

# POPULATION EDUCATION

## A DRAFT SYLLABUS

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# POPULATION EDUCATION

*A Draft Syllabus*

(Classes I to XI)



*Population Education Cell*  
**Department of Social Sciences and Humanities**  
**National Institute of Education**  
**National Council of Educational Research & Training**  
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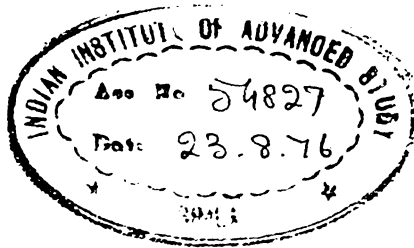
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Population Education Cell  
National Council of Educational Research & Training

T.S. Mehta  
R.C. Saxena  
Ramesh Chandra

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## FOREWORD

The National Seminar on Population Education held at Bombay during 1969 recommended that this subject should become an integral part of education at all stages. A Population Education Cell was set up in the Department of Social Sciences and Humanities of the National Institute of Education in June, 1970. The Cell has applied itself to the task of examining the problem of developing appropriate curricula. The outcome of the work of this Cell is the draft syllabus which should interest everyone.

The area of population education is new the world over. There are no tried out models to fall back upon. Symposia and discussions have been held from time to time both in our country and elsewhere. These have furnished some base for thinking.

The syllabus as furnished in this book is developed stage-wise and is woven round the following major areas:

- i) Population growth;
- ii) Economic development and population;
- iii) Social development and population;
- iv) Health, nutrition and population;
- v) Biological factors, family life and population.

Ecological considerations have also been kept in view.

The syllabus furnished is only a draft. It will be finalized after getting the reactions of the Education Departments of the States and all others interested in this important work.

Shri T.S. Mehta, who is Incharge of the Department of Social Sciences and Humanities was a Consultant to the Unesco. Regional Workshop on population Education. This Workshop was held during September-October, 1970 at Bangkok. The working Document prepared by him has been extensively utilized in drafting the Syllabus.

The Council's thanks are due to Shri T.S. Mehta and his colleagues and all those who participated in our National Workshops.

Suggestions for the improvement of the Draft Syllabus are welcome. They will be gratefully acknowledged and considered while finalising the Syllabus.

S. V. C. AIYA

*Director*

National Council of Educational  
Research and Training

New Delhi-16  
10th August, 1971



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# SECTION I

( *General Introduction* )



# Point of View

Population explosion is one of the most fundamental of human problems. It affects every aspect of man's life, individual, national and international. It affects health, wealth and happiness of individual families, it affects the prosperity and progress of nations, it affects international security and peace. Due to population pressure most countries of the world are confronted with the problems of food supply, living standards, racial, economic and educational concerns, natural resources and politics and these problems are of colossal magnitude. Hence some people not only feel but openly say that our very survival is at stake.

A rapid rate of population growth presents serious consequences for any country in the world, even for those countries that are relatively well advanced economically and socially and are endowed with ample natural resources. Some of the significant implications are the following though they are more pressingly experienced by the developing countries.

1. Rapid population growth is a threat to economic development, specially with respect to per capita economic growth. The rate of improvement in per capita economic growth can be viewed simply as the difference between the rate of economic growth and the rate of population growth. The greater the population, the less there is to distribute to the people. In India this simple fact is being felt increasingly because the growth of the economy is being 'eaten up' by even more rapid growth of population. To keep up with an expanding population major part of economy goes to current consumption and there is little left over for fresh capital investment. Consequently a lesser percentage is being invested than it should have been if the population would not rise so fast. But increasing capital investment are necessary if living levels are to be raised even modestly. The result is blocking of further economic growth.

2. The second major problem concomitant to rapid growth of population is that of providing adequate food for more and more people. By U.N. standards approximately two thirds of the people on the earth are under fed or eat unbalanced diet. The Food and Agricultural Organization of the United Nations estimates that food production must be doubled by 1980 and even tripled by 2000 to maintain the present and by far sub-standard, nutritional level. In spite of scientific and technological advancement the task appears to be well nigh impossible.
3. Rapid population growth also affects the structure of population, for a growing population usually is a "young population". And young population requires a particular kind of expenditure to support it, a proportionately large outlay is required for supporting the social institutions relevant to it, e.g. schools, health facilities etc. The economy in India has been disrupted by the growing numbers, new demands for more schools, more job opportunities, more health facilities and so on.
4. It is not only economic standards that are threatened by rapid growth of population but the quality of life as a whole. Large number of people with low living standards affect the productivity of the entire nation. Poor people are not usually very productive. Poor productivity leads to more poor people—a vicious circle.
5. While urbanization of population does come with certain kind of social and economic progress, swelling numbers in cities do create environmental problems. Water and air pollution, transportation congestion, shortage of housing, overcrowded schools, limited civic amenities, long distance travel are some of the problems that bother even the more economically developed countries. The above list is not comprehensive but enough to show that the problems arising out of population pressures are of immense magnitude and require serious considerations for their solution. They are almost assuming the proportions of an emergency that calls for an all out effort on several front.
6. The ever swelling numbers seem to undermine all plans of consolidation and qualitative improvement. The situation can be very well summed up as making nonsense of planning not only in education but in almost every field of social and economic development. It is a desperate situation where one has to run as fast as one can merely to stay where he is. Money

earmarked for improving the standards is eaten up by the increase in numbers and in our race for better standards we end up with hardly maintaining the existing standards.

## ASSUMPTIONS

Even with the best intentions and consummate planning it may not be possible to solve the problems of expansion of education, unemployment, poverty, shortages, inadequacy of civic amenities and a host of others, unless these problems are tackled in the context of the total population problem of the country. These are merely symptoms and not the disease proper. Treating symptoms may provide temporary relief but not a permanent cure.

Fortunately, many of our people are becoming increasingly aware that any planning to develop the nations material and human resources without a concurrent reduction in the incidence of births is doomed to failure. It is now being realized on all hands that family planning programmes should be supported by formal education about awareness of population problems so that right attitudes are developed at an early age to take rational decisions. The problem is not only of the currently fertile population. Perhaps more important is that 50 percent of the population whose reproductive behaviour in the next three decades is vital not only for our progress and prosperity but our very existence. It is here that population education becomes relevant as a motivational instrument that will inject these new entrants with a desire to adopt family planning as way of life. It is through population education that we may strengthen and enlarge the area of commitment towards checking population growth by developing right attitudes amongst the vast population which has yet to enter fertility age group.

