

**DANTULURI NARAYANA RAJU COLLEGE (A)::BHIMAVARAM**

**M.A.ECONOMICS**

**III SEMESTER PAPER - III**

**ECONOMICS OF EDUCATION AND HEALTH**

**STUDY MATERIAL**



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**DANTULURI NARAYANA RAJU COLLEGE (A)::BHIMAVARAM**

**SYLLABUS- III SEM**

**Paper – 303 ECONOMICS OF EDUCATION AND HEALTH**

**Unit 1: Education as an instrument for economic growth**, Human Capital human Capital Vs Physical Capital, Components of human capital Education as consumption or investment - Demand for Education-private and social demand, Cost of Education - Expenditure on education, Private costs and social costs and wastage and stagnation.

**Unit 2: Benefits of education**-Direct and Indirect benefits, Private and social benefits; Problems involved in measuring returns from investment in education. Education and Labour Market - Effects of educational financing on income distribution; Effects of education, Ability and family background on earnings, Poverty and income distribution, Education and employment. Economics of educational planning in developing countries with special emphasis on India-Manpower requirements approach.

**Unit 3: Health dimensions of development**; Determinants of health Poverty, Malnutrition and environmental issues; Economic dimensions of health care-Demand and supply of health care; Institutional issues in health care delivery - Health Care Delivery system in India.

**Unit 4: Financing of health care and resource constraints** – Health Status Indicators and measurement Global burden of disease-Inequalities in health class and gender perspectives; Health Policy in India.

**Text Books :**

Mehta, S., S.Mundle and U.Sankar (1995), Controlling Pollution: Incentives and Regulation, SAGE Publications, New Delhi.

Murthy M.N.,A.James ; and S.Misra (1990), The Economics of water Pollution in India,Oxford University Press, new Delhi.

Sengupta R.P, (2001), Ecology and Economics: An approach to Sustainable Development, Oxford University Press, New Delhi.

Tilak, J.B.G. (1994), Education for Development in Asia, Sage Publications, New Delhi.

Baru, R.V. (1998), Private Health Care in India's Health Care Social Characteristics , Sage publications, New Delhi.

Berman, P. and M.E Khan (1993) Paying for Indian's Health Care, Sage Publications, New Delhi.

## MODEL PAPER

**DANTULURI NARAYANA RAJU COLLEGE (A)::BHIMAVARAM**

**P.G. Department of Economics**

**M.A. Degree Examination Semester-III**

**Paper-303 : ECONOMICS OF EDUCATION AND HEALTH**

**Time: 3 Hours.**

**Max. Marks: 75**

Note: (1) Answer either (a) or (b) from each of 1 to 4 questions.  
(2) In question No: 5, answer any five from (a) to (h).  
(3) Each question carries fifteen marks.

1. (a). Examine whether Education considered as investment or consumption?  
(Or)  
(b). Explain the components of Human capital.
  
2. (a). Discuss the Benefits of education.  
(Or)  
(b). Briefly explain education and labour market.
  
3. (a). Discuss Economic dimensions of health care.  
(Or)  
(b). Explain the Health Care Delivery system in India.
  
4. (a). Explain the Health Policy in India.  
(Or)  
(b). Examine the financing of health care and resource constraints.
  
5. Answer any FIVE of the following
  - (a). Physical Capital.
  - (b). Social demand
  - (c). Wastage and stagnation
  - (d). Private costs.
  - (e). Education as an instrument for economic growth
  - (f). Education and Employment
  - (g) Health Poverty
  - (h). Health Status Indicators

## STUDY MATERIAL - UNIT-I

### ➤ Education as an instrument for Economic Growth :

**Introduction:** Education economics or the economics of education is the study of economic issues relating to education, including the demand for education, the financing and provision of education, and the comparative efficiency of various educational programs and policies. From early works on the relationship between schooling and labor market outcomes for individuals, the field of the economics of education has grown rapidly to cover virtually all areas with linkages to education.

Education plays a major role in the economic development of any country, may it be developed or developing. Many resources play a part in the growth of a country's economy one of which and perhaps the most important is human capital, which means the workforce of the country. A good and productive workforce by making use of other resources can lead an economy in to growth and prosperity.

- ❖ The importance of education was fully recognized by the classical economists such as Adam Smith, John Stuart Mill, Karl Marx and Alfred Marshall, and has been reconfirmed by recent writers like Schultz, Becker and Sen.
- ❖ The classical economists emphasized the micro relationship between education of an individual and the benefits accruing to him from his education. Among the neo-classical economists Marshall (1930) alone showed some attention to the field of education. He in his "Principles of Economics" refers to education as a national investment.
- ❖ During the Keynesian period greater attention was given to short- run problems of augmenting the effective demand. Keynes and other economists did not pay attention to factors of long- run consequence such as education. The subsequent studies have shown that education is one of the critical inputs in economic development. Consequently a new area of Economics came into existence known as Economics of Education".

### Economic characteristics of Education:

- a) It yields a host of direct and indirect benefits.
- b) It is a non-controversial fiscal tool.
- c) It brings technological change.
- d) It increases productivity.
- e) The skills, etc., can be exchanged only through it.
- f) It is a merit want.
- g) It is both a consumption as well as an investment good (it is both an end and means).

### **Economic Growth:**

Land and labour by themselves cannot produce anything. Education, we know, is an investment good and of so what is its role the process of economic growth?

Economic growth refers to the increase in the national product measured in constant rupees. The value of money decreases when there is inflation. So the increase in the national product has to be measured in 'constant prices'.

To measure the economic growth from 1990-91 to 1991-92, we will first find the real value of the national product for the year 1990-91 and for 1991-92 and then compare these 'real' values. The changes over time in GNP per capita or by adjusting the GNP series to population changes in addition to the adjustment for price changes.

### **Education and Economic Growth:**

If education is one of the factors contributing to production and thereby the economic growth in ways does it affect economic growth? How could such an effect be quantified and measured?

“Education is a source of economic growth only if it is anti-traditional as well as informs the individual and himself.”

“Without education, people would be far less adaptable to varying production needs.”

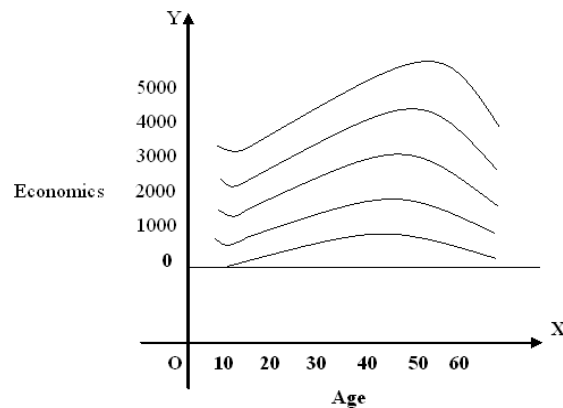
The third growth producing capacity that education possesses in the durability of educational investment.

The fourth growth producing capacity of education is the result of education being an alternative to consumption or private investment in physical capital. Thus education can contribute to growth even if the internal rate of return may be less in education than for material resources.

### **Education and Economic Development in the Indian context:**

The national sample surveys in India indicated this trend and the survey results revealed that in urban India the proportion of gainfully employed persons had increased in mining quarrying, manufacturing, trade, commerce, services, transport and communications while it has gone down in agriculture, finishing and livestock.

**Figure: 1 Age-earnings profiles for India**



### **Methods of assessing Growth:**

- a) The demand for education approach.
- b) The rate-of-return approach, and
- c) The man-power requirements approach.

### **Difficulties in Measurement:**

When we say that education contributes to economic growth, what type of education, what level of education do we mean? It refers to that kind of education that develops the productive skills that will contribute to economic growth.

However, economics have successfully devised some analytical frameworks to study the role of education in economic growth.

Education influences the laze of the family also. Education may lead to late marriage;

- It may encourage people to adopt family planning.
- Education may also lead to a higher standard of living and
- There by to lower rate of mortality:

### **Conclusion:**

We have discussed above the relationship between education and economic growth. Economic growth refers to the increase in the national product measured in constant rupees.

The measurement of economic growth is not very simple. In spite of the difficulties involving GNP is the best available empirical measure to assess the rate of economic growth.

Economists have identified education as a factor that explains the residual growth in the economy. We have also discussed education and economic growth in the Indian context.

Education influences the laze of the family also. Education may lead to late marriage; it may encourage people to adopt family planning. Education may also lead to a higher standard of living and thereby to lower rate of mortality.

➤ **Human Capital Vs Physical Capital Components of human capital:**

**Introduction:** A number of classical economists notably among them Adam Smith(1937), pointed out that education helped to increase the productive capacity of workers, in the same way as the purchase of new machinery or other forms of physical capital, increased the productive capacity of a factory or other enterprise. Thus an analogy was drawn between an investment in physical capital and an investment in human capital. Smith (1937) and Marshall (1930) envisioned education as a fixed capital in human resource and as a national investment. Smith (1937) in his “Wealth of Nations” states that “ the acquisition of such talents by the maintenance of the acquirer during his education, study or apprenticeship, always costs a real expense, which is a capital fixed and realized, as it were, in his person.Those talents as they make a part of his future, so do they like wise of that of the society to which he belongs”. Marshall (1930) observes, “Capital consists in a great part of knowledge and organization; knowledge is the most powerful engine of production.”

**Definitions : Definition of Physical Capital**

In economics, the term ‘physical capital’ is used to denote the inputs (factor of production) or man-made goods, which are owned by the company such as computers, machinery, equipment, tools and so forth. It is used in the production process to enable conversion of raw material into finished goods.

- When one wants to start a company, a huge amount of physical capital is invested in the initial stage, so that the company can mark its existence in the marketplace.
- On the basis of sufficient knowledge, decision is taken to invest in the physical capital. For this purpose the entrepreneur, finds out the expected returns from the range of investments and then the one, generating relatively higher return is chosen. Therefore, the ownership of physical capital is a result of planned and conscious decision of the entrepreneur.

**Definition of Human Capital:**

Human Capital connotes the experience which an employee takes to the organization in the form of knowledge, skills, abilities, talents, intelligence, values etc. which he/she has accrued over time. As a result, the employees are perceived as an asset, whose value can be increased, by investing in their training and development, like any other asset of the company.

- The concept makes it clear that all the employees at work, are not equal and they differ in their proficiencies.

- Simply put, it portrays the aggregate value of the firm’s intellectual capital, which is a sustained source of creativity and innovation. It is a standard used to ascertain the economic value of an employee’s skill set.
- Human capital is not owned by the company rather rented from employees, and so there remains an uncertainty of being lost, when the employee leaves the organization.

In modern economic thought the concept of education is considered as a unique investment in human capital, in the present for the future. It has been identified as an important parameter for national development. The word “capital” refers to the reproductive power of natural and man made producer goods.

The concept of “human capital” refers to the fact that human beings invest in themselves, by means of education and training or other activities, which raises their future income by increasing their lifetime earnings.

Economists use the term “investment” to refer to expenditure on assets that will produce income in the future, and contrast investment expenditure with consumption, which produces immediate satisfaction or benefits, but does not create future income.

