable teacher to stand up before a group of young people and interpret on them that family size and quality of life are inter-related, unless and until teachers and would be teachers are exposed to problems of population and unless a faith is created in their minds about the great intensity of problem vis-a-vis the future prosperity of the country, not much success can be achieved in the proper orientation of the school going children. Boodish (1955) also stressed the importance of each learning situation in the formation of future behaviour: "Free Will" is a myth. Perhaps 2% of our decisions can be attributed to free will, 98% are inevitable consequences of the chain reactions of the past events. Hively (1959) supported that education is concerned with changing the behaviour of students.
Thus the main purpose of including population education as an integral part of the elementary and secondary syllabi is to inculcate in the young minds a gradual consciousness of the potent fact that the material resources of a country can be stretched only to a certain extent, and if individual share has to remain respectable, effective and if standard of living has to remain adequate the number of share holders has necessarily to be restricted.

Population Education - An Innovation

Innovation in different fields like health, family planning education, etc. have been explained within the framework of model of diffusion of innovations as suggested by Rogers (1962) and Rogers with Sherring (1969). The main outline of the original model as proposed by Rogers is as follows:

Awareness ______ Interest ______ Knowledge

_______ Evaluation _______ Adoption

With regard to family planning practices, Rogers has modified his model and suggested the following stages for adoption:

Knowledge ____ Persuasion ____ Decision ____ Confirmation

Donald Bogue (1962) also suggested the following stages through which an individual may pass with regard to the adoption of family planning practices:-
Rogers and Shoemaker (1962) have emphasized that an innovation is an idea, practice or object perceived as new by the individual. It matters little as far as human behaviour is concerned. Whether or not an idea is objectively new as measured by the lapse of time since its discovery. If the idea seems new and different to the individual, it is an innovation.

Zaltman and Lin (1973) have suggested that adoption of an innovation by an individual or other relevant unit of adoption represents one half of the dynamic core of social change. It is the fruition of a decision making process influenced by plans or strategy made by others, affected by personality and creative ability, basic wants etc. On the other hand diffusion is the other half of the dynamic core of social change. It is a phenomenon which emerges from the adoption of an innovation by potential adopter units and is usually a partial result of interaction among these units.

When an innovation is diffused to and adopted by sufficiently large number of relevant units in a system, so as to register an impact, it is said that the change has occurred in that particular system. The adoption of an innovation at the individual level may be indicative of a change at the attitudinal level. And a change in the attitude has been considered as a pre-requisite for any other change in the
The process of education is an important factor which affects the cognitive elements in an individual's personality. It helps in the inculcation of new thoughts, patterns, and also in the reshaping of the old ones. It can, therefore, be said that an educated person tends to have less traditional attitudes as compared to an uneducated person. When the traditional attitude of educated person starts changing in order to give place to the modern ones, the individual is faced with the problems of maintaining a balance in his changing attitudes. In accordance with the dissonance and consonance theories of cognitive elements, an individual attempts to bring about harmony and consistency in his attitudes regarding various social elements. In order to achieve this consistency, the individual adds some new attitudes and also changes some of the existing ones. This process of attitudinal change is likely to affect the performance and behaviour patterns of the individuals.

In the above background, population education is an innovation to a large number of people especially the young students, who would need inputs of knowledge for building desirable attitudes and behaviour change with regard to population problems.

Within the functional perspective, Parekh and Rao (1974) have suggested a conceptual framework for understanding human behaviour which has been stated as follows: Behaviour (B) is
the result of Motivation (M) and Values (V), which in turn are determined by social system in which the individual lives. Accordingly, the individual behaviour is caused by factors at two different levels. At the individual’s intrinsic level, the individual's motivation and values including his attitudes influence his behaviour. At the community (extrinsic) level his behaviour is influenced by expectancy of reward and punishment from the socially significant persons within the society and by the social system. The social system produces relevant motivational patterns in the members of the society, with regard to population problems. These patterns help to maintain the social system and are thus functional at the individual as well as community level which produce reinforcing mechanism. Some important mechanisms from this point of view are child rearing practices, the school system and the other institutions of socialization. Such institutions and mechanisms greatly influence human behaviour by producing expectations of behaviour being rewarded or punished by the society. This functional perspective may be useful in creating awareness about the increasing population.