Population Education is a new area and no model exists at present which could be adopted to suit the conditions prevailing in our country. This Draft Syllabus attempt to outline one such programme for the schools. The programme is based on the following major assumptions :—

- The unprecedented population growth is responsible for retarding economic progress of the country and prejudicing the health and well-being of the younger generations.
- The country is pledged to raise the standard of living of the people since chronic poverty provides a constant stimulus to unrestrained population growth.

- In order to effect any significant change in the rate of growth of our population we should direct our attention to future parents and inculcate in them attitudes which favour small family norms.
  - Population education is primarily a motivational force for creating the right attitudes to family size and need not be mixed up with sex education or knowledge of family planning methods.
  - Population is not merely a quantitative phenomenon. It is the quality of population that is most relevant both as a factor of growth and an end product of growth.
  - The reduction of birth rate is not a “once for all affair”, nor is it concerned only with the currently fertile population that is capable of adding to the country’s numbers. It has to be on a continuous basis to be effective.
  - The small family norm is not only desirable but also achievable.
-

# Meaning and Definition of Population Education

As yet no clear and commonly accepted statement of definition of Population Education exists. Several persons have defined it differently with the bias and purpose they had in mind. A number of statements have been used without clear cut demarcation of areas. Broadly speaking the four approaches that can be readily identified in the literature are (a) Sex Education (b) Education for family living (c) Population awareness (d) Education for basic value orientation with focus on planning for the future. All these approaches are not necessarily mutually exclusive. And consequently there exists a lot of vagueness about the concept of population education. The available literature amply reveals that there is a tendency to avoid clear cut definition and to take resort to clarify the meaning in operational terms by listing topics that population education shall include or by indentifying objectives it shall seek to achieve at school level.

The "National Seminar on Population Education" held at Bombay in August 1969 made the following recommendations to define the concept: (1) "The objective of population education should be to enable the students to understand that the family size is controllable, that population limitations 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 prospects for the young generation, the Indian family of today, should be small and compact, with only two or three children."

(2) "Students at all levels have a right to accurate information about the effect of changes in family size and in national population

on the individual, the family, and the nation so that this body of knowledge is utilized to control family size and national population with beneficial impact on the economic development of the nation and the welfare of the individual families."

The Seminar very clearly indicated that a comprehensive concept of population education should include knowledge about both the quantity and quality of population and the need to control them for happy human existence. "Population should not be treated merely as a quantitative phenomenon or just an essay in numbers. It is the quality of the population that is most relevant both as factor of growth and an endproduct of growth and numbers have to be treated in terms of the effect they have on quality either by way of deterioration or of improvement." 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 quality, and quantity are taken care of.

As an educational programme, the approach of population education should be presented to the students as meaningfully as possible the multifaceted aspect of their population situation with a clear-cut emphasis on cause and effect relationship. In other words the determinant and consequence approach may be followed. By doing so the assumption implied is that a comprehension of the total picture will lead the students to eventually make more national decisions concerning their own behaviour on population matters.

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# Objectives of Population Education\*

In more specific terms or in terms of objectives we may now say that 'Population Education' as an integral part of General Education seeks:

- (1) to develop an understanding of some demographic concepts and processes.
- (2) to develop among the younger generation an understanding of the most important phenomenon of the modern world viz., rapid growth of population and its causes.
- (3) to develop an understanding of the influence of population trends on the various aspects of human life, political, social, cultural and economic.
- (4) to develop an understanding of the close interaction of population growth and developmental process—with particular reference to developmental programmes for raising standard of living of people.
- (5) to develop an understanding of the evil effects of over-population on the environment and the concomitant dangers from pollution.
- (6) to develop an understanding of scientific and medicinal advancement enabling to get an increasing control over famines, diseases and untimely death and the imbalance thus created between death rate and birth rate.
- (7) to develop an understanding of biological factors and phenomenon of reproduction which are responsible for the continuation of the species.
- (8) to develop an appreciation of
  - (a) the small family norm as proper and desirable.

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\*Based on Population Education in School curricular by T. S. Mehta, N.C.E.R.T. Publication, Delhi, 1970

- (b) the relation between population size and the quality of life.
  - (c) the fact that family size is a matter of deliberate choice and human regulation rather than of accident or forces beyond human control.
- (9) to develop an attitude of responsibility and mutual help and cooperation in all aspects of personal and family living.
  - (10) to develop an appreciation of the relationship between the preservation of the health of mother, the welfare of the children and the small size of the family.
  - (11) to develop an appreciation of the fact that the actions of each individual member of the society affects the others, and personal and national decisions concerning family size and population have long range consequences for the whole world.
  - (12) to develop an awareness of the population policies and programmes of the country.
  - (13) to provide students with a basic demographic vocabulary so that they are able to read and interpret demographic material with some understanding.

The list of objectives given above is not comprehensive but suggestive. The objectives listed are not mutually exclusive. The interactions among the various facts of population dynamics are such that it is not possible (nor desirable) to identify them with defined border. The objectives as they are listed above outline an operational frame-work of population education.

*Specific Objectives—Stage wise (level wise).*

In the process of curriculum development the next sequential step is the spelling out of achievable objectives stage-wise (elementary, middle, high/higher secondary) in more specific terms. This, helps, in the proper selection of content and in offering information and concepts which are appropriate to the age levels and the cultural orientation of the children. In the language of the curriculum workers delineation of objectives stage wise help in selecting learning experiences which are likely to attain these purposes and also help in evaluating the achievement after instruction.

### (A) Elementary Level

(5 to 6 years duration—6 to 12 years age group)

This stage in the development of the pupil presents the period of the rapid mental and social growth. Attitudes and habits formed during this period will greatly influence his intellectual and social behaviour in the subsequent stages at school as well as in adult life. Although how attitudes are formed is still something of a mystery in psychology, evidence indicates that attitudes are derived from experiences in which the pupil has been emotionally involved. They are not likely to be developed in highly verbal procedures usually employed in formal teaching.