**Difference between Physical Capital and Human Capital**

<b>Physical Capital</b>	<b>Human Capital</b>
<i>Examples:</i> Land, Machinery, Equipments, Natural Resources	<i>Examples:</i> Knowledge, skills, attitudes, health and fitness
1. Visible, tangible or quantifiable	Invisible, not precisely quantifiable
2. Value gets reduced with use – depreciation	Value gets increased with use
3. This is always a means to an end	Can be both a means and an end
4. Can be priced and exchanged for money	Priceless even though it is priced
5. Consumers and producers are different	Consumers and producers are the same
6. Stock gets exhausted with use	Stock never gets exhausted
7. Efficiency of use depends only on technical quality of the product	Efficiency does not depend just on technical quality; sincerity and dedication of the user are also important



**Conclusion:** Physical and human capital both require significant investment to acquire and develop. In addition, firms need to spend considerable amounts of money in repairing both of these types of capital. It is, therefore, crucial for business owners and managers to identify and utilize sources of both types of capital available to them, in order to add value to the business operations. A clear distinction between the two types of capital will enable their proper combination, resulting in maximum productivity and returns for business entities.

➤ **Components of Human Capital:**

The accumulation of physical capital is quite important in the process of economic growth of a country but with the passage of time, it is being increasingly realized that the growth of tangible capital stock depends extensively on the human capital formation must get its due importance. In the absence of adequate investment in human capital, utilization of physical capital will be at low pace, leading to retardation of development.

Economists, like Harbison, Schultz, Kuznets, Kendrick and Denison observed that one of the important factors responsible for the rapid growth of the American economy is their increasing allocation of outlays on education resulting significant improvement in the level of human capital formation.

**The following are the components of human Capital:**

**(i) Health and Nutrition**

**(ii) Education and Training**

**(iii) Housing Development**

**(i) Health and Nutrition:**

As the poor health and undernourishment adversely affect the quality of manpower, the best way to improve the quality of manpower in underdeveloped countries is to provide adequate food and proper nourishment to people along with adequate health and sanitation facilities.

### **(ii) Education and Training**

The second composition of human capital formation is to provide education and training facility to the people in general. Investments made in education can accelerate economic growth. Proper utility of manpower depends on system of education, training and industrial experience of the people.

Prof. Singer has rightly observed, **“Investment in education is not only highly productive but also yields increasing returns”**. In order to raise the general living standards of the people, investment in human capital for making provision for education and training is very much required. Moreover adult education and training is also another integral part of manpower planning.

### **(iii) Housing Development**

The final component of human capital formation is the development of housing facilities for the people, which is an important determinant of human resource development. In underdeveloped countries special incentives for private house construction should be provided in order to provide healthy living conditions to the people. Moreover, steps must be taken to introduce subsidized housing schemes.

### ➤ **Demand for Education-Private and Social Demand:**

**Introduction:** The human capital “revolution” of the 1960s and 1970s turned the previously peripheral topic of demand for education into a major area of research for labor economists. Analysis has focused on a variety of questions relating to the role of education in an economy, individual decision-making with respect to demand for education, and social provision of education.

There are quite a few studies have attempted to estimate demand for education. They defined the concept of demand for education at different angles.

According to the literature, demand for higher education is also affected by direct and indirect costs of individuals, family income, increase in income which is ensured by higher education yield of return unemployment rate, gender and quantity of the related age group.

### **Concept of Demand for Education**

The term demand refers to the quantity or the amount of a particular commodity purchased at a given price level. The term "demand" is associated with the price of the commodity.

As far as the price of education is concerned there are two kinds of price.

- 1) Supply price and
- 2) Demand price.

The supply price is the price at which the supply of education can be offered to the public which includes government and nongovernment outlays on educational institutions. The demand price is the price at which the consumers are willing to obtain education. If supply price and demand price converge in this case, it is named as the equilibrium price.

The Quantity demanded in the context of education has been explained in the following views.

- a) The number of Years of education an individual has acquired. This can be measured in terms number of years of schooling.
- b) Whether the child is enrolled in the school or not. This aspect is known as the enrolment Index. A variant of this measure is the enrolment ratio, where it is measured as the percentage of children enrolled.
- c) School expenditure on children is calculated as the expenditure on education such as school fees, transportation cost, etc.

### **Different Types of Demand**

Demand for education can be classified in to two types. They are :

- i) Individual demand or private demand.
- ii) Social demand.

For instance Psacharopoulos and Woodhall (1985) have defined the individual demand as the enrolment of individuals in an educational system. On the other hand, if we aggregate the individual demand, we get the social demand. Thus the social demand is the total number of persons enrolled in an educational system.

Actual demand for education by which we mean that the total number of persons actually enrolled in the educational system. The potential demand for education may be defined as the total number of individuals who are willing to pay for their education.

There are three kinds of private demand for education. These can be explained as described here.

- i) **Satisfied Demand for Education :** We call the satisfied private demand for education as one when an individual enrolled in a school and he stays for throughout his course time with more probability of completing the course.

- ii) **Unsatisfied Demand for Education:** Unsatisfied private demand for education may be defined as the situation while an individual not at all enrolled in a school, during his voluntary school-age period. Here the individual's demand for education is said to be an unsatisfied demand.
- iii) **Partially Satisfied Demand for Education ;** The partially satisfied demand for education can be viewed as the case, where an individual enrolled in a school after some days or months might have dropped out from the school, due to any family problem.

Therefore we can call this demand as the partially satisfied demand for education.

We can compare the concept of demand for education with that of the text book definition of demand as follows. At a given price level, the quantity of commodity demanded by an individual, while he was backed by the purchasing power. In the context of education the ability to pay for the school expenses (i.e., the direct and indirect costs of education) depends on the purchasing power. Therefore the purchasing power for education can be decided by student's family income.

The equilibrium condition for investing in education is that the marginal cost of education must be equal to the marginal benefit obtained from education. The marginal concepts explain regarding the last unit of money that was spent on education and the last unit of rewards received from education.

### **Determinants of Demand for Education:**

The crucial determinants of demand for education from the point of view of the individual family, society, and the school.

#### **1. Individual Factors**

As far as an individual is concerned he will invest in education so long as the present value of the expected stream of benefits arising from education exceeds or equals the present cost of education. This is known as the rate of return criterion. The internal rate of return can be defined as the rate of discount which makes the present value of the costs equal to the present value of benefits. The demand for education can also be considered as a functional relationship between the willingness to purchase education and the price of education. Here the term "willingness" refers to the preference towards education. In short individual's perception about education plays a vital role in deciding his demand for education (Blaug, 1966). We may argue that, even if the individual has willingness to obtain education, if his family background does not allow him to do so, then his demand will be unsatisfied.

## **2. Family factors:**

Primarily the family income decides the demand for education of their children. The parents ability to pay for their children's school fees would decide the demand for education of their children. Parental educational levels influence the demand for education of their children. We can expect a direct relationship between the parent's education and their children's demand for education. Variables like demand for child labour, urban living standards and the role of child in the economic well being of the family would influence the demand for education of children.

If the family has the following characteristics:

- i) Well planned family.
- ii) Family with parents and elders who are highly educated.
- iii) Family with reasonable economic status.
- iv) Family with respectable occupation.

## **3. Social Context:**

The determinants of the demand for education at the society level. The social status and demand for education are positively related. As far as the society is concerned demand for education depends on good social status, social mobility and social prestige. Among the social factors, variables such as community, religion and the social value attached to education play a crucial role in determining the educational attainment of the members. Demand for education can also be determined by the conveyance facilities available for going to educational institutions in that particular area of the society. Hence the transportation facilities should be considered in deciding the demand for education of individuals.

## **4. School Factors:**

There are several important school factors that determine the demand for education. These are :

- the distance from home to school,
- -availability of schools (especially in rural areas),
- - medium of instruction,
- - school fees,
- - the infra-structure facilities available at schools, and
- -- subjects offered for the students.

For instance, Psacharopoulos and Woodhall (1985) identified that medium of instruction would affect the demand for education. Shrestha, (1984) and Lane (1982) observed that distance factor greatly influences the demand for education.

### **Conclusion:**

The majority of countries worldwide have witnessed an important growth in higher education demand, especially in the Third World countries where the population explosion, and by consequent, the educational explosion were highly remarked. Since the seventies of the last century, India has experienced a steady growth in the demand for higher education. The fact that human capital acquired by education and training is more important than physical capital for development and growth of income in India, The high rates of population growth, in addition to the factors mentioned above have engendered this educational explosion at all levels of education. Since 1960, the number of population has doubled five times to reach more than six million inhabitants currently. Thus, the numbers of students, educational institutions and enrollment rates have steadily increased.

“The crucial role of human capital makes it all the more essential to pay attention to the close relation between sensible public action and economic progress, since public policy has much to contribute to the expansion of education and the promotion of skill formation. The role of widespread basic education in those countries with successful growth-mediated progress cannot be overemphasized.” - **Jean Dreze and Amartya Sen (2002: 75).**

The value of education for development is increasingly recognized – both in the instrumental sense of enabling rapid growth in GDP and in the direct attainment of human self-consciousness and capability. India is one of the fastest growing countries in the world today, but within India, and particularly within rural India, the distribution of educational opportunities and attainment is highly unequal.

### ➤ **Education as Consumption or Investment:**

**Introduction:** Economics is a social science that studies how society chooses to allocate its scarce resources, which have alternative uses, to provide goods and services for Economics as a social science subject concerns itself with making choices and finding alternatives. It studies how society decides what, how and for whom to produce goods and services. Robbins defined Economics as a social science subject that studies human behaviour as a relationship between ends and scarce means which have alternative uses.

### **Meaning and Scope of Economics of Education:**

Economics of Education as an area of study cannot be said to be a separate field of inquiry that is totally different from the ordinary economics. Economics of Education is the application of Economic principles, concepts, laws to the process of Education. Economics of education studies

human behaviour (in terms of human decisions), action(s) and reaction(s)) about schooling (Babalola, 2003).It further looks into how human behaviour affects economic development.

Economics of education is one of the branches of ordinary economics, though, it is the study of how educational managers make official or approved choices from scarce available resources which is meant for the realisation of the best possible educational outcomes. Economics of Education employs the use of some elementary concepts commonly used in labour economics, public sector economics, welfare economics, growth theory and development economics. World known classical economists like Adam Smith, Alfred Marshall, John Stuart Mill had discussed education and development extensively, advocating for public investment in education. So, by the 1950s, economists gave attention to issues such as the relationship between education and economic growth; relationship between education and income distribution and also the financing of education.

Economists analyze the production of education in this world where resources such as the capital invested in buildings or technology and the labour of the teacher workforce are necessarily scarce. This scarcity of resources means that policymakers must decide:

1. How much to spend on each stage of education (i.e. what to produce);
2. How to provide educational services in a way that maximizes its benefits to society (i.e. how to produce education); and
3. Who should have access to each stage of education (i.e. for whom is education provided).

There are three decision makers or stakeholders in the educational system.

These are

- (1) The society
- (2) The institutions or providers (suppliers) of education and
- (3) Individual or households (purchasers of educational services). The twin problem of scarcity and choice face these major stakeholders.

The fundamental problem of economics of education is how the society, institution and the households make use of the limited human and material resources they have, to best satisfy their unlimited wants for education. The solution to the fundamental problem requires the application of certain economic concepts.

The study of economics of education includes private and social rates of returns to education, human capital and signaling theories of education, non-pecuniary benefits of education, education and economic development, contribution of education to the economy, measuring educational expenditure, manpower planning, educational planning and human resource development,

educational cost, cost analysis, educational production, educational effectiveness and efficiency, costs-efficiency and cost effectiveness, cost-benefit analysis and economics of teacher supply, educational and equity.