However, the correct concept and connotation of population education still not grasped by many, population education is an educational movement. It is an educational programme which provides for a study of the population situation in the family, community, nation and the world with the purpose of developing in the students rational and responsible attitudes and behaviours towards coping with that
situations.

Inspite of all this, population problem appears differently to different people at different times and they also have different notions and ideas about it. For some people, the increasing human beings do not pose any threat to the survival of humanity. In fact this large number would not be a reason for concern if the required food supply, increasing avenues of employment, adequate housing facilities, better education and health services are also provided at a rate commensurate to the growth of population.

The interrelationship between population growth and economic development is not new to demographers and economists. They have been debating over a long period of time as to whether this relationship is positive or negative that is, whether population growth retards or promotes economic development and vice versa and whether the two in this regard have fluctuated between pessimism and optimism.

The concept of development can be interpreted either as economic development measured through the rise in the total national product and hence, in the per-capita income or it may be thought in terms of provisions of better quality of life to each and every person of the society.

As the ultimate purpose of development is to provide increasing opportunities to the people for a better life, it is essential to bring about a more equitable distribution of income and wealth for promoting both social justice and
efficiency of production, to raise substantially the level of employment, to achieve a greater degree of income security, to expand and improve facilities for education, health, nutrition, housing and social welfare and to safeguard the environment. Thus, qualitative and structural change in the society must go hand in hand with rapid economic growth, and existing disparities - regional, sectorial and social - should be substantially reduced. These objectives are both determining factors and end results of development, they should therefore be viewed as integrated parts of the same dynamic process.

Therefore, socio-economic development and population growth are linked by a continuous chain of inter-dependent variables. Very often, it is the area with declining satisfactory economic opportunities that has higher birth rates. As a consequence, a large number of children grow up to the working ages with much hope of finding satisfactory employment. Some people see it more so in the mode of production. There are others who on the contrary look upon absolute number of human beings on this planet as a serious problem. The population growth acts as a stimulant only upto a point beyond which it becomes an impediment. As such measures to check the population is a must. In this direction, population education assumes a greater significance in socialising young potential youths so that they develop appropriate personalities by acquiring the right type of perception, knowledge and attitudes towards problems which they are likely to confront.
The third world is heading for a major crisis if the present rapid pace of population growth continues unchecked. All our developmental efforts will be retarded and the predictions that the next 800 years would see one person for every square foot of land surface would then not be far from reality. The need is to stabilize the population at a level consistent with the requirements of the national economy.

Over the past few years in India, there is a continuous effort in introducing population education in the formal educational system. Population education aims at constant flow of information to the children right from their formative years in schools. The expectation is that a voluntary desire to have a small family norm will emerge in the potential mothers and fathers in the next few years. This voluntary demand of small family norm, is likely to have major lasting effect on the population growth rate in the country.

In every society, roles are allocated on the basis of the Gender, that is roles are labelled as 'Masculine' and 'Feminine'. "Socialisation is the family and education in the school reinforce 'Gender roles' that is cultural definition of traits and behaviour that are considered appropriate for men and women. In fact the process of socialisation itself is sex specific. In the traditional Indian set up, male children have been preferred to the female for various reasons. The sons in the family are given more value and importance as compared to
the daughters. This leads to differential treatment given to boys and girls which, in turn, may influence the perception and attitude of younger ones.

Thus population awareness and sex education are of vital importance as they constitute topics that are fundamental for understanding current population problems and thereafter, for helping to create a positive attitude towards small family norm especially among the young and young adults.

There are two distinct approaches to the family welfare planning programme. One, advocating long term measures with a view to improving overall socio-economic and demographic structure of a nation and the second, deals with the short term measures with a view to reaping immediate results by way of averting the number of births. The long term measures include well conceived population education, increasing age at marriage, compulsory education and adult literacy campaigns, restricting the maternity benefits to small families, providing security in old age, introduction of new life insurance policies, Carrying special benefits for those having small families and better health education and employment facilities and accelerating economic growth by diversifying industrial development. It has been said that educational institutions i.e., schools and universities are the best places where the gap in the knowledge created at home can be filled up. For an all round development of the personality of the young students creating greater awareness among the younger generations, are, the measures which were to be considered important to check the
rapid population growth.