The primary school child has only a limited background of first hand experience upon which to generalize. His thinking is concerned with "here and now" with the specific and the concrete. He can grasp only those realities which are associated with his immediate environments and in the later years of this stage begins to understand simple things about the state and the country of which he is a member. Hence the immediate environment and towards the later stage of elementary education the state and the country should form the basis of all relevant information with regard to population education, given to him in simple form and through what is called the "discovery method". Some of the important objectives to be realized at this level are:

#### **Information and Knowledge**

- (1) To develop in children an awareness of the growing population in their locality, neighbourhood, state and the country.
- (2) To develop in children an understanding of the visible impact of the growth of population in home, locality and neighbourhood etc.
- (3) To enable the children to appreciate the advantages of a small family in relation to food, clothing, shelter and education.
- (4) To enable the children to understand the relationship between (a) hygienic habits and healthy life (b) good nutritive food and healthy life.
- (5) To enable the children to acquire an elementary knowledge of plants and animal life-process growth and decay.

- (6) To develop in children an awareness of comfortable living conditions in a family.

### **Skills and Abilities and Attitudes**

- (7) To help children develop good hygienic habits so that they keep both their person and environment clean.
- (8) To help children develop the skill of locating information about the population of villages, districts, states etc., from various sources.
- (9) To help children keep the record of personal expenses—calculate rise in prices and increased cost of living (elementary exercises).
- (10) To help the children to compare and contrast the life in rural and urban areas. (Problems of transport, overcrowding, housing etc.)
- (11) To help the children develop attitude of responsibility, mutual help and co-operation in various aspects of family and community living.
- (12) To help the children appreciate the cause of overcrowding and poor sanitary conditions in their localities.
- (13) To help the children collect data about population of his state and country.
- (14) To help the children draw maps and simple bar graphs showing density of population etc., in the various parts of the country.

(Emphasis at this level should be placed upon the development of simple understandings leaving the more complex ones to be realized in later stages. At this formative and impressionable stage of the pupils the teacher shall be constantly sensitive to the attitudes and feelings pupils are developing about learning.)

### **(B) Lower Secondary Level**

(3 years duration—13 to 15 years age group)

This stage is usually regarded as a bridge between the elementary level and the higher secondary level. In many countries of this region this is almost a terminal stages for a majority of children who would then enter life. Hence it is important to keep in mind the developmental characteristics of this age group while drawing up specific objectives. Some of significant ones are the following.

The intellectual and social growth of the pupil continues at relatively rapid rate. The pace at which the pupils' background is broadened increases as greater reliance is placed upon various experiences. Increased maturity makes it possible for him to perceive necessary relationships in the development of major understandings, particularly cause and effect relationships. This increased maturity also makes possible an improved time sense, and the pupils' sense of chronological progression of sequence is considerably developed. He begins to acquire an awareness that each period of time has its distinguishing characteristics—that his ancestors lived differently from how he does and the pattern of life for those who follow him will be different than his. His ability to grasp special arrangements is also widened. Experience suggests that at this age the pupil's interests in people broaden beyond those with whom he has had established direct contacts. His interests in others increases and he becomes interested in their problems. Some of the specific objectives to be realized at this level are:—

#### **Knowledge and Understanding**

- (1) to develop an understanding of the density of population in various parts of the world.
- (2) to develop an understanding of the growth rate of population in India and various parts of the world and its causes.
- (3) to develop an understanding of the implications of the rapid population growth and the natural resources, basic necessities and essential social services available in the country.
- (4) to develop an understanding of social and economic problems that arise out of rapid population growth.
- (5) to develop an understanding of the relationship of the size of the family, its income and healthy comfortable living.
- (6) to develop an understanding of the problems arising out of rapid population growth with reference to food, clothing, housing, education, health and employment.
- (7) to develop an understanding of the relationship of happiness and well-being of the people and the providing of better living and working conditions and essential social services like medical care, education and social security.
- (8) to develop an understanding of the need to maintain a balance in population.

- (9) to develop an elementary knowledge of the human physiology and the reproductive systems among plants, animals, birds and human beings.
- (10) to develop an understanding of the components of population growth—birth rate, death rate, migration etc.
- (11) to develop an awareness of the plans and programmes of economic and social development.

### **Skills, Abilities and Attitudes**

- (12) to develop an ability to collect data about population, growth rates, density of population, natural resources.
- (13) to develop an ability to interpret simple line-graphs, bargraphs or picto-grams etc. showing distribution of population, its growth etc.
- (14) to develop an ability to present data relating to population growth in a tabular, diagrammatic, pictorial and symbolic form.
- (15) to develop an appreciation for maintaining the surroundings clean for the good of all including their own.
- (16) to develop an ability to state facts and express his views on problems related to population growth.
- (17) to develop an appreciation for the need of food that is simple, clean and nutritious not only for themselves but for the entire community.
- (18) to develop an appreciation for the difficulties faced in large families with small incomes.
- (19) to develop an appreciation for difficulties—social and sanitary—arising out of overcrowding and proliferation of slums in large cities.
- (20) to develop an appreciation for keeping the size of a family small in order to have better amenities for the members.
- (21) to develop an appreciation for the fact that superstitions are detrimental to a better living and checking of population growth.
- (22) to develop an appreciation of the value of cooperative efforts to solve problems at the local and national levels.

(The interests, skills and understanding developed at the elementary stage are not only to be reinforced at this level but are to be expanded with a view (1) to preparing pupils for the higher secondary and (2) to developing enough insight into problems of

population growth in those who would be leaving school after the completion of this level).

**(C) Higher Secondary Level**  
(3 years duration—16 to 18 years)

For a majority of pupils this stage is the last opportunity for education unless they decide to go for university. Consequently the purposes of teaching population education (what is taught and how it is taught) have to be planned in terms of the social values, attitudes and skills required for intelligent participation in the activities of the society. It would, therefore, be worthwhile to understand the growth characteristics of the pupils at this age level. Some significant ones are :

Students at this stage are well along in the period of adolescence (at the threshold of adulthood) when physical, emotional and intellectual changes are rapid. Their interests also expand. Students now demonstrate an increasing desire for independent adventure. They become critical of themselves and more so of their families and those around them. Their minds are more and more inquisitive, questioning and doubting orthodox ways and wisdom. They look for rapid changes and quick decisions. Emotionally they are capable of extreme dedication and loyalties to individuals and causes. They like to develop insights into problems around them and are anxious for recognition as individuals and eager to find a role to play in the family, and in local affairs. These characteristics (they vary from student to student) present educational challenges and opportunities. These characteristics can be fully utilized to produce a person who is self-disciplined, active, constructively critical of mind, intelligently participating in public affairs, dedicated to the improvement of the society and anxious to learn more and more of importance to himself and to his country. In the light of the above the objectives of teaching population education at this level are :

**Knowledge and Understandings :**

- (1) to develop an understanding of the components of population growth (more complex concepts about birth rate, growth rate, death rate, migration etc.)
- (2) to develop an understanding of the trends of the population growth at national and international levels.
- (3) to develop an understanding of the economic development plans of the country-trends in national income, gross national product and share of individual in the same.