**Education as an Investment :**

The economic view of education traditionally has employed the human capital framework developed by Becker (1964). In this framework, education is viewed primarily as an investment wherein individuals forgo current labour market earnings and incur direct costs in return for higher future wages. The original theoretical work by Becker (1964), Ben Porath (1967) and others spurred a tremendous amount of empirical work, which has generally supported the implications of the human capital model (Freeman 1986). As individuals and nations increasingly recognize that high levels of knowledge and skills are essential to their future success, spending on education is increasingly considered an investment into a collective future, rather than simply as individual consumption. However, investment in education competes for limited public and private resources.

The challenge of expanding educational opportunities while maintaining their quality and ensuring their equitable distribution is linked to questions of education finance. Education is seen as an investment because it entails costs in the present and because it increases productive capacity and income (of the educated individual to be sure but also of society in general) in the future. Private returns accrue to individuals, while social returns accrue to the whole society (including the individuals). In most cases, private returns are greater than social returns because governments give more in subsidies than they take away in taxes.

Developed nations around the world invest an average of 6% of their gross domestic product (GDP) in systems of public schooling.

The national importance of education is based on the significant positive influence it has on individual lives and on the welfare of communities. Education is primarily a way to train children in the skills they will need as adults to find good jobs and live well. But education also has broader social and economic benefits for individuals, families, and society at large. These benefits are received even by people whose relationship to the public school system does not extend beyond "taxpayer." The widespread improvement of social and economic conditions is a direct outcome of an educated population that is able to use information to make good decisions in a better manner and which is collectively trained for work better.

A great deal of recent research demonstrates how the benefits of supporting public education extend far beyond each child's individual academic gains. A population that is better educated has less unemployment, reduced dependence on public assistance programs, and greater tax



revenue. Education also plays a key role in the reduction of crime, improved public health, and greater political and civic engagement. Investment in public education results in billions of rupees of social and economic benefits for society at large.

**Education as Consumption:**

At the same time, the human capital framework does not rule out that education may also provide immediate consumption. Indeed, many economists have discussed the consumption value of education. For example, Schultz (1963) identifies current consumption as one of three benefits of education, along with investment and future consumption. For the most part, however, consumption aspects of education have received relatively little attention in the literature. Several trends suggest that consumption may be becoming an increasingly important part of the choice of whether, where, and how to attend college.

**Conclusion:** Economics distinguishes in addition to physical capital another form of capital that is no less critical as a means of production – human capital. With investments in human capital, such as education, three major economic effects can be expected

--- increased expenses as the accumulation of human capital requires investments just as physical capital does,

--- increased productivity as people gain characteristics that enable them to produce more output and hence

--- return on investment in the form of higher incomes.

Investment in education will give advantage to individuals in terms to get higher and unlimited income level. The higher of education the higher income can be earned. In fact education will form an individual with knowledge and skills to improve themselves and in order to develop the state. With a variety of skills and knowledge that obtained from education, individuals will be able to get a job with higher offer salary or they can build own careers. Thus, who investing more in education to achieve a high level of education will be able to have a better life style with high household income. Education can view as consumption and investment.

➤ **Cost of Education - Determinants of Educational Costs:**

**Introduction:** There is a tendency to use the terms expenditure and cost interchangeably. However, the terms ‘expenditure on education’ and ‘cost of education’ are not the same. Cost of education refers to the amount of money spent to acquire or impart education. On the other hand, information on expenditure on education is more easily accessible and available from budgets and accounts of the Institution at the micro level and the Central and State governments at the macro

level. From the point of view of the individuals, costs refer to the amount of money spent during a particular period (generally a year) to acquire education. From the point of view of the state or the institution, it refers to the expenditure incurred on education during a year. The term cost and expenditure are used interchangeably, but more popularly, we use the term 'cost' and refer to cost per student pertaining to a particular level (primary, secondary, higher secondary or university). Similarly, cost per student to the institution/state for a particular course or level is calculated. But cost per student in the institution/state may include expenditure incurred on staff salaries, equipment and buildings, maintenance costs of apparatus, library books, sports, etc. From the point of view of the individual, cost of acquiring education includes expenditure on books and stationery, school fees, travel cost and in case of students making use of hostels, it will also include rent of hostel accommodation, mess charges, etc.,.

The cost of education **refers** to the cost incurred by the state government or private sector for providing education to the citizens. Thus, the cost of education is divided into two broad categories, i.e. institutional cost and private cost.

**Meaning of Cost:**

In economics, in general, the concept of cost comes into play in the production of goods or services. It needs to be noted that: (a) cost may be expressed in terms of money or in nonmonetary terms; (b) cost affects a specific economic transactor : producer, seller, buyer, consumer, etc. Thus, when the owner of a factor of production offers that factor to a producer, the cost to the owner is represented by his 'consumption forgone', while the producer incurs a precise and measurable money cost, made up of wages, interest, charges, etc.

In business, cost is usually a monetary valuation of (1) effort, (2) material, (3) resources, (4) time and utilities consumed, (5) risks incurred and (6) opportunity forgone in production and delivery of a good or service. All expenses are costs, but not all costs (such as those incurred in acquisition of an income-generating asset) are expenses.

**Meaning of Cost of Education :**

Something of value, usually an amount of money, given up in exchange for something else, usually goods or services.

The education sector, as the producer of the service of 'education' and like any other sector of activity, theoretically brings into play the same concepts of cost. A closer look at the application of the concept of cost to education, however, reveals three types of difficulty inherent in the very nature of the activity of education, and arising more particularly out of:

- (a) the definition of the production of education;
- (b) the identification of the economic transactors concerned with education;

- (c) the fact that education has the character of a public service.

**Unit Cost of Education:**

Unit cost of education means costs per unit i.e. per student, per graduate, per credit, etc. Generally, unit in unit costs means the total number of learners enrolled in a course in a particular year. Sometimes, it is said that the number of learners actually attending the classes should be taken for the purpose of calculation of unit costs and not the total number of learners on roll. Alternatively, unit costs refer to the unit of output i.e. successful learner or graduate. This is called effective costs of education. This type of cost calculation education takes care of wastage in education too. The difference between the effective costs and the normal costs of education reveals the efficiency of the given level of educational system. Thus, we can calculate alternative forms of unit costs of education.

**Unit Cost of Education:**

These are as follows :

- ❖ Cost per learner (unit cost of education) = Total expenditure/Total enrolment.
- ❖ Cost per learner actually attending the school = Total expenditure/ No. of student attending classes.
- ❖ Cost per successful learner = Total expenditure/ Number of passout learners. (effective unit costs of learner).
- ❖ Cost of education per capita = Total expenditure/Total population.

**Feature of unit costs analysis:**

- For manpower planning and related purposes, the 'effective unit costs' is important.
- The selection of unit in unit costs analysis depends upon the purpose. As the costs are generally found to be highly sensitive to the number of students, the student is most often considered as the unit. But while calculating costs of classroom equipment, the class forms the right unit.
- Generally, unit costs of education are calculated per year. It is unreasonable to calculate the unit costs for one level by the duration of a five year time period, and for another level/type of 3 year time period.

**Determinants of Educational costs:**

Knowledge of the major determinants of educational costs is essential for anyone thinking of improving the level of education in the society. The cost of an educational plan or innovation is often expressed in terms of its total cost to indicate the value of the total resources devoted to it. But for diagnostic and evaluative purposes, unit cost is more meaningful. Unit cost is cost per educational nit, e.g., cost per student, cost per school, cost per teacher, etc. But education has multiple outputs measured variously in terms of student achievement, number of graduates

passed, and so on. Hence, while estimating unit cost, due care should be taken to avoid ambiguity.

For example, cost per student may imply:

- a) cost per student enrolled;
- b) cost per student actually attending school; or
- c) cost per student successfully completing a given course.

**Determinants of educational costs:**

The problem of deciding on the unit cost has to be solved carefully. Choosing the number of students may not always be the right thing to do because all costs do not vary with the number of the students; for instance, the teachers and their salaries, the number of square meters of building space, etc. Hence, cost per teacher or cost per school should also be considered.

Educational costs may be **divided into three** categories:

those related to the students;

those related to the teachers; and

those related to buildings and equipment.

**Conclusion:** In a normal growing state, a composite unit including all three could be adopted. Unit costs are likely to rise due to changes in the price level, increase in learner population, rise in the educational standards, demand for education as well as the pressure for raising the level of school-going age. In making long term forecasts, we have to take note first of the increase in the number of students, teachers and schools and secondly, of the rise in cost per unit. It is essential to break up the expenditure on education, both by the government and private institutions, into different components like recurring expenditure and capital expenditure. Recurring expenditure (or cost) as the name suggests takes place regularly at certain intervals. Capital expenditure or costs, on the other hand, are one time investments. Cost depends on: the level and structure of the teachers' salaries; the average pupil-teacher ratio at each level; the non-salary costs of education; and the capital cost for buildings and other equipments of course, each of these factors are themselves determined by a number of other factors like availability of funds, teacher, student enrollment, etc. It is because of the variation in these factors that countries or states and districts within the country differ with regard to their educational priorities and the corresponding expenditure.

➤ **Expenditure on Education, Private Costs And Social Costs**

**Introduction:** The cost of any economic activity could be measured from numerous angles and perspectives. In fact, all the stake holders bear the cost either as the suppliers of activity or as the demanders/users of that activity/service.

The cost of education refers to the cost incurred by the state government or private sector for providing education to the citizens.

India spends 4.6 per cent of its total GDP on education, and ranks 62nd in total public expenditure on education per student, according to IMD. Experts have called for raising the education expenditure to 6 per cent, which is also in sync with Niti Aayog's target to improve education quality in India.

In the Financial Year 2019-20, Union Finance Minister Nirmala Sitharaman had allocated around Rs 94,000 crore for education and this is expected to increase by about 5 per cent this time. "With government's increasing focus on improving the education system of the country.

**Meaning of Cost:** The cost of education is divided in to two broad categories, i.e. institutional cost and private cost. The private cost refers to the part of expenditures/investments which are incurred either by the parents or students or both. It means that financial expenses incurred by the students or parents or both (including relatives, etc.) in a year for acquiring education is called the private cost.

Private cost of education may be classified into two categories:

- (i) academic cost and
- (ii) maintenance cost. Academic cost refers to expenses on the items such as fees and funds paid to the institution (i.e. tuition fees, examination fees, library fees, laboratory fees, etc.), payments made for getting private coaching, books, stationery, instruments, etc.

**Meaning of Expenditure:** payments made for getting private coaching, books, stationery, instruments, etc. Maintenance cost includes expenses incurred on clothing, transport, boarding and lodging and other sundry expenses. It is also known as the incidental cost.

“India ranks 62nd in total public expenditure on education per student and measures of the quality of education (pupil-teacher ratio in primary and in secondary education,” IMD said. The country spent 3% of its total GDP on education in 2018-19 or about 5.6 lakh crore, the Economic Survey said.

The definition of an expenditure is the act of spending money or time and it is something on which you spend money. An example of an expenditure is the money spent on office equipment that you have purchased.

The amount of total government's budget of a country allotted in different educational activities is called an educational expenditure.

**Expenditure V/s Cost:**

Expenditure on education and cost of education are not the same. Information on expenditure on education is more easily accessible and available from budgets and accounts of the Central and State governments. There is a tendency to use the terms expenditure and cost interchangeably. Cost of education refers to the amount of money spent to acquire or impart education. From the point of view of the individuals, costs refer to the amount of money spent during a particular period (generally a year) to acquire education. From the point of view of the state, it refers to the expenditure incurred on education during a year. The term cost and expenditure are used interchangeably, but more popularly, we use the term 'cost' and refer to cost per student pertaining to a particular level (primary, secondary, higher secondary or university).