Thus, it has to be realised that while on one hand arrest of rapid population growth is essential to prevent best of our developmental efforts being nullified. On the other hand, properly implemented programme of education can influence population trends in our country and hasten the rate of economic, social and educational development.

DEVELOPMENT OF POPULATION EDUCATION PROGRAMME:

Since, the first Asian Regional Workshop on Population and Family Education organized by the UNESCO Regional Office for Education in Asia, Bangkok in October, 1970, there are now 14 countries in Asia alone which have recognized population education as one intervention strategy for development. Varied innovative strategies, approaches, methodologies and materials have continously been developed and used to meet changing needs and requirements in different countries. A lot could be shared by member states in various aspects of population education. Much could be done in cooperatively planning and developing strategies, programme and activities both at the national and regional levels to qualitatively improve existing programme in the formal and non-formal sectors.

The Regional consultative seminar on population education (organized by UNESCO, held in Bangkok in October, (1982) discussed the curriculum and materials developed in

various countries for population education.

a) Formal education and the educational levels at which population education is introduced.

India, Pakistan, the Phillipines and Thialand have chosen to introduce population education from Grade I. Bangladesh, Indonesia, Malaysia, Nepal and the Republic of Korea from Grade IV and Srilanka from Grade VI.

The most popular mode of introduction is the integration of population contents with several areas. In India at the primary level, (I-V Grade), it is integrated with social studies, environmental-studies, General Science, Mathematics and language, and at the secondary level (VI-X Grade) with civics, geography, biology, general science, hindi, economics and social studies.

b) Non-formal education: Population Education in the region started within the in-school programme, but later on it was realised that the national population education objectives would be difficult to achieve unless population education programmes were also initiated in non-formal education sector. This is because about 50% of the population in the region is not being attended to.

10. Ibid.
by the formal education system. The countries in the region thus started expanding their on-going population education programme to meet the learning needs of millions of out of school youth and adults who make individual as well as collective population related decisions everyday, affecting the welfare of individual, family, community and the nation. Many countries in the region have also evolved a variety of non-formal education programme that are carried on outside formal school. In India for adults, it has been integrated with National Adult Education Programme of the Ministry of Education, and for out of school youth and adults, are population education projects of the University of Madras: Family life education programme of literacy house, Lucknow; and Integrated Child Development Services Schemes of Institute of Public Cooperative and Child Development.

It is being necessarily realised that while family information and methods form the subject matter for those who are married, or about to be married, there should be another appropriate knowledge component for younger age groups dealing not only with family planning and its methods but with the basic causes and effects of population growth and the desirability of adopting new norms like that of a small family. This body of

knowledge which can be introduced into the educational system at all levels, has for the present been given the term 'Population education' and realizing the magnitude, enormity and urgency of the population problem with which the country was faced, it did not take long for intellectuals, social workers, political thinkers and those related with family planning programme in India to join hands on a new front, initiation of population education in the formal education system. Several voluntary agencies, national as well as international took lead in organizing such a front. Population Education programme will be considered as a curriculum enrichment programme which will involve the inclusion of population related concept throughout the whole range of school curriculum. The culmination of this initial effort was the acceptance by the Government of India in 1970, the basic recommendations of the national seminar on Population Education held in Bombay in August 1969 to introduce population education as an integral part of school curricula.

Population education should be introduced into the curriculum of the schools and the colleges by including it in so far as it may be possible, in the area of a study now common in the educational curriculum such as social studies, science, health education, mathematics, language, etc. The Seminar very

12. Wadia, Arabia, op. cit.
13. Parakh, B.S. et.al. op. cit.
clearly indicated that a comprehensive concept of population education should include knowledge about both the quantity and quality of population and need to control them for happy human existence.