- (4) to develop an understanding of the per capita income and standard of living.
- (5) to develop an understanding of the relationship between the family size and standard of living.
- (6) to develop an understanding of the relationship between population growth and economic development and social welfare.
- (7) to develop an understanding of the problems arising out of rapid population growth e.g. social tensions, crimes, antisocial activities and peace and security.
- (8) to develop an understanding of the reproductive process in animals and human beings with a view to creating an awareness that family size is controllable.
- (9) to develop an understanding of the factors responsible for a small family.
- (10) to develop an understanding for the need for balance in nature and the effect of rapid growth in population in disturbing the balance (man can live only in harmony with nature and not by destroying it).
- (11) to develop an understanding of the problems of health and population growth—both at national and international levels (this will also include nutrition, balanced diet, food shortage)
- (12) to develop understanding of the manifold importance of accurate and comprehensive statistical data on population for planning and development.
- (13) to develop an understanding of the population policies and programmes of the country.
- (14) to develop an understanding of the roles of international organizations like UNESCO, UNICEF, WHO and others in solving the problems arising out of rapid population growth.

**Skills, Abilities and Attitudes :**

- (15) to develop the ability to use the tools of social sciences e.g. charts, maps, graphs and statistical data (read, interpret and prepare them).
- (16) to give students practice in simple demographic analysis (use census, health department or other data to calculate birth rate and death rate).

- (17) to develop the ability of participating intelligently in the processes of decision making (with regard to population programmes at various levels).
- (18) to develop the ability to assume local leadership role in executing population policies and programmes.
- (19) to develop a positive attitude towards a small family norm arising out of appreciation that a small family is better able to care for its members including their ethical and moral development.
- (20) to develop an appreciation of the urgency of taking certain measures for keeping control over the growth of population.
- (21) to develop respect for problem solving methods of dealing with persistent ills of society (rather than waiting for heavenly help).
- (22) to develop a realization of the effectiveness of using scientific methods to human problem for speedy solution.
- (23) to develop an appreciation that superstitious beliefs are detrimental to social progress and social well-being.
- (24) to develop an appreciation of the need for cooperative efforts for bringing about needed change.
- (25) to develop willingness to accept responsibility for the improvement of family, community and national life.

The specific objectives of Population Education listed above stem from the general objectives given earlier and are supplemented by some that grow from the content to be taught. Very naturally, these objectives to some extent overlap those for the lower secondary level but take them to a more mature level. It also, perhaps, needs repetition to say that the objectives listed are suggestive and not comprehensive or prescriptive. They need to be changed according to the needs, characteristics of the educational system and the population policies of a particular country.

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# SECTION II

( *Content* )



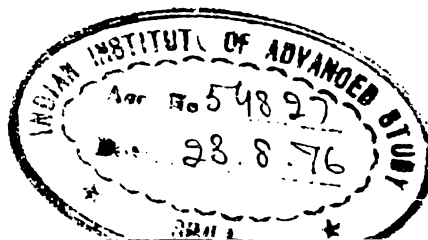
# The Selection of Content

Suitable learning experiences that are likely to attain the objectives are to be selected next. This means identification of the major areas of knowledge to be included in population education, delimitation of these areas in terms of factual information, concepts and understandings relevant to population education. The criteria for the selection is provided by the objectives.

On the basis of the over-all objectives laid down, the following five major areas have been identified which are not exclusive to particular disciplines but draw from several Social Sciences and Biological Sciences. They also have a wide scope for encompassing most of the concepts potentially related to population education at the school stage. These areas are:

1. The population growth
2. Economic development and population
3. Social development and population
4. Health, nutrition and population
5. Biological factors—family life and population.

All these areas are not mutually exclusive and overlap at several points but they do provide clear cut channels to develop properly articulated concepts related to population education and thus draw up a sequential curriculum plan that would impart students the knowledge about population dynamics and develop the desired attitudes. However, the goal is not to draw up a separate population education course to be included in the elementary and secondary school programmes. The general opinion world over is also not in favour of a separate course. According to Viederman, "A survey of the sparse literature in the field and the discussion with its proponents suggest that separate population education course or a series of courses to be included in elementary and secondary programmes, is not the most appropriate way to develop the necessary awareness. The curriculum is already over-



crowded. The demand from the traditional disciplines for more time as the boundaries of knowledge are pushed back generally preclude the possibility of adding a new population course. Furthermore children will probably learn better if they are confronted with population relevant materials both throughout their school curriculum and during their entire period of schooling.”\* The National Seminar on Population Education held at Bombay in August 1969 also recommended, “Population Education should be introduced into the curriculum of schools and colleges, by including it, in so far as it may be possible in the areas of study now common in the educational curriculum such as social studies, science, health education, mathematics, languages etc. In fact this seminar is of the view that it may be possible to achieve all the objectives in view by including population education suitably in the curricula of appropriate subjects already comprized in the curriculum...”\*\* What is proposed then is the diffusion of population related concepts through the entire school programme wherever they are educationally relevant and appropriate. The status study conducted in the Department reveals numerous plug points in social and biological sciences where population education concepts can be easily introduced without changing the existing pattern.

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\*Viederman Stephen “Developing Population Awareness Education in the Developing World” unpublished paper read at the “National Sciences Teachers Association annual meeting.” March 15, 1970 (Mimeo).

\*\*Report of the National Seminar on Population Education, Mehta, Parekh, Saxena, Ed. N.C.E.R.T., New Delhi, p.9.

# The Syllabus

The syllabus which follows is one of the possible patterns in order to achieve the desired goals. This does not exclude other patterns organized with the same ends in view. It is here necessary to repeat that no one method of organizing the content need be taken as the only one possible and the way of presenting the material is as important as the material to be taught. The syllabus, however, has the necessary flexibility to lend itself to adaptation to suit the needs of various states of the country.

A word is also necessary to explain the way in which the syllabus has been presented. While it retains more or less the traditional practice of detailing the content, it goes further to dive below the content to put together the "understandings" that the learner should develop through the study of the topics. This has the object of continually directing the teachers' attention to the ultimate objectives of teaching population education.