Similarly, cost per student to the state for a particular course or level is calculated. But cost per student in the state may include expenditures incurred on staff salaries, equipment and buildings, maintenance costs of apparatus, library books, sports, etc. From the point of view of the individual, cost of acquiring education does include expenditure on books and stationery, school fees, travel cost and in case of students making use of hostels, it will also include rent of hostel accommodation, mess charges, etc.,

Since educational costs are available in current prices, it would be necessary to deflate them by a common deflator with a bench mark, so as to study whether real cost per student or per course is increasing or decreasing over a period of time. In other words, for purpose of comparisons, costs should be calculated at constant prices, rather than at current prices, to eliminate the effect of change of prices.

In an educational enterprise, we have to measure the cost incurred by the supplier of education and by the consumer of education separately. This necessitates a re-consideration of cost in economics so that it can suitably be applied to education, In fact, when we try to apply the concept of cost to education, three difficulties arise due to the inherent nature of the activity of education.

These **difficulties** are:

- The definition of 'production' resulting from education;
- The identification of the 'economic transactors' connected with education; and
- The fact that education has the character of a 'public service'.

**Types Of Educational Costs** : The very idea of cost immediately poses the question: cost for whom? Cost can be defined from the supplier's point of view as well as from the consumer's point of view. Moreover, cost can also be of various forms.

Let us briefly discuss the types of costs below.

**Types of Educational Costs**

- (a) Individual or Private Costs
- (b) Institutional or Public or Social Costs
- (c) Direct Costs
- (d) Indirect Costs
- (e) Opportunity Costs

We will now look at the meaning of each of these types of costs.

**Social and Private Costs: Direct Costs and Indirect Costs:**

**1. Individual Costs or Private Costs:** These concern individuals in families and represent costs which the individuals and the families must bear in return for the education received.

**Examples** of such expenditure are:

- 1. Tuition and examination fees and other such fees;
- 2. Institutional supplies;
- 3. Manuals and books;
- 4. Transport;
- 5. Uniforms;
- 6. Foregone earnings.

**2). Institutional/Public/ Social Costs:** These costs concern society, and refer to such costs (or expenditure) as are borne out as a result of all education and training activities in a society at a given point of time.

**3. Direct Costs :**

These are those costs that are directly visible. They include all money expenditure incurred on different items by the student. Direct costs are expenses that can be separately identified and charged as part of the cost of a product, service, or department. Typical direct costs include items such as instructional and other programme materials printed, fuel, oil and repairs of vehicles used for home-to-school transportation, centralized data processing services, in-house equipment repairs, field trips, expenditure on tuition fees, other fees and charges, purchase of books, stationary, uniforms, hostel expenses and transport.

#### **4. Indirect Costs :**

Indirect costs are those costs that cannot be directly charged to a particular programme, but are attributed to services, which are necessary to operate the program. Such services include, but are not limited to, accounting, budgeting, payroll preparation, personnel management, purchasing, warehousing and centralized data processing. Some programs cap the allowed indirect cost rates, others have an administrative cap that limits a combination of direct administrative costs and indirect costs, while others do not allow indirect costs at all, requiring that the entire award amount be spent on direct costs. These expenses are not paid directly to your school, but are associated with attending school. You and your family can control some of them.

#### **5. Opportunity Cost :**

Opportunity cost is a concept you did not see in the definition of economics. But not seeing it doesn't mean that it isn't there. There is yet more to say about the definition, but this is the logical place to introduce a related concept. Opportunity costs are everywhere, due to scarcity and the necessity of choosing. Opportunity cost is not what you choose when you make a choice -it is what you did not choose in making a choice. Opportunity cost is the value of the forgone alternative - what you gave up when you got something. The opportunity cost of going to college is the money you would have earned if you worked instead. On the one hand, you lose four years of salary while getting your degree; on the other hand, you hope to earn more during your career, due to your education, to offset the lost wages. Thus, opportunity cost is the cost of alternatives foregone.

#### **Economic aspects of Education :**

Economics of Education led to the analysis of various aspects of education from the economic point of view.

1. Education as Economic Good
2. Education as Consumption
3. Education as Investment
4. Education as an Industry and
5. Education as Human Capital.

##### **1. Education as Economic Good**

Examining the various economic aspects of education, a good is said to be economic good only when its availability is limited and it is capable of allocation. There are two types of economic goods - material goods and nonmaterial goods. Material goods are physical and



tangible where as a nonmaterial good is a service rendered that satisfies a human want. Education is a non- material economic good. It is a service rendered to satisfy a human want. It is limited and capable of being allocated to individuals. Education is both a producers' good as well as a consumers' good. Producers' goods are the goods used in the process of producing other goods where as consumers goods are goods used by a consumer to satisfy his wants. It gives satisfaction to the person who consumes it and it helps in the production of more goods.

## **2. Education as Consumption**

Some economists view education as a superior consumption good, and has nothing directly to do with production. It is a form of consumption like bread or wine. John Maynard Keynes considered general education in the USA as mere consumption. When learning is merely to spend the leisure time or for pleasure without any economic motive we may term it as consumption. Learning classical languages, fine arts and games in most of the cases is a consumption activity.

## **3. Education as Investment**

Alfred Marshall emphasized the importance of education as a national investment, it is the most valuable of all capital, invested in human beings, Modern economists treat education as a kind of investment, like dam or canal in which we invest to produce more in the future. If it is being sought for its own sake, it is consumption and if it is being taken as an input to increase future earnings, it is investment (Blaug, 1970). Education put in the framework of classical economics, is investment and in the Keynesian analysis is consumption.

## **4. Education as an Industry**

Education is an industry in the sense that it utilizes money and other valuable resources to develop its output. It is considered as a growth industry, which provides employment and services needed by the total economy as any other industry contributes to the gross national product of the country. Again, education produces only intangibles in the form of nonmaterial goods or services that are valuable but difficult to measure.

## **5. Education as Human Capital**

Capital is anything that involves costs but yields a stream of income overtime. Education is considered as human Capital as it directly promotes the quality and capability of human beings. It contributes to the intellectual and social capital of a country. Education raises the economic value of human capital by raising the future earning power and current asset value of human beings.

### **The Importance of Education in Economic Development**

Education in every sense is one of the fundamental factors of development. No country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves and world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition it plays a very crucial role in securing economic and social progress and improving income distribution.

The role of education in economic development and the effect of education on labour productivity, poverty, trade, technology, health, income distribution and family structure. Education provides a foundation for development, the groundwork on which much of our economic and social well being is built. It is the key to increasing economic efficiency and social consistency. By increasing the value and efficiency of their labor, it helps to raise the poor from poverty. It increases the overall productivity and intellectual flexibility of the labor force. It helps to ensure that a country is competitive in world markets now characterized by changing technologies and production methods. By increasing a child's integration with dissimilar social or ethnic groups early in life, education contributes significantly to nation building and interpersonal tolerance.

### **Conclusion:**

Education in every sense is one of the fundamental factors of development. No country can achieve sustainable economic development without substantial investment in human capital. Education enriches people's understanding of themselves and world. It improves the quality of their lives and leads to broad social benefits to individuals and society. Education raises people's productivity and creativity and promotes entrepreneurship and technological advances. In addition it plays a very crucial role in securing economic and social progress and improving income distribution.

➤ **Wastage And Stagnation In Education - causes and measures**

**Introduction:** It is seen that planners of education have always expressed concern about educational wastage caused by repeaters and dropouts. Such wastage is one of the difficulties in fulfilling the social demand in formal education. For an effective management of educational system, it is required that the retention rate should be improved by reducing educational wastage, while maintaining the quality of the system at reasonable input cost.

By wastage we mean premature withdrawal of children from schools at any stage before completion of the primary courses". This statement does not mean there is no wastage in the Secondary Course and Higher Course. Any student, who receives education at any stage, is expected to complete his education with the prescribed period. If one withdraws from the course before completion, then that individual or individuals are deemed to be wastage to the course. Such students do not complete the study of their curriculum and consequently the time, money and energy expended on such students prove to be sheer wastage. Hence the most popular use of the word "Wastage" in education means the wastage of time, effort and money.

The word 'Stagnation' in education means the detention of a student in a class for more than one year on account of his unsatisfactory progress. The Hartog Committee reports, "By stagnation we mean the retention in a lower class of a child for a period of more than one year. Of course stagnation always means wastage".

As in the case of primary education, the wastage and stagnation were also eating the vitals of the secondary education. The tremendous loss that is caused because of the problems of the wastage and stagnation will be clear by looking at the results of High School Final every year.

**Meaning and Definition of wastage in Education:**

**Educational wastage** :Educational wastage is a worldwide phenomenon. It. occurs due to dropping out of students from the educational institutions, before completion of. their programs of study and before their educational skills are honed, repetition of classes and. courses, being unsuccessful in academic performances and stagnation.

Educational wastage is an economic term defined as the 'total' number of student's years spent by the repeaters and dropouts.

Repeater is a student who in a given school year remains in the same grade as in the previous year while, drop outs are those who leave the school before the end of the final year or some where during an educational cycle in which they are enrolled.

Wastage refers to the benefits provided to the repeater for his/her extra time spending in school and the benefits accruing to the drop outs before their leaving the school.

**Total Wastage = Reflect the total size of repetition and drop**

outs in the flow of Promotion within on education system

**Repeaters = Stay in the school for longer than normal duration**

there by reducing the intake capacity.

Hartog Committee (1929), which for the first time pointed out that the “massive wastage and stagnation are taking place in primary education. Primary Education is ineffective unless it at least produces literacy”.

### **Causes of Wastage and Stagnation:**

The causes of wastage and stagnation are of three categories:

1. Economic,
2. Educational and
3. Social.
4. Miscellaneous Causes

**1. Economic Causes:** Studies conducted on the subject show that 65% of wastage is due to poverty. According to Kothari Commission Report, "A child is sent to school between 6-9 years of age because at this age he is a nuisance at home than a help. Parents mostly involve their children in domestic work and this leaves no time to child for study. Financial handicap is responsible for wastage and stagnation. Out of poverty some parents utilize the service of their children to supplement earning.

In many cases poor parents find it almost impossible to lose the assistance of children. Poverty of Indian people is miserable that they find themselves unable to meet other expenses connected with the education even against the provision of free education of their children during harvest time; children cannot afford to go to school as they are required in the farm. Again, out of poverty children lack minimum diet and are unable to stay for long in school.

**2. Social Causes:** Class and caste distinctions prevail in India, the former in urban areas and the latter in rural areas. Especially in the case of girls custom of early marriages or betrothals stands a bar. There is an opposition to send grow-up girls to schools especially to the mixed schools without women teachers.

Muslim parents exhibit more of orthodox views about their girls. Even in the case of boys some parents due to caste restrictions do not want their children to mix with power caste boys and girls. Co-

education of boys and girls in some places is looked with suspicion. And as there is no separate provision of education for girls, deprivation of girls from schools leads to much wastage.

**3. Educational Causes:** Only educational causes are responsible for another 30% of wastage. Government of India admits this in the following words:

"The educational institutions being ill-equipped, poorly housed and with dull and depressing environment unfortunately could not exercise effective counter-acting influence".