Population education is a new innovation in the field of education and as such we do not have much experience either in this country or elsewhere on its organization and implementation. As per the recommendations of the first national seminar on population education, a population education cell was developed in the National Council of Educational Research and Training to find out ways and means of developing and implementing the programme in schools and teacher training colleges.

National Council of Educational Research and Training has already made a beginning in bringing out some text books with regard to the introduction of population values in the educational systems. This programme has been prepared in collaboration with the United nations Fund for population activities, and with the active involvement of the Ministry of Health and Family Welfare. However, none of the states in India has introduced population education as a separate subject in the formal school or college education. NCERT has also

14. Ibid.
prescribed the course of contents of population education which is to be introduced in the formal educational centres (school under this programme). The contents are given at three different levels, (a) Elementary level (b) Lower secondary level (c) Higher Secondary level.

The contents for all the three levels prescribe information in five areas as follows:

a) Population Growth.
b) Economic development and population.
c) Social development and population.
d) Health, nutrition and population.
e) Biological factors, family life and population.

But population education efforts were not confined to NCERT alone, although it was called upon to play a leading role as an apex body in the field of educational research, development and training in the whole country. However, all the efforts made by a large number of agencies outside the government orbit, such as; the family planning association of India; the Population Education Centre in the Venkateswara University, Tirupati; Population Education Project located in M.S. University, Baroda, Pathfinder funds population education project in Delhi and the initial efforts made by Central Health Education Bureau in the Ministry of Health and Family Planning were more or less accepted by the population education unit in the NCERT.

The 1st National Seminar on Population Education was held at Bombay on August 1969 to develop the objectives and contents of population education. This approach and strategy was further reinforced in the National population Policy statement issued by the Ministry of Health and Family Planning in 1976 and the new population policy in 1977. As per the recommendations of the first national seminar on population education, a population education cell was developed in the NCERT, New Delhi in May, 1970, to find out ways and means of developing and implementing the programme in schools and teacher training colleges. Over a period of ten years the NCERT has made efforts to develop the concept of population education curriculum for use in schools and teacher training colleges and has helped to disseminate the knowledge to teachers and teacher educators in various parts of the country, through a series of seminars and workshops. The UNESCO came into picture in 1970 and made special provision for training of teacher educators at Quezon City in the Phillipines. Apart from Universities, studies have also been initiated in some population study centres. The states were divided into two groups:

1. Those that were ready to launch the project by April, 1980.
2. Others who would be ready to launch the project by April, 1981. The ten states of the 1st group are Bihar, Maharashtra, Madhya Pradesh, Gujarat, Karnataka, Tamil Nadu, Punjab, Haryana, and Chandigarh.
The programme was started in the State Institute of Science Education, Punjab, Chandigarh, with its Director as the Project Director. He attended workshop in July 1980, organized by NCERT at Srinagar for the proper implementation of population education programme. After that there was a workshop for subject specialists in Bombay in July, 1981. Another workshop at Coimbatore in March, 1981, the work of the cell was done by the Director S.I.S.E. with the help of two members of the Institute, as there was no formal sanction for the creation of the population education cell.

In September, 1981, the financial sanction of the project, was released by Punjab Govt. and the staff was subsequently appointed according to sanctions.

(a) CREATION OF POPULATION EDUCATION CELL IN S.I.S.E.:

A population education cell was created in the State Institute of Science Education in the SCERT in September, 1981. This is responsible for planning and implementation of the population education programme in the State of Punjab. The cell provided assistance from different sources. They are:

I(A) From State Fund:-

1. Director of SISE
2. Assistant Incharge 1 Part-time salary for part time work with normal duty
3. Senior Clerk 1
4. Class IV 4
| 5.  | Stenographer          | 1     |
| 6.  | Driver               | 1     |
| 7.  | Projectionist        | 1     | Full time for population education cell. |

(B) From UNFPA

1. Pay of Establishment:
   1. Project coordinator Class II - 1
   2. Subject specialists       - 3
   3. Artist                   - 1
   4. Accountant               - 1
   5. Steno-typist             - 1
   6. Part-time consultant      - 1

II. fundings include expenditure in connection with project staff, project training, travel cost research, evaluation, development, printing of instructional material and some expendable and non-expendable equipment for the population education cell. UNFPA support will be available. It is assumed that funding will be continued at least for five years, more for proper institutionalisation of population education in Punjab.