(These 'understandings' are more or less generalizations based on the facts and information given under the topic. They are provided for the direction of the teachers, textbook writers and educational administrators and are not meant to be committed to memory by the child. They are to be developed (discovered) and internalized by him through the teaching of the relevant content.)

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# (A) Elementary Level

(5 and 6 years duration—Age group 6-12 years)

## Area I—Population Growth

### Understandings

1. Population increases due to births and decreases due to deaths.
2. Every population occupies land but some lands are densely populated and some are sparsely populated.
3. Population increase leads to certain problems in the neighbourhood cities and the state.
4. Natural calamities led to slow growth of population in the past.
5. Development in the sphere of science and medicine has reduced the incidence of death due to natural calamities and led to the increase of the growth of population.

### Content

1. Some facts about the population of village, city, state and the country.
2. Approximate increase in population of the village, city and state in last ten years.
3. Idea of most populous city, and state in the country and India's population in world context. (It may be related with the effects of factors such as climate, altitude and agriculture) population growth.
4. Overcrowding in buses, schools; shortage of food stuffs, rise in prices of articles of daily use.
5. Natural challenges such as floods, famines, epidemics etc. Some facts of significance in the past 100 years.
6. Some facts about the rate of growth of population during 20th century. Simple ideas about birth rate and death rate and growth rate, rise in population.

## Area II—Economic Development and Population

1. Food, shelter and clothing are the basic necessities of life. All human beings need them.

1. Identification of basic necessities food, shelter, clothing.
2. Family as basic organizational Unit through which the needs are met.

**Understandings**

2. Every family has limited resources.
3. Every nation spends some of its resources on providing basic necessities of life to its people.
4. Increase in population increases the need for more basic necessities.
5. Rapid population growth causes depletion of natural resources.

**Content**

3. Large families and the difficulties in providing these need in sufficient quantities. Food shortage, accommodation problem, want of comforts.
4. Expenditure on basic necessities such as food, housing, transport, etc. and facilities available.
5. Some facts about increase in demand for food, housing facilities etc. due to rise in population. Import of food-grains from other countries.
6. Arable land is limited, shortages of raw materials—coal, forest, gasoline etc., shortage of drinking water.

**Area III—Social Development and Population Growth**

1. Rapid population growth leads to several social problems.
  1. Some social problems, elementary idea of problems—like overcrowding.
  2. Division of property in families, litigation, marriages of girls.
  3. Shortage of amenities—water supply, medical facilities.
  4. Air pollution in big cities industrial water and pollution of water. Some recent examples.
2. Rapid population growth leads to the pollution of natural environment.

**Area IV—Health, Nutrition and Population Growth**

1. Good health is desirable for every individual.
1. Importance of good health, its meaning.
2. The individual is responsible for the status of his own health.
2. Need for developing healthy habits—cleanliness, sanitation.

**Understandings****Content**

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|--|---|
| <p>3. Large families with lack of facilities suffer from bad health.</p> <p>4. Some countries maintain higher health standards.</p> <p>5. Insanitary conditions lead to the spread of communicable diseases.</p> <p>6. Health efforts in the past have resulted in lower death rate and better quality of life.</p> <p>7. Food is essential for energy growth and vitality and it protects one against diseases.</p> <p>8. Inclusion of basic food group in daily diet ensures good nutrition.</p> <p>9. In most of the developing countries the people are malnourished and the problem has become worse with</p> | <p>3. Need for good food, pure water, fresh air, rest, exercise etc.</p> <p>4. Health standards in some other countries such as U.S.A., Japan, as compared to India.</p> <p>5. Factors responsible for bad health, personal hygiene, lack of nutritional food.</p> <p>6. Life in large families and slums, living in unsanitary conditions, common diseases.</p> <p>7. Control of communicable diseases, preventive measures. Some national programmes such as malaria eradication and their effect on the life of the people ; school meals, mass inoculation for cholera etc., vaccination against smallpox.</p> <p>8. Basic food groups—nutrients necessary for energy and growth.</p> <p>9. Diseases caused by deficiency in nutrient intake.</p> <p>10. Hygiene of food preparation, serving, storage, guarding against wastage.</p> <p>11. Basic principles of meal planning, meal planning for different seasons, balanced diet.</p> <p>12. Dietary intake in India and in some other countries such as U.S.A., Japan, U.K. etc., Food choice in low in-</p> |
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**Understandings**

the unchecked growth in population.

**Content**

come and large families, malnutrition amongst school children.

**Area V—Biological factors—Family life and Population**

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| <ol style="list-style-type: none"> <li>1. Each population has certain characteristics.</li> <li>2. Every population is distributed according to the environment.</li> <li>3. The growth of population depends on the natural environment.</li> <li>4. Births add to population while deaths subtract from the population.</li> <li>5. Population tends to spread to other areas.</li> <li>6. The family is a unit which provides its members with basic needs, and whose members each have a responsibility towards each other.</li> <li>7. Some traditional beliefs and superstitions quite often encourage large family size.</li> <li>8. Every family has limited resources.</li> <li>9. Better facilities are conducive to happy family life.</li> </ol> | <ol style="list-style-type: none"> <li>1. Observation of plant &amp; animal life. Maintenance of population, division of functions, reproduction of new organism etc.</li> <li>2. Living organism are found in water, land and air.</li> <li>3. Factors that affect the growth of population—climate temperature, food supply, heredity etc.</li> <li>4. Reproduction in plants and animals, rate of multiplication in various species, cause of death and decay.</li> <li>5. Dispersal of seeds ; migration of birds and mammals.</li> <li>6. What is family ? Nuclear and extended families, members and their functions, size of the family and needs.</li> <li>7. Desire for a son, children divine gift, larger the family happier the family, lower status of girls etc.</li> <li>8. Earning members in a family, income—its sources and sharing, large families and small families and the resources.</li> <li>9. Facilities for family welfare, components of a comfortable family life.</li> <li>10. Factors as good health, nutritious food, housing etc. in a family, tensions and conflicts due to lack of facilities.</li> </ol> |
|--|---|

# (B) Lower Secondary Level

(3 years duration—Age Group 13-15 years)

## Area I—Population Growth

### Understandings

1. Population grows due to the gap between birth rate and death rate.
2. The widening gap between birth rate and death rate results in accelerated population growth unless steps are taken to reduce birth rate.
3. India is mainly an agricultural country and about eighty percent of her population lives in villages.
4. Difference in rural and urban conditions have material significance for problems of population growth.
5. India is one of the major countries effecting the world population growth.