Uncontrolled fresh admissions without consideration of age or time have no permanency. That is, admissions are made of under-aged and over-aged children. Again admissions are done throughout the year. So there is more of wastage and stagnation. That is because under-aged children lost interest in classes, whereas over-aged children remained away from school out of shame.

**4. Miscellaneous Causes:** Sometimes children in schools suffer from diseases of serious kinds and they are withdrawn for a long period causing wastage. Death of one of the parents or both causes much hardship to children. Orphan children drop-out from school without completing education, and so the wastage.

Lack of adequate accommodation, too much of over-crowding schools with high pupil-teacher ratio become the main causes of wastage and stagnation. Again, increased number of single-teacher schools, inefficient teaching, lack of teacher-pupil contact, frequent transfer of teachers and plural class-teaching disturbed the quality of instruction which ultimately cause much wastage and stagnation.

**Remedial Measures:** Statistics indicate huge wastage at the Primary stage. Of every 100 pupils that enter class I only 40 reach class V and only 20 reach class VIII. So steps are required to be taken for fighting against such alarming wastage those 80 students out of every hundred leave school before they complete age of 14.

1. Stagnation and wastage can be reduced by concentrating on quantitative improvement by (a) Universal provisional and (b) Universal retention. Again attempts should be made for qualitative improvement of pupils.
2. Qualified teachers should be appointed to create better quality in the instructional programme to attract children.
3. The curriculum may be made modest, simple and interesting so that it can be implemented most efficiently.
4. Improvement, of the Professional competence of teachers may be made by providing training facilities, both pre-service and in-service. Necessary guide books for teachers and work books for students and other literature should also be provided.
5. Provision of part-time schooling may be made for the benefit of children who cannot attend the school during regular hours on account of domestic and economic disabilities.

6. Effective supervision and inspection may be provided in educational institutions. Etc.,

### **Conclusion:**

In short, dull and unattractive schools, incomplete schools, inefficient and poor quality of teachers, defective examinations, uninteresting curricula, lack of proper parental attitude, absence of school health services and school mid-day meals are responsible for much of wastage and stagnation in schools. Wastage across national level great deal of caution to be taken as educational systems are not alike a structural and promotion policies and achievement norms differ to a larger extent, when we talk of drop out and repeaters, we have to consider educational wastage as the total number of pupil years. Spent by repeaters and drop outs and can be converted into a percentage of the total number of pupil years spent by repeaters and dropouts. The tendency of students to repeat and drop out is largely influenced by

- Socio economical backwardness
- Educational factors
- Excessive involvement of learners in domestic work
- Parental opposition, educational states of parents As for educational factors are concerned, stagnation or absence or relationship between educational system and Economics needs of the community, faulty admission policy. Lack of physical facilities poor institutional environment are the causes of repetition and drop outs.

Factors like death of parents, poor physical standard of learning lead to dropping out or repetition of grades.

## ➤ **Educational Policy in India:**

### **Introduction:**

Governments all over the world place a major emphasis on education policy. There is a global pressure on increasing attention on the outcomes of educational policies and their impact on social and economic development. However, there is often a lack of understanding of how educational policies are formed and what constitutes an education policy. An attempt is made in this module to analyse the nature of educational policy, basic features of education policies and the intended outcomes of these policies. Education policy refers to the rules and principles that govern the operation of educational systems. The

module also tries to answer questions regarding the goals of education, strategies employed for achieving these goals and for identifying tools for assessing their impact.

In the process of formulating educational policies, many crucial factors have to be taken into consideration. These include pedagogical methodologies, resource mobilization, curriculum content and the possible impact of the policy on different groups.

According to Taylor (1997) there are three major aspects in education policy, these being:

- a) Context: It refers to the antecedents and pressures leading to the development of a specific policy.
- b) Text: It refers to the content of the policy itself.
- c) Consequences: If policy texts are open to differing interpretation by practitioners then this is also likely to result in differences in implementation.

In India educational institutions have existed since the emergence of civilization (Keay, 1972).

### **Education Policy in Independent India**

After the Sargent Commission, there were no major commissions or reports in the British period. Even the Sargent Commission's Report did not see the light of the day. Following the transfer of power, the Central Advisory Board of Education (CABE) decided to set up two Commissions, one to deal with university education and the other to deal with secondary education, recognizing the fact that the requirements of independent India would be different. It became imminent that the education system in India would be restructured. This decision came at a time, when the promises made to the people in the field of education during the freedom struggle, were to be implemented. Provision of free and compulsory education up to the age of 14 years was being debated in the Constituent Assembly, and these debates ultimately found expression in the Directive Principles of State Policy of the Constitution of India. The goal set for the country's educational policy was to work out a system of universal elementary education by 1960. Necessary changes were also effected in the system of secondary and higher education in keeping with the felt needs of the country (Saikia 1998).

A new chapter in education policy began with India becoming independent. A number of problems and challenges had surfaced in the country because of the sheer diverse character of Indian society. The Government established education commissions in order to address these challenges and recommend comprehensive policies for educational problems and also for the improvement of the education system in India. After independence India adopted the Constitution in 1950. Education became the responsibility of both state and central governments. The Constitution makers recognized that the stability and progress of the country which adopts a democratic course depends to a large extent on a well educated electorate. The Constitution not only emphasized the principle of 'equality of educational opportunity' but also the achievement of social justice through a policy of 'positive discrimination'.

In independent India education policies have been closely influenced by the Education Commissions that were set up from time-to-time. In the section that follows the highlights of the recommendations of these important commissions have been presented.

### **University Education Commission (1948)**

The first Commission to be appointed in independent India was the University Education Commission of 1948, under the chairmanship of Dr. S. Radhakrishnan, to report on the status of Indian university education and suggest improvements and extensions that would be desirable to suit the present and future requirements of the country (Aggarwal 1993). The Commission, which produced a comprehensive and voluminous report, set for itself the task of not only reorienting the education system to face the challenges emerging from a long period of colonisation but also to increase the country's general prosperity, create an effective and functional democracy and reduce socio-economic inequalities. Higher education for the next generations was envisaged as one of the principal aims of the education policy that the country was proposing to formulate.

This Commission had aimed at creating universities which would provide knowledge and wisdom for a comprehensive development of the personality. It considered university education as a pivotal step for higher level of learning. The main goal of establishing a university in a particular region was to make higher education accessible to all sections of society, irrespective of region, caste, gender and region. This report proposed the re-construction of education system in tune with the vision of the Indian constitution.

### **Secondary Education Commission (1952)**

The Secondary Education Commission was set up under the chairmanship of Dr. A. Lakshmanaswami Mudaliar in 1952. The Commission submitted its report to the Government in 1953. The report gave a broader view about the educational problems of Indians and proposed to increase efficiency of production. The report of the Commission suggested diversification of high school courses and the establishment of multipurpose high schools. Another proposal was that of introducing a uniform pattern throughout India. Further, it also recommended the setting up of technical schools.

The recommendations of Mudaliar Commission occupy a very significant place in the development of secondary education in independent India. Most of the educationists have praised its recommendations for providing very practical and useful suggestions. However, there are a few who have pointed out the limitations of this report. They opined that the Commission's recommendations lacked freshness, were a replication of old policies and gave imperfect and distorted suggestions that could not really be implemented. The Commission's report also did not provide framework for promotion of women's education.



### **Indian Education Commission (1964-66)**

The Mudaliar Commission was followed by the appointment of the Indian Education Commission under the chairmanship of D. S. Kothari. Popularly known as the Kothari Commission, it was entrusted with the task of dealing with all aspects and sectors of education and to advise the Government on the evolution of a National System of Education. It is in accordance with the recommendations of this Commission that the National Educational Policy of 1968 was formulated. In its opening paragraphs, the report of the Kothari Commission on Education observed that “the destiny of India is now being shaped in her classrooms. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of people. On the quality and number of persons coming out of our schools and colleges will depend our success in the great enterprise of national reconstruction whose principal objective is to raise the standard of living of our people” (Report of the Education Commission 1964-66. Vol. 1).

In the Commission’s view education had the power to work as a powerful instrument of social, economic and political change. Therefore, educational objectives have to be related to long term national aspirations. If the change is to be achieved without any violent revolution, the only instrument, the Commission noted was education. Further, the Commission reviewed the development of education in India in the modern period and particularly since Independence and came to the conclusion that Indian education needs a drastic reconstruction, almost a revolution, to realize the constitutional goals and to meet the various problems facing the country in different sectors. This comprehensive reconstruction, said the Commission, has three main aspects; a) Internal transformation b) Qualitative improvement and c) Expansion of educational facilities.

### **National Policy on Education (1968)**

In 1968 the Government of India had formulated the National Policy on Education, in response to the recommendations of the Kothari Commission. The National Policy on Education sought ‘total reformation’ and aimed at extending the prospects of education to all sections of the society to accomplish the goal of harmony and integration. The policy suggested the provision of compulsory education to children in the 6-14 years age group as proposed in the Indian Constitution. Further, it also recommended that regional languages must be encouraged for being used in secondary schools. The Commission was of the opinion that English had to be the medium of instruction in schools and it considered Hindi as the national language. The National Policy on Education also promoted the development of Sanskrit, which was the symbol of India’s cultural heritage. This policy recommended to the Government of India that 6 percent of the national income be spent on education.

The National Policy on Education 1968 was widely criticised for its promotion of the 'three language formula'. The general feeling was that the third language was thrust upon the students even though they were not interested. Further, it was also pointed out that the policy was very vague and lacking in clarity by not indicating the ways by which the guidelines contained in the policy could be implemented. However, the policy received considerable attention as it was the first of its kind to give a proper direction to the educational system in independent India. The 'three language formula' was seen as a step towards national integration and was viewed as a facility provided for the improvement of education among the minorities (Sharma 2004). In spite of the criticism, this policy was still hailed as the first systematic effort to give shape to Indian education.

### **Draft National Policy on Education (1979)**

The Draft National Policy on Education – 1979 proposed the development of an educational system that helped people not only to enhance their knowledge but also academic skills. It also called for building awareness of morals and ethics among students so that they can develop a good personality and become worthy citizens. The Draft National Policy on Education suggested that a good educational system that reinforces the constitutional values must be implemented. The thrust was on encouraging national integration through education.

The Draft National Policy on Education envisaged that the present Indian education system has to be transformed in the light of contemporary needs of the Indian people (Chaube 1988). It also laid down that the education system must be flexible and responsive to all conditions. Further, the Indian education system must endeavour to reduce the gap between the educated classes and the masses, in order to overcome the feelings of superiority, inferiority and alienation. The policy also suggested that educational institutions and communities should work together and help each other.

### **National Policy on Education (1986)**

The Government of India initiated the National Policy on Education in 1986. Its major objective was to provide education to all sections of society, with a particular focus on scheduled castes, scheduled tribes, other backward classes and women, who were deprived of educational opportunities for centuries. In order to fulfill these objectives the National Policy on Education (1986) stressed on the provision of fellowships for the poor, imparting adult education, recruiting teachers from oppressed groups and also developing new schools and colleges. The policy focused more on providing primary education to students. Further it also gave importance for the establishment of open universities by setting up the Indira Gandhi National Open University (IGNOU) at Delhi. The policy had recommended that education be given to rural people in consonance with the Gandhian philosophy. It also set the stage for the

emergence of information technology in education, besides opening up the technical education sector in a rather big way to private enterprise.