The programme was launched with the following objectives:-

**LONG TERM OBJECTIVES OF PROJECT**

1. To help the students develop an insight into inter-relationships between population growth and economic development at the individual family, society, national and international levels.
2. To make the children and teachers aware of the population situation in the country and the targets and efforts of the Govt. of India in solving this problem.

3. To institutionalize population education in the formal education system including universities and non-formal education programme at the national and state levels.

4. To develop desirable attitude and behaviour in the teachers and students as well as the community at large towards population issues so that they may take rational decisions about their family size and the quality of life that they would like to have.

IMMEDIATE OBJECTIVES OF POPULATION EDUCATION PROGRAMME:

The following are the immediate objectives of the state programme:

1. To establish population cell at state level with a team of full time technically knowledgeable persons who will be responsible for overall implementation of the programme.

2. To develop curriculum, instructional materials, learning packages and audio-visual aids for the programme.

3. To arrange and help to conduct orientation courses for the key persons. The participants will also include the following functionaries working at various levels of school education:
a) Circle education officer
b) District Education Officer
c) Deputy D.E.O.'s
d) Block Education Officer

4. To develop lessons relating to population education for the educational broadcast programme.

5. To initiate and promote population education out of school children in the age group 6-14.

(b) BACKGROUND:

In 1971, population of Punjab was 13.55 million and the growth during the period (1961-71) was 21.70% which was slightly lower than the national growth rate of 24.80. At the time of Test Census (1981) population of Punjab was 1,66,69,775 and the growth in population during 1971-81 is 23.01 which is slightly lower than the national growth of 24.75% during the decade.

The immediate objective of the project is to expose the teacher/parents/students to the population dynamics so that they may ultimately help the state in the reduction of growth rate. The population education has not been given its due importance in the present set of school text-books though some components of population education have been included here and there.
<table>
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<th>SR.NO.</th>
<th>TYPES OF SCHOOL</th>
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<th>ENROLMENT</th>
<th>TEACHERS</th>
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<td>220362</td>
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</table>

This is to be covered by 1990.

(c) RELATED ACTIVITIES:

The population education programme will be linked up with UNICEF Project, II, III and IV already taken up in SISE, Punjab, Chandigarh.

(d) INSTITUTIONAL FRAMEWORK:

A high power state level co-ordination committee under the chairmanship of the education commissioner has been set up with the following members:

1. Education Commissioner to the Govt. of Punjab Education Department.
2. Director of Public Instruction (Schools), Punjab.
3. Director of Public Instruction (Colleges), Punjab.
4. Director of Public Instruction (Primary), Punjab.
5. Director, SCERT, Punjab, Chandigarh.
6. Director, SISE, Punjab.
7. Officer Incharge of Adult Education.
8. Officer Incharge of Technology Cell.
9. Secretary to Govt. of Punjab Health and Family Planning or his representative.
11. field Advisor, NCERT, Chandigarh.
12. Station Director AIR Jullundur.
13. Director Evaluation and Educational Planning PSEB, S.A.S. Nagar (Mohali).
14. State Mass Media and Education Officer, Health Department, Punjab.
15. Director, Doordarshan, Jullundur.
16. Project Coordinator PEP SISE, Panjab Chandigarh.

(e) PROJECT ACTIVITIES:-

A. CURRICULUM DEVELOPMENT:

1. Development of Instructional material for orientation and training programme.
2. Development of training kits.
3. Curriculum Development for different stages of school.
5. Development of material for non-formal education.

B. TRAINING PROGRAMME:

1. For administrators.
2. Training for teacher educators (Primary and Secondary).
4. Training of teacher of secondary and primary schools.
5. Training of teachers of non-formal education.

C. Fellowship.
D. Study Tour.
E. Evaluation and Research.

In these programmes, special efforts were made to ascertain the views and needs of teachers for teaching the areas relating to growth and family life education and in helping the students understand the population problem and develop a desirable attitude for a small family.

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