### Content

1. Meaning of birth rate, death rate, infant mortality rate and expectation of life. Demographic definitions—fertility, mortality. Measures of population increases.
2. Inter relationship between birth rate, death rate, migration and growth rate, demographic concepts. Calculation of birth rate, death rate and growth rate.
3. Facts and figures about population in India, village and towns, density of population in rural and urban areas, role of migration, other relevant facts about Indian population (1971 Census Report).
4. Distribution of population sex, age composition (1971 Census Report).
5. Facts and figures about population in the world, Asia and other important countries as compared to India. Projected figures for years 2000. Regional differences (special emphasis on situation in Asia).

**Understandings**

6. The trends of birth and death rates of India are shared by most of the developing countries.
7. The rate of reproduction of population has put countries into two categories as 'developed' and 'developing'.
8. People move to other places to satisfy their needs.

**Content**

6. Facts about population size, density, growth rate, birth rate and expectation of life in a few important countries of the world, e.g., U.S.A., USSR, Japan, France etc.
7. Contrast between developed and developing countries and the place of India in world perspective.
8. Migration causes; migration from villages to cities, migration to other countries temporary and permanent migration.

**Area II—Economic Development & Population Growth**

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|--|--|
| <ol style="list-style-type: none"> <li>1. Food, shelter and clothing are basic necessities of life.</li> <li>2. Availability of these basic necessities varies from place to place.</li> <li>3. Rapid increase in population leads to inadequate supply of consumers goods and rise in prices.</li> <li>4. The standard of living is the sum total of amenities and facilities a man enjoys in a community/country.</li> <li>5. The standard of living of the people in a country depends</li> </ol> | <ol style="list-style-type: none"> <li>1. Per capita requirement of basic necessities—available per capita. Malnutrition and resulting poor health. (country figures to be used)</li> <li>2. Rapid population growth its results, lack of availability of basic necessities, high prices.</li> <li>3. Small family and its relation to standard of living. Some idea of comfortable living.</li> <li>4. The relationship between population and standard of living. The examples of India and China as the most populous countries of the world. Effect on standard of living.</li> <li>5. Examples of the standard of living of people in some ad-</li> </ol> |
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**Understandings****Content**

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| <p>on the total national income and the total population in that country.</p> <p>6. Standard of living differs from country to country depending on the stage of economic development.</p> <p>7. Production and population are controllable by man and his know-how and both of them effect the standard of living.</p> <p>8. Rapid growth of Population adversely affects the economic life of a country.</p> | <p>vanced and developing countries.</p> <p>6. Comparisons of national income, nutritional requirement. Inadequate nutritional food in countries with low percapita income.</p> <p>7. Rate of growth of population and rate of growth of production—Five Year Plans (both agricultural &amp; industrial).</p> <p>8. Shrinking share of natural resources and soil, water minerals etc., fragmentations of land.</p> |
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**Area III—Social Development and Population Growth**

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|---|---|
| <p>1. Rapid population growth leads to several social problems.</p> <p>2. Rapid population growth tends to increase the number of illiterates inspite of the increase in percentage of literacy.</p> <p>3. Growth of population leads to migration from rural areas to urban areas.</p> | <p>1. Problem of providing education, transport facilities and welfare services, etc. Shortage of schools, teachers, libraries—effect on quality of education.</p> <p>2. Shortage of school—trained teachers, equipment, libraries etc.</p> <p>3. Rapid growth in number of younger age group increases the number of children not attending school, wastage and stagnation, economic reasons.</p> <p>4. Rush for cities, rise of slums, lack of housing facilities, unsanitary conditions.</p> |
|---|---|

**Understandings**

4. Rapid growth of population gives rise to transport problems.
5. With rapid growth of population the social services usually lag behind.
7. Rapid population growth causes greater unemployment.
8. Social customs and traditions affect the size of family.

**Content**

5. Difficulties in travel—over crowding in buses, trains; inadequate roads, overcrowding in places of recreation, social conflicts, deprivations.
6. Availability of trained doctors, nurses; absence of welfare schemes.
7. Problems of landless labour, educated unemployed, and surplus of technical persons; lack of job opportunity.
8. Social pro-natality factors, early marriage of girls, illiteracy among women, ignorance, superstitions.

**Area IV—Health, Nutrition and Population Growth.**

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| <ol style="list-style-type: none"> <li>1. Positive health averts diseases.</li> <li>2. Health facilities tend to become inadequate with rapid growth of population.</li> <li>3. Small families in comparison to large families help in promoting better standard of living.</li> <li>4. Malnutrition and under nutrition lead to bad health and diseases.</li> </ol> | <ol style="list-style-type: none"> <li>1. Common diseases, communicable diseases, preventive measures. Diseases as danger to national progress.</li> <li>2. Available health facilities in town, state and country, inadequate hospitals. Health schemes of the country. Consequences of non-availability of health facilities—epidemics.</li> <li>3. Family and the health of the members—better availability of food, accommodation, medical facilities and other amenities.</li> <li>4. Meaning of malnutrition and under nutrition results in poor health, diseases, low vitality, poor performance, low yield, low production, poor economic growth.</li> </ol> |
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**Understandings****Content**

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| 5. Size of family is an important factor in determining the nutritional status of the members of the family. | 5. Family size and its impact on family budget on food. Perceptive food consumption, quality and quantity of food intake of the people.     |
| 6. Countries with poor resources and large population have poor health standards.                            | 6. Comparisons in developing and developed countries. India's position in world context. International efforts to feed the hungry millions. |

**Area V—Biological Factors, Family Life and Population**

- |   |   |
|---|---|
| 1. Continuity of population is maintained by reproduction.                              | 1. <b>Asexual reproduction</b> —Fission in amoeba, planaria; Budding in yeast and hydra; Spore formation in fern; vegetative propagation.<br><b>Sexual reproduction</b> —parts of a flower, reproductive cells—pollen, and ovule (in plants) sperm and egg (in animals); Fertilization external and internal. Protection and care of the young ones.<br><b>Reproduction in Man</b> —male and female reproductive systems. |
| 2. Different population depend upon each other for existence.                           | 2. Food habits of man to show that he is consumer of all order.   |
| 3. A number of factors balance the population.  | 3. Competition between the consumers of different orders, e.g. deer and wolves, tigers. Territorial rights in birds and other animals. Migration.   |
| 4. Population balance is affected when the factors controlling Population are affected. | 4. Natural calamities, diseases, availability of food.  |

**Understandings**

5. The family is a basic social unit which has the responsibility of child rearing and which meets the material, ethical and recreational needs of its members.
6. Various patterns of family life exist, in different societies all over the world.
7. A variety of factors contribute to family size.
8. The two sexes are complementary.
9. Men and women are equal partners contributing to the welfare of the family and community.
10. The process of growth and development from infancy to adulthood is a continuous process.