### **National Policy on Education (1992)**

The Government of India had set up a commission under the chairmanship of Acharaya Ramamurti in 1990 to reassess the impact of the provisions National Policy on Education and also to give recommendations. Later, under the leadership of N. Janadhana Reddy the Central Advisory Board of Education was set up. This Board considered some modifications in NPE. The report of the committee had been submitted on 1992 and it came to be known as the National Programme of Action of 1992. The National Policy on Education – 1992 stressed on promotion of development and strengthening national integration. The National Policy on Education (1992) emphasized the need for greater transformation of the Indian educational system, with a focus on quality enhancement. The policy also stressed on developing moral values among students and bringing education closer to life (Ranganathan 2007).

### **Sarva Shiksha Abhiyan (SSA -2000-2001)**

Sarva Shiksha Abhiyan or The Education for All Movement is a central government programme which aimed at universalising elementary education in a time bound manner. This programme has been in operation since 2000-2001. However, its origin dates back to 1993-94, when the District Primary Education Programme (DPEP) was launched. DPEP had basically aimed at fulfilling the goal of universalisation of primary education. Sarva Shiksha Abhiyan aimed at creating an ideal system of education which enabled individuals to develop and inculcate knowledge, create awareness of social and human values, and build a strong character. SSA proposed that the education system must develop in consonance with contemporary societal needs (Mohanty 2003).

Availability of infrastructure is fundamental in providing access to education. Under the SSA scheme between 2002-03 and 2008-09 1,48,492 new primary schools and 1,33,277 new upper primary schools were opened and an additional 8,00,000 classrooms were built, significantly expanding access to the elementary level. Further, the Mission also motivated increased efforts to develop, fund and implement specific strategies to reach deprived urban children, particularly in the 35 cities with more than one million inhabitants (Joint Review Mission of SSA 2009).

### **Right to Education Act (2009)**

Right to Education Act or The Right of Children to Free and Compulsory Education Act emphasizes the importance of free and compulsory education for children who are in the age group of 6 to 14 years. The Act came into existence on 1st April, 2010 and since then India became one of the 135 countries to

make education a fundamental right of every child. Further, this Act specifies that all private schools have to reserve 25% of seats to children of socially disadvantaged groups. It also laid down that no child shall be held back, expelled or required to pass a board examination until the completion of elementary education. For school dropouts there is a special training, given under this Act. Since education is a concurrent issue in the Indian Constitution, the responsibilities of implementation of this Act have been distributed among centre, state and local governmental bodies. The central government bears 70 percent of the expenses of the implementation of this Act and 30 percent is provided by state government.

### **National Education Policy 2020**

It was approved by the Union Cabinet of India on 29 July 2020, outlines the vision of India's new education system. The new policy replaces the previous National Policy on Education, 1986. The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India. The policy aims to transform India's education system by 2021. In 2019, the Ministry of Human Resource Development released a Draft New Education Policy 2019, which was followed by a number of public consultations. The Draft NEP discusses reducing curriculum content to enhance essential learning, critical thinking and more holistic experiential, discussion-based and analysis-based learning. It also talks about a revision of the curriculum and pedagogical structure from a 10+2 system to a 5+3+3+4 system design in an effort to optimize learning for students based on cognitive development of children.

On 29 July 2020, the cabinet approved a new National Education Policy with an aim to introduce several changes to the existing Indian education system. The National Education Policy 2020 (NEP 2020), which Shortly after the release of the policy, the government clarified that no one will be forced to study any particular language and that the medium of instruction will not be shifted from English to any regional language. The language policy in NEP is a broad guideline and advisory in nature; and it is up to the states, institutions, and schools to decide on the implementation. Education in India is a Concurrent List subject.

Himachal Pradesh has become the first state to implement New Education Policy 2020. The national educational policy should be implemented in all schools over India by 2022.

## **Background**

The NEP 2020 replaces the National Policy on Education of 1986. In January 2015, a committee under former Cabinet Secretary T. S. R. Subramanian started the consultation process for the New Education Policy. Based on the committee report, in June 2017, the draft NEP was submitted in 2019 by a panel led by former Indian Space Research Organisation (ISRO) chief Krishnaswamy Kasturirangan. The Draft New Education Policy (DNEP) 2019, was later released by Ministry of Human Resource Development, followed by a number of public consultations. T74 Draft NEP was 484 pages. The Ministry undertook a rigorous consultation process in formulating the draft policy: "Over two lakh suggestions from 2.5 lakh gram panchayats, 6,600 blocks, 6,000 Urban Local Bodies (ULBs), 676 districts were received."

## **Vision**

The vision of the National Education Policy is:

National Education Policy 2020 envisions an India-centric education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society by providing high-quality education to all.

## **Provisions**

The NEP 2020 enacts numerous changes in India's education policy. It aims to increase state expenditure on education from around 4% to 6% of the GDP as soon as possible.

The changes and objectives are:

## **Languages**

The policy raises the importance of mother tongue and regional languages; medium of instruction until class 5 and preferably beyond should be in these languages. Sanskrit and foreign languages will also be given emphasis. The policy also states that no language will be imposed on the students. Shortly after the release of the policy, the government clarified that the language policy in NEP is a broad guideline; and that it was up to the states, institutions and schools to decide the implementation. A more detailed language strategy would be released in the National Curriculum Framework in 2021. Note was also made that there were already institutions which had implemented this language policy 60 years ago such as Sardar Patel Vidyalaya. Both the Education Policy of 1986 and the Right to Education Act, 2009 promoted usage of the mother tongue too as an advisory guideline.

## **School education**

The "10 + 2" structure will be replaced with "5+3+3+4" model. This will be implemented as follows:

- Foundational Stage: This is further subdivided into two parts: 3 years of preschool or anganwadi, followed by classes 1 and 2 in primary school. This will cover children of ages 3-8 years. The focus of studies will be in activity-based learning.
- Preparatory Stage: Classes 3 to 5, which will cover the ages of 8-11 years. It will gradually introduce subjects like speaking, reading, writing, physical education, languages, art, science and mathematics.
- Middle Stage: Classes 6 to 8, covering children between ages 11 and 14. It will introduce students to the more abstract concepts in subjects of mathematics, sciences, social sciences, arts and humanities.
- Secondary Stage: Classes 9 to 12, covering the ages of 14-19 years. It is again subdivided into two parts: classes 9 and 10 covering the first phase while classes 11 and 12 covering the second phase. These 4 years of study are intended to inculcate multidisciplinary study, coupled with depth and critical thinking. Multiple options of subjects will be provided.
- Instead of exams being held every academic year, school students will only attend three exams, in classes 2, 5 and 8.
- Board exams will be continued to be held for classes 10 and 12 but will be re-designed. Standards for this will be established by an assessment body, PARAKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development).
- To make them easier, these exams would be conducted twice a year, with students being offered up to two attempts. The exam itself would have two parts, namely the objective and the descriptive.
- This policy aims at reducing the curriculum load of students and allowing them to be more "inter-disciplinary" and "multi-lingual". One example given was "If a student wants to pursue fashion studies with physics, or if one wants to learn bakery with chemistry, they'll be allowed to do so." Report cards will be "holistic", offering information about the student's skills.
- Coding will be introduced from class 6 and experiential learning will be adopted
- The Midday Meal Scheme will be extended to include breakfasts. More focus will be given to students' health, particularly mental health, through the deployment of counsellors and social workers.

### **Higher education**

It proposes a 4-year multi-disciplinary bachelor's degree in an undergraduate programme with multiple exit options. These will include professional and vocational areas and will be implemented as follows:

- A certificate after completing 1 year of study
- A diploma after completing 2 years of study
- A Bachelor's degree after completion of a 3-year programme
- A 4-year multidisciplinary Bachelor's degree (the preferred option)
- M. Phil (Masters of Philosophy) courses are to be discontinued to align degree education with how it is in Western models.
- A Higher Education Council of India (HECI) will be set up to regulate higher education. The council's goal will be to increase gross enrollment ratio. The HECI will have 4 verticals:
  - National Higher Education Regulatory Council (NHERC), to regulate higher education, including teacher education, while excluding medical and legal education.
  - National Accreditation Council (NAC), a "meta-accrediting body".
  - Higher Education Grants Council (HEGC), for funding and financing of universities and colleges. This will replace the existing National Council for Teacher Education, All India Council for Technical Education and the University Grants Commission.
  - General Education Council (GEC), to frame "graduate attributes", namely the learning outcomes expected. It will also be responsible in framing a National Higher Education Qualification Framework (NHEQF). The National Council for Teacher Education will come under the GEC, as a professional standard setting body (PSSB).
  - Other PSSBs will include professional councils such as Veterinary Council of India, Council of Architecture, Indian Council of Agricultural Research and National Council for Vocational Education and Training.
- The National Testing Agency will now be given the additional responsibility of conducting entrance examinations for admissions to universities across the country, in addition to the JEE Main and NEET.
- The policy proposes that higher education institutes like the IITs make changes with regard to the diversity of learning.
- The policy proposes to internationalize education in India. Foreign universities can now set up campuses in India.
- The fees of both private and public universities will be fixed.

### **Teacher education**

The NEP 2020 puts forward many policy changes when it comes to teachers and teacher education. To become a teacher, a 4-year Bachelor of Education will be the minimum requirement needed by 2030.

The teacher recruitment process will also be strengthened and made transparent. The National Council for Teacher Education will frame a National Curriculum Framework for Teacher Education by 2021 and a National Professional Standards for Teachers by 2022. The policy aims to: ensure that all students at all levels of school education are taught by passionate, motivated, highly qualified, professionally trained, and well equipped teachers.

### **Other changes**

Under NEP 2020, numerous new educational institutes, bodies and concepts have been given legislative permission to be formed. These include:

- National Education Commission, headed by the Prime Minister of India
- Academic Bank of Credit, a digital storage of credits earned to help resume education by utilising credits for further education
- National Research Foundation, to improve research and innovation
- Special Education Zones, to focus on the education of underrepresented group in disadvantaged regions
- Gender Inclusion Fund, for assisting the nation in the education of female and transgender children
- National Educational Technology Forum, a platform to facilitate exchange of ideas on technology usage to improve learning

The policy proposes new language institutions such as the Indian Institute of Translation and Interpretation and the National Institute/ Institutes for Pali, Persian and Prakrit. Other bodies proposed include the National Mission for Mentoring, National Book Promotion Policy, National Mission on Foundational Literacy and Numeracy.



## UNIT-II

### ➤ **Benefits of education-Direct and Indirect benefits. Private and social benefits:**

It is universally accepted that there is a valid (though imperfect) analogy between the expenditures incurred on education and that incurred on other productive investments. This analogy (i.e., acceptance of education as an investment) naturally suggests that education, like other productive investments, must have (i) the returns, (ii) the beneficiaries to whom the returns may accrue, and also (iii) the method(s) to measure the returns to investments in education.

Educational expenditures give rise to a large variety of economic benefits. Broadly speaking, these benefits may be grouped into two: (a) the monetary benefits, and (b) the non-monetary benefits. Similarly, the beneficiaries of educational investments may also be grouped into two: (a) the private individuals, and (b) the society. The economists have developed various methods to measure the returns to education. These methods are: (a) 'the residual factor' in which education plays a crucial role. This is also called as 'the third factor', (b) 'cost-benefits' ratios, (c) a calculation of 'human capital' and (d) a discounting of the additional earnings of the educated over those of the uneducated. This is alternatively called also as the 'rate of return approach'.