**Content**

5. Security in family, growth and maturity, preparation for future life.
6. Matrilineal and patrilineal families, nuclear, extended and joint families, features of various patterns of the family.
7. Social customs—early marriage, illiteracy, traditional beliefs impact of modernization.
8. Educational, social and economic status of women in India.
9. Role of women in modern India—social work, education etc.
10. Stages of growth, physical differences between male and female, physical changes at puberty. Menstrual hygiene, nocturnal emissions, emotional changes at adolescence age.

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# (C) Higher Secondary Level

(Three-Years Duration—Age Group 16-18 years)

## Major Ideas

- (i) There is a close inter-action of population growth and developmental process—with particular reference to developmental programmes for raising standard of living of people.
- (ii) There is a close relation between population size and the quality of life.
- (iii) Family size is a matter of deliberate choice and human regulation rather than of accident or forces beyond human control.

## Area I — Population Growth

| Understandings   | Content   |
|--|---|
| 1. Population grows due to the gap between birth rate and death rate.                            | 1. Complex demographic concepts and definitions e.g. population dynamics - life tables; collection of population figures - the surveys-census-its uses.         |
| 2. Several pronatality factors-particularly traditional and cultural effect on birth rate        | 2. Pronatality factors, cultural and traditional pressures, superstitions.  |
| 3. Improved health measures and hygiene and new knowledge in medicine have decreased death rate. | 3. Broad description of health services, new approach in medicine and public health. Lowering of death rates. Some facts about India and the world.             |
| 4. Demographic transition is a discernible phenomenon based on known factors.                    | 4. The demographic transition, meaning, the factors and the process; status of various countries with regard to demographic transition (some examples). The new |

**Understandings****Content**

- |  |  |
|--|--|
|  | demographic change in the world, the future trends, in developing and developed countries.   |
| 5. Family size plays a vital role in regulating population growth. | 5. Need for a small family norm. Movement for popularizing small family norm. Family planning policies and programmes at local and national levels; Role of International organizations. |

**Area II – Economic Development and Population**

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|---|--|
| 1. Increase in production is nullified by rapid increase in population.   | 1. Rate of growth of population and of production (Agricultural and Industrial) Comparison — facts and figures about India (Five Year Plans; Measures to increase production, G. N. P. etc. (description and critical analysis). |
| 2. Rapid growth of population adversely affects the economic life of a country.   | 2. Shrinking share of natural resources—soil water, minerals; fragmentation of land etc. Small and uneconomical holdings.  |
| 3. The standard of living depends on the relationship between growth of population and growth of production in a country. | 3. More details about the standard of living—relationship with growth of population — some examples from developing and developed countries.<br>Causes of low standard of living; suitable examples.                             |
| 4. Low standard of living leads to low production   | 4. Effect on productive efficiency; lesser productivity --   |

| Understandings   | Content  |
|--|--|
| resulting in lower standard of living.   | poor output; lower standard of living.   |
| 5. Standard of living is raised by increased production and population control.  | 5. The other argument—increase in population—more demand for growth—impetus to more productivity, manpower utilization — better use of natural resources, rise in standard of living; limitations of this argument; critical analysis. |
| 6. Production and population both are controllable by man and his know-how.  | 6. Efforts in advanced countries for raising the standard of living. Some examples of plans and programmes.  |
| 7. The effective way to check growth of population and raising the standard of living depend upon people and how they assume responsibility to meet the challenge. | 7. Some recent efforts made by developing and developed countries.   |
|  | 8. The role of some international agencies in raising the standard of living in developing areas — FAO USAID, ECAFE etc.   |

### Area III— Social Development and Population Growth

#### (Education)

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|---|--|
| 1. Illiteracy is detrimental to country's progress and democratic life.             | 1. Increasing illiteracy problem— Increasing numbers of illiterates; Some recent facts; Ignorance; Danger to democracy; superstitious beliefs; traditional social customs. |
| 2. Lack of proper training facilities often results in poor efficiency of manpower. | 2. Unskilled labour; poor training; importance of training both in agriculture and industry; deterioration in the power of human re-                                       |

**Understandings***(Evil Social Practices)*

3. Goods and services are rendered inadequate by rapid growth of population, which leads to evil social practices.
4. Social pressures on large families often result in indebtedness, litigation.

*(Ecological)*

5. Concentration and over crowding in cities leads to bad effects such as pollution of air, water, land, and environment.

**Area IV—Health, Nutrition and Population Growth**

1. Health facilities have been improved during the past few decades but these are not in proportion to the rapidly growing population.
2. Improvement of public health facilities is necessary for betterment of society.

**Content**

sources—poor productivity-unemployment; lowering of ethical values.

3. Scarcity of essential commodities, evil social practices—e.g. black marketing, adulteration, cheating, poor ethical behaviour.
4. Social customs, traditional beliefs, superstition (value of children specially sons—children as divine gift etc.). Early marriages; Agricultural society, fragmentation of land, litigation—large amounts spent on marriages etc., indebtedness — poor care of children in large families with low income.
5. Ecological considerations, imbalance in nature, its effects, danger to the health of the community, elimination of natural surroundings.