Now we shall study in some detail about the various types of returns to education and also about its beneficiaries. We shall limit our study only to the fourth method of measuring the returns to education, i.e. 'the rate of return approach'. Hence, what follows below has been divided into three sub-sections:

- a) Returns to education,
- b) Beneficiaries of the returns to education, and
- c) Measuring the returns to education through 'the rate of return approach'.

### **The Benefits or Returns of Education**

It is already noted above that the contribution of education to human economic welfare may be grouped into the monetary and the non-monetary benefits. These benefits may be further classified as the direct benefits and the indirect benefits. Still further, these may be grouped in the private benefits and the social benefits of education. The 'indirect benefits' of education may also be called by another name of 'external economies' of education.

#### **1) Direct Benefits of Education**

The direct benefits of education are those benefits of education (or returns from education) which are realized directly by the students. We may group the direct benefits of education into the following three types:

- 1) Direct returns;
- 2) 'Financial option' returns; and
- 3) Non-Monetary returns.

**a) The Direct 'Financial Returns' of Education:**

The direct 'financial returns' or the monetary benefit of education is reflected in the higher life-time wages or salary earned by the persons having higher educational qualifications compared to those persons having relatively lower qualifications. Various empirical studies show that with the acquisition of additional education/qualifications, the lifetime monetary or wage-earnings of individuals go up. These studies have been conducted both for the developed and developing countries. These studies have shown that the levels of aggregate or total life-time wage-earnings of persons with different educational levels are different from each other. To put it simply, Economics of Education these studies have shown that there are remarkable differentials in the earnings of the persons having different levels of education. It is generally found that higher the level of one's education, higher is his / her earnings and vice-versa. Persons with lower levels of education have lower earnings. It may be noted that while estimating the earnings accruing due to education, the amount of education is measured in terms of either the completed number of years or the levels of schooling. It should also be noted that there are 'other factors' which have determining effects on the personal earnings. Some of these 'other factors' are: age, sex, race, innate ability, social class background, family wealth, social mobility, place of residence, branch of employment, occupation, on-the-job training, informal education home, non-formal education, ambitions, motivation, efforts taken for the search of information regarding jobs with better salary and with better scope of promotions, number of hours worked, family wealth, quality of schooling, father's occupation, etc. Many of these factors are positively correlated with education and also have impacts on one's earnings. Various studies have recognized the influence of these non-educational factors and further they have tried to make suitable 'adjustments' for these factors and refine their calculations for the additional earnings attributable to education. One may safely say that at least a part, perhaps the most significant part, of the additional earnings of the better educated persons is due to their additional education. The economists of education have suggested that education first raises one's marginal productivities which in turn raise their wage-earnings.

**b). Financial Option 'Return of Education:** We have seen that additional education gives rise to additional earnings. Such earning related benefits of education have been most talked about and measured benefits of education. But there are other benefits of education. We know that completion of a given level

of education (say, graduation) creates opens the 'option' to obtain still further education (e.g. master's degree, etc). One is normally not permitted to pursue higher degree without the completion of the corresponding lower degree. We also know that such further education will result in still further additional earnings for the concerned individuals. Any estimation of returns to a given level of education (but ignoring the option of any additional education and resultant additional earning) will result in gross under-estimation of returns to education. According to estimates made by Weisbrod, "the option value of high-school education increased the rate of return on high school cost from 14 to 17 percent, considering only the 'monetary' returns". B.A. Weisbrod pointed out that "the value of the option to pursue additional schooling depends upon (a) the probability of its being exercised and (b) the expected value if exercised". He further said that "if the option value of education has been overlooked by the parents as it has been by economists there would be a tendency toward under investment in education".

**c) Non-Monetary 'opportunity options':** In addition to the 'financial option' returns, there are numerous economic but non-market options that become available to the educated persons due to their acquisition of education. These will include the direct consumption value of learning per se, the opportunity to lead the 'full life', way-of-life options, on-the-job learning options, 'hedging' options, preparing one's own income-tax return, etc. Some of the other examples of indirect effects of education are: the relation between schooling and the savings behavior, effects of education on consumer behavior and also on the 'consumer efficiency', relation between the education and crime, relation between education and the allocation of women's time, education and fertility family-size, education's impact of child-care and health-care.

### **Indirect or External Benefits of Education**

Any investment in education gives rise to many benefits which are often not so visible and are indirect. Further, these benefits are not appropriate or captured by the parents and students making investments in one's schooling. Some such benefits of education accrue to 'other' individuals and the society at large. All such benefits (which accrue to other than those who actually make investments in education) are called as the 'external benefits' of education. It is necessary to identify and measure these external benefits. It will help us in determining the true rate of return of education. This in turn will help in attaining the 'allocative-efficiency' while making allocation of scarce economic resources between education sector and other sectors of the economy. Education system may give rise to some intended or unintended byproducts. One of the by-products of education system, particularly which of the elementary education, is the child care. This enables many mothers to perform other jobs, for example, to seek and to engage in productive paid work in the job-market.

In the absence of educational provision for the children, these mothers would have been forced to supervise their children themselves or to arrange for the baby-sitter. In fact, some mothers' earnings are made possible only due to the reason that children remain in school. Though difficult but it should not be impossible to measure the economic value of child-care services provided by education.

**Inter-generational benefits:** Education also brings some valuable benefit to children from the education of their parents by way of informal education at home, better help in school related home-work etc. Education is presumed to develop in the individuals various acceptable social values and behavior. It may inculcate in them the qualities of flexibility, adaptability, cooperation etc. The neighbors benefit from these good qualities of the educated persons staying in their neighborhood. This may be called as the neighborhood effects/ benefits of education. The qualities that make the individuals good neighbors also make good colleagues at the work place. It creates a positive and conducive environment in the factories and other work places which in turn may be reflected in the higher productivity of the factory as a whole. This may be called as the employment related external benefits of the education. Further, education creates some benefits also for the society in general. Education is supposed to make persons more law abiding. It is presumed that educated persons will have lower tendency of indulging in criminal and unlawful activities. This will be reflected in lower requirements for law enforcement which in turn will lead to avoidance, at least lowering, of the costs of law enforcement. This type of social benefits of education may be called as the 'cost-reduction' benefits of education. There are other examples also of the social benefits. Education is presumed to promote 'equality' of opportunities in the fields of employment, various other economic and social spheres. Thus education promotes goals of socio-economic goal of equality. Education helps in improving the communication of information, functioning of political democracy. Higher education promotes research, innovations, inventions etc. In fact these are the 'joint products' of education. The national and the international communities reap the benefits of research etc.

➤ **Problems Involved in Measuring Returns Form Investment in Education:**

**Introduction:**

In all the modern states, education forms an important activity of the people. In all the educational systems, there is an attempt to forecast the future educational requirements of the economy. In that sense, all educational systems are planned. Of the three the rate of return approach is considered to be technical in nature. We are discussing here the rate of return and its measurement.

**The Investment or Rate-of-Return Method:**

It has been established now expenditure on education is an important aspect of the investment in human capital. The rate-of-return first suggest the planners to argue a case for the investment in education.

**The Costs and Benefits:**

The estimation of the rate of return required information on the costs and benefits of education. The unit cost estimate are generally used in these studies. If the total costs of education including the opportunity and social costs are taken into consideration.

Generally the information on costs, and benefits of education is not readily available from secondary sources, particularly in the developing countries. Therefore, researchers and the planners conduct sample surveys to estimate the costs and benefits and later the data are used to estimate the rates-of-return.

**Rate-of-Return and Labour Markets:**

The rates-of-return on education do reflect the shortages or surpluses of the graduates in labour market. For instance, a high rate of return on a particular type of education will attract more enrolment into that category and this will reflect in the labour market. It also suggests whether such a trend in the demand of a particular category of education is rational or irrational.

However, the method of calculating the rates needs the knowledge of a little bit of arithmetic. The calculation of this requires the following steps.

**The Method of Calculating the Rate-of-Return:**

People invest a part of their income on education. In a way it is an investment in themselves. They incur some costs in the present and can generate equivalent or greater returns in the future.

Economists like Bowen, Bowman and others have narrated the various types of costs and benefits of education which may help the planner to overcome certain problems. The studies of lee Hansen, Becker, Nalla Gounden and others have paved the way for the easy estimation of the rates-of-return.

**Precautions in the Measurement of Rate-of-Return:**

The rate of return study requires information on costs and benefits. The benefits of education are the life long earnings

In the case of the estimation of private (personal) costs of education, a careful examination of the expenditure habits of the students is needed.

Therefore, the total resources cost of education must necessarily contain the following three components.

- 1) Institutional or school related costs.
- 2) Student or private (personal) cost, and
- 3) Opportunity costs or earnings fore gone.

The sum of the three gives the total resources cost and the last two items explain the real private cost.

**Capital Cost:**

The problem in education costing is generally associated with the treatment of capital costs and recurrent costs which are considered to be the important component of institutional cost. A large amount of money is spent on construction of buildings, acquisition of land, equipment, furniture and books, etc. every year. But this treatment violates the theoretical aspect of capital cost.

**Recurrent Cost:**

Careful examination in the selection of items under this head essential. These costs can be divided into divisible and non-divisible.

In most of the cost analysis studies only the financial costs to the public budget are estimated.

In the unit cost analysis, the scholarships, free ships and other student related non-teaching recurrent costs can also be estimated per unit chosen.

**Earnings Foregone Vs. Cost of Food:**

The opportunity cost of students time is generally traded as the value of opportunities of income foregone by the students while they are in the educational institutions.

There is a very interesting discussion on the inclusion of earnings foregone in the cost of education by lord vaizey and Blaug respectively in their studies on economics of education.

But in the case of school education the question of earning foregone does not arise since school education in India is free and compulsory up to the age 14.

Therefore, we can simply ignore the controversy and estimate the total resource cost by taking into account the cost of food as an item of total resource cost.

The stream is negative during years of school going age and positive during years of employment.

There are some practical problems in the calculation of the rates-of-return on education. It is very often difficult to obtain the social benefits of education.

The stock of capital is the stock of buildings, equipment, books and other capital items at a point in time. These items are subject to depreciation and need replacement after some time. However, in the developing countries, non-availability of financial statistics relating to the value of capital is the main limitation.

The expenditure on books, laboratory equipment, etc., is generally treated as recurring non-divisible cost. But it should be treated as capital costs as the books, laboratory, etc.

### **Conclusion:**

Rate of return method is followed to determine the desirability of selecting a project. Information on costs and benefits is obtained to estimate returns. The method can be used with some precautions.

## ➤ **Education and Labour Market:**

### **The effect of education on the labour market:**

Rate of participation division of labour market, mobility of production is very significant. Education effects the composition of labour force as the adult worker replaces child labour and in more educated workers replaces the less educated worker. It also effects industrial and occupational distribution effects mobility of labour among different occupations and geographical areas.

Another indirect and almost invisible effect in the labour market is through the development and creation of certain kinds of attitudes towards life. An important characteristic of education is that educational institutions themselves employ a large proportion of their own products and in this sense they influence the supply as well as the demand for education. Thus for the labour market the output of the education system is as important as its inputs i.e. teachers and students. Moreover there will be rise in the value (real estate, land and buildings in the vicinity neighbourhood) of educational institutions, another important impact of education is growth of trades like book production and book distribution and the more intensive development of the media of mass communication. For eg: Radio, T.V News papers.

By promoting division of labour specialization, education brings about an optimum combination of factors of production. In many public or private undertakings, today we find specialists dealing with accounts, auditing, sales, advertising, production, supervision and management, just as we find specialists

within each group or line of economic activity. This is situation that would be inconceivable (can't minimum age) were it not for the wide spread influence of education.

Among the indirect effects of education there are few important items are:

- 1) Education effects propensity to save. Propensity to save increases with every level of education though it can't be said that saving is due to education perse.
- 2) The effects of education on the size of a family is also important.

Diverse theoretical frameworks, ranging from Marxist to neo-classical recognize the contribution of education and skills (as a form of congealed labour as capital) to growth. Human capital theories, which became prominent since the major contributions of shullz and Becker, and more recently the recognition of the role of the knowledge sector to growth, have, in the form of the new and endogenous theories of economic growth.

Human capital includes both formal learning (education and training) as well as informal on-the-job training and learning.

Marxist theories explain of the specific in skills in the context of the specific dynamics of capitalism and the motivations of capital.

From a theoretical point of view, it has been argued that Braver man:

- a) Gave too much weight to the capitalists in determining the labour process and too little to technology and to worker resistance;
- b) Associated deskilling with the erosion of craft control;
- c) In taking an excessively broad sweep of the de-skilling argument.

### **Skills and the Emerging Labour Market: Some Issues:**

- a) Objectively defined competencies;
- b) Control over conception and execution;
- c) Socially defined occupational status.

#### **1) Job Hierarchies and Skill:**

Job hierarchies are part and parcel of the economic structure, though only a part of it displays the characteristics of a modern capital system.

#### **2) Skill Hierarchies:**

The skill hierarchies that are experienced in the Indian labour market have little to do with the skill of the worker or the skill content of the job but more to do with the type of work that is to be performed and the category of person with the skill attribute.

#### **3) Gender and Skills:**

The social construction of skills, discussed above, is most obvious in the context of women's job. Skills are not socially natural.



**The Indian Labour Market:**

The Indian labour market is constituted by an undeveloped and differentiated economic structure, which continues to be dominated by agriculture.

**Dynamics of Growth and the Labour Market:**

Not surprisingly, the Indian economy does not fit into a construct of a developed economy in which formal industry and services have an overwhelming share in both employment and output.

**Education, Skills and the Labour Market:**

The education and skill characteristics of the Indian economy reflect a low level of development and are not in line with the rapidly industrializing developing economies.

**1) Education:**

We have enough evidence to show that access to education is massively skewed in India, thereby relegating low educated workers to low paid jobs.

**2) Formal Skills:**

We can describe formal skills as those which are developed in a structured and standardized manner and, more importantly where the training outcomes are measured assessed according to some objective parameters.

**3) Informal Skills:**

The lack of formal education does not stop workers from acquiring skills. Although one may expect the lack of basic literacy and numeracy to be a constraint.

**Implication for Policy:**

- Research on returns to education and training in India is hampered by the lack of adequate data.
- Both private and social returns on different levels and types of education are high.
- The fact that the return on education is perceived to be high in India is also corroborated by the pattern of demand and supply of private-for-profit.
- There is a view that the provision of skills should be market-linked and demand-led.

## ➤ **Effects of Educational Financing on Income Distribution:**

### **Introduction:**

There is an intimate relationship between financing of education and income distribution. At the first and second levels, primary and secondary, the main thrust should be to consolidate quality. So that students entering from, relatively weaker socio-economic backgrounds, receive better education more over the emphasis should also be tied on coverage.

There is an inverse relation between, selectively and relaxation of students of admission. Any marginal increase the private cost of education is that the rate of return of education.

It is significant to note that, in the universal declaration of human rights adopted by the general assembly of UN on 10<sup>th</sup> December 1948 the right to educate reorganized to the fundamental right. But the right to higher education, has been declared to be a qualified. Right subject to merit on the part of those who seek higher education.

The principle of equity requires that government subsidization of education should be for granted in respect of primary and secondary levels, there is respect of higher education. To allocate proportionately more resources to primary and to some external secondary education than to higher education.

As high rates of return to education suggest higher levels of income inequalities, rapid expansion of the education system may reduce income inequalities through decline in rates of return to education.

It is also argued here that since high income groups benefit from all levels of education, education investments targeted specifically towards the poor may be preferred to overall investment in education.

### **1) Rates of Return to Education and Income Distribution:**

#### **a) Analytical Framework:**

That education influences income distribution in an economy is well researched. The ways in which it effects the distribution are varied. As psacharopoulos and wood hall summarized.

- 1) Education may raise the overall level of income and thus reduce the absolute level of poverty.
- 2) It may change the dispersion of income.
- 3) It may open up new opportunities for the children of the poor and thus act as a vehicle for social mobility.
- 4) Alternatively, if participation is confined to the children of the rich, education may simply transmit intergenerational inequality.
- 5) If certain groups (for example male, city dwellers, or certain ethnic groups) obtain higher financial rewards from their education than other groups (such as females, inhabitants of rural areas, and ethnic minorities), then education may increase income inequalities.

- 6) The pattern of financing, in particular the extent of public subsidies for education, may redistribute income from those who are taxed to those who benefit from subsidies.
- 7) Education may interact with fertility, mortality, health, and other aspects of development that effect income distribution.

The effects of education on income distribution depend, inter alia, upon the wage structure in the economy and the public subsidies for education. Rate of return to education.

## 2) Financing Elementary Education in India:

Long before the formulation of the United Nations Educational, Scientific and Cultural Organization (UNESCO) resolutions and the emergence of interest by international agencies like the world Bank, the United Nations Children’s Fund (UNICEF) and the United Nations Development Programme (UNDP), the government of India had recognized the importance of elementary education and had made a resolve in the constitution of India as long ago as in 1950. The commencement of the constitution for free and compulsory education for all children until they complete the age of 14 years (articles 45).

## 3) Allocation of resources:

There are three important aspects relating to allocation of resources to education:

- a) Allocation of resources to education vis-à-vis other sectors, i.e. inter-sectoral allocation,
- b) Intra-sectoral allocation of resources within education i.e. allocation to different levels, and
- c) Inter-functional allocation of resources to different activities such as teaching, administrative, and welfare.

**Table-1**

**Share of Education in GDP in India: (percent)**

<b>Year</b>	<b>% of GDP</b>
1950-51	1.2
1960-61	2.5
1970-71	3.1
1980-81	2.9
1990-91	4.9
1996-97	3.8

**Table-2****Share of Education in State Domestic Product (SDP) by States in India (percent)**

State	1960-61	1980-81	1990-91			
Andhra Pradesh	2.3	3.8	4.6			
Assam	2.2	3.6	6.0			
Bihar	2.3	3.6	6.3			
Karnataka	2.6	3.4	4.3			
Kerala	4.2	5.7	6.5			
Madhya Pradesh	2.3	3.3	5.0			
Maharashtra	3.0	3.5	3.2			
Utter Pradesh	2.2	3.1	4.6			

**Table-3****Percentage of education expenditure on education to total budget:**

Year	State government	Union government	All India
1967-68	19.8	1.6	11.9
1970-71	21.4	2.8	14.1
1980-81	20.9	2.0	12.8
1990-91	20.8	2.2	10.6
1995-96	19.5	3.1	10.9

**4) Conclusion:**

The constitutional directive of UEE (Universalisation of Elementary Education) in India is still elusive, even four decades after the expiry of the deadline prescribed by the constitution.

The rationale for financing of education is clear. The need to enhance the levels of funding elementary education is obvious.

The need for strengthening the resource base for education is obvious. However, the choices seem to be limited as far as school education is concerned. There is need to improve the overall allocation pattern in financing education in India.

India, a resource scare developing economy has been making a huge investment in higher education. It is increasingly viewed that this is possible only at the cost of elementary and adult education.

➤ **Effects of Education, Ability and Family Background on Earnings, Poverty and Income Distribution.**

**Introduction:**

Vaizey studied that “Expenditure on Education payes” by the virtue of the fact that the indirect benefits of education so great that its direct benefit and not necessary the most important aspect. This point of view widely shared by exes those economists who is analyzing the returns to educational investment dispared of over equalibring the indirect benefits of education the following are the important indirect benefits of education that have been soted in the literature.

- a) The current spillover income gains to persons other than those, who have reserved extra education.
- b) The spillover income gains to subsequent generations from a better educated, present generation.
- c) The supply of environment mechanism for discovering and conducting potential talents.
- d) The means of assuming occupational flexibility of labour force.
- e) The permission of an environment the stimulates R&D technology.
- f) The supply of certain measures of social control by the common cultural heritage.
- g) It is argued that education is a public good, satisfy a social want.

The peculare characteristic of public good is that the benefits are indiscriminate is the double sence that no consume can be excluded from enjoying the benefits and that consumption by one person reduces to consumption of others.

Hence public goods cannot be priced by a market mechanism, it meaning is viewed as public good it is meaning less to calculate, the rate of return whether private or social. However education is not a pure public good because, it is economic benefits are largely personal and divisible i.e. below the statituary leaving age it is possible to buy more education and above the statituary age in higher education are relieved it followers that there is nothing the nature of education as an economic service that prevents meaningful comparison of costs and benefits.

We can had combined benefits of education, to those who have paid for it nor it is possible to exclude less educated from the spillover benefits of the education. We can’t regard it economic services too education therefore represents what might be called “Quasi-public goods”. But the fact remains that besides the public action education should be privately financed.

**Family Background:**

The transition to a market system has affected inequality along a number of dimensions. One of the most interesting but least studied is the transition’s effect on intergenerational mobility.

A positive correlation between parental and children's educational attainment is an almost universal finding.

Theoretical models of educational choice in a family framework have been suggested in Altonji and Dunn (1996).

Are examples of recent empirical studies which confirm that schooling decisions and outcomes in developed market economies are affected by parental education and family income.

However, the literature is silent on parental effects under communism; very little is known also about intergenerational transmission of human capital in the transition context.

There are several channels for intergenerational links. More educated parents are likely to be more able, and children might inherit their ability. Educated parents are more likely to provide a learning-friendly environment, to enroll children in better schools, and to encourage post-secondary schooling, both explicitly and by their own example.

“Importance of long-term family influences on educational attainment has been confirmed in many different environments including those with free tuition and no restrictions on entry”

Increasing (respectively, decreasing) the impact of parental education or some specific demographic characteristic on children's education contributes to a widening (respectively, narrowing) inequality of distribution of human capital across social groups.

Find that college enrollment of different ethnic groups responded differently to rising returns to college education, and the differences are associated with long-run family background factors.

Find a significant effect of interaction between race and socioeconomic status on college enrollment.

Conditional on family background, are schooling decisions and outcomes of ethnic minorities substantially different from that of majority population? How strong were the family background effects on schooling outcomes under communism and how have they evolved during the transition?

### **Poverty and Income Distribution:**

The World Bank defines poverty as the inability of people to attain a minimum standard of living.

The most obvious measure of living standards is an individual's (or household's) real income or expenditure (with an allowance made for output produced for own consumption). Measures of living standards based on per capita income.

We discuss later the attempt by the United Nations Development Programme (UNDP) to construct a Human Poverty Index and a Human Development Index, which take some of these factors into account.

The linkages between education and poverty can be understood in two ways:

- a) Investment in education as a poverty reduction strategy which can enhance the skills and productivity among poor households.
- b) Poverty as a constraints to educational achievement both at the macro-level (poor countries generally have lower levels of enrolment