1. Availability of health facilities in the country/state/city/district/village. Consequences of non-availability of adequate health facilities—Role of international organizations. Communicable diseases (advanced level) Preventive measures (advanced level)
2. Various national health programmes. Impact of these programmes on population. Responsibility of

| Understandings  | Content   |
|---|---|
| 3. Small families in comparison to large families help in promoting better standard of health.<br>4. Malnutrition and under-nutrition and major problems that challenge the survival of population in India and many other countries. | individual and community in making these programmes more effective.<br>3. Family size and its impact on the health of the family members — mother and children.<br>4. Nutrition level in different countries, Malnutrition among children and people at large, recommended diet allowances; U. N. norms—Quality and quantity of food. |

#### Area V—Biological Factors, Family Life and Population

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|---|--|
| <ol style="list-style-type: none"> <li>1. The biology of human population is dependent upon evolution, reproduction and the future of man.               <ol style="list-style-type: none"> <li>a) Human evolution has been accompanied by various achievements of man.</li> <li>b) Reproduction in man has certain characteristic features not observed in other animals.</li> <li>c) The future of man shows several trends of which most important is over-population.</li> </ol> </li> <li>2. The institution of marriage and the family is important and significant units of the society and of thenation.</li> </ol> | <ol style="list-style-type: none"> <li>1. Different stages of human evolution with special reference to man's achievements like use of stone weapons, invention of agriculture and scientific revolution.<br/><br/>               With the agricultural, scientific and industrial revolutions the population of man has tended to increase<br/>               Hormonal control of reproduction. Placenta and embryonic development location.<br/>               Factors that contribute to the mixing up of races. Advantages that human species have over other species.</li> <li>2. Healthy sex relationships; companionship. Healthy interpersonal relationship. Interdependability of family</li> </ol> |
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**Understandings****Content**

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|--|---|
|  | members. Emotional security; Conservation of healthy values. Parenthood, responsibilities of a parent.  |
| 3. A small family size can contribute to better interpersonal relationship between family members. | 3. Age of marriage in India. Early marriage and its contribution to larger family size. Need for contributing the size of the family.   |
| 4. Measures restricting family size help in providing for maximum well-being of every citizen.     | 4. Provision for health including material and child health, economic security, Housing, social welfare, food, employment. Utilization of resources and services afforded by the State. Limiting family size. |
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# General Methods of Teaching & Suggested Activities

In the context of our educational set-up and the school programmes the quantum of population education content is to be plugged into the existing curricula of Social Studies, Geography, Economics, History, Civics, Sociology, Biological Sciences, Mathematics and Languages at the various school stages and is not to be taught as a separate subject. Lectures and other activities as extra-curricular items may also be taken up, but the burden of the main teaching will rest with the teachers themselves. We all know very well that anything that is not likely to form part of the examination in schools is neither taught nor learnt. This is not a happy situation and there may be exceptions, but that is a stark reality.

## General Approach

While the content is important and will always matter, the method is not less important, particularly, when we seek to develop awareness and desirable attitudes for rational decision making. By and large, the various tools and techniques of social sciences and science teaching, such as, the collection of data, gathering of evidence, shifting of information, analysing cause and effect relationships, drawing conclusions etc., are to be used. Most effective learning takes place when the learner is himself actively involved in the process of learning. Hence, students may be involved in as many activities as possible, so that they may discover things themselves. We must also remember that the teacher does not teach so much as he helps the students to learn. At no time, should the student be made to feel that he is being subjected to a message from the teacher.

## Problems Solving

Problem solving method has to be increasingly used for teaching population education concepts. Population education content, as given in this paper, by its very nature would provide ample op-

portunities for the utilisation of this technique. This technique is schematically presented as follows :—

|   |   |   |   |  |
|---|---|---|---|--|
| The learner with<br>past experience   | — | Faces a situation<br>new to him re-<br>sulting in                           | — | A block, tension,<br>a disturbance.  |
| Out of which<br>emerges a pur-<br>pose or need  | — | To solve a prob-<br>lem and resolve<br>the tension                          | — | He uses past ex-<br>perience and<br>knowledge to<br>formulate hypo-<br>thesis:   |
| Tests hypothe-<br>ses by experi-<br>menting, merely<br>asking questions<br>listening, obser-<br>ving, construc-<br>ting | — | Organizes and<br>verifies facts by<br>discussing, wri-<br>ting, re-checking | — | Draws conclu-<br>sions which give<br>satisfaction and<br>resolve tension<br>and disturbance<br>and leave the<br>learner ready to<br>face a new situ-<br>ation with incre-<br>ased power. |

This may sound formidable, but in practice it is not, because while teaching all the steps are not to be taken necessarily and the idea is that the learner is to be involved in the process as much as possible.

#### Some Suggested Activities

- (1) Study of maps, physical or population maps—local, state, country and the world.
- (2) Collecting data about population growth etc., by using local records, year books.
- (3) Collecting informations about—health services, civic services etc.
- (4) Reading—books, newspapers and other relevant material.
- (5) Discussions on topics e.g. urbanization problems, over-crowding, health and hygiene.
- (6) Preparing simple graphs, charts etc., of the rise of population in developing countries.
- (7) Viewing films, T.V. and conduct discussions.
- (8) Conducting local surveys, e.g., family composition, population growth, rise in prices.

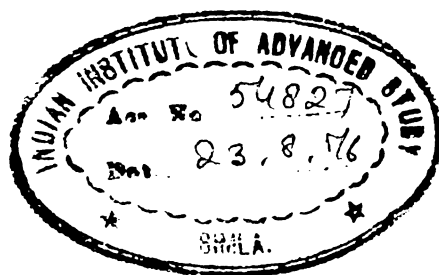
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- (9) Preparing bulletin boards and putting information like balanced diet, calories required for good health.
- (10) Take up small projects involving several group activities centred round some small problems.

The above list is only suggestive, and not comprehensive. Much will depend on the ingenuity of the teacher himself. He shall have to employ all the methods that result in an effective teaching. At the secondary stage, particularly, rational discussions should form an important part of the teaching plan. The teacher should help the students identify relevant information, learn the techniques of critical analysis, make independent judgments and be prepared to present and support them. The teacher should also see that the student become sensitive to the continuing need for objective re-examination of issues in the light of new information and changing conditions in the society. Population pressures provide numerous such issues to be discussed on the basis of data collected, particularly, from the point of view of cause and effect relationship.

We all know that the teacher is always pivotal for the success of any educational programme, hence, the orientation of the teacher (both pre-service and in-service) is important. Firstly, he is to be convinced about the programme, because anything carried out without conviction is mostly half-heartedly done, and secondly, he has to be equipped in order to be able to deliver the goods. Population education is an absolutely new area, and our teachers are neither acquainted with the content nor with the methods of handling it. It is, therefore, necessary that in the overall scheme of introducing population education in the school curricula, adequate attention is given to the preparation of teachers.

Education is no longer simply concerned with earning a living or being a "good citizen"; it is now much more concerned with quality of the life—one's own and that of the people. In the recent decades the story of curriculum development has been largely the account of a struggle to keep the curriculum up-to-date and relevant. Convincing those concerned about introduction of Science and Social Sciences as worthwhile relevant body of knowledge was the main burden of this struggle in the last three decades. It looks that "Population Education" would be the banner headlines for the 1970's.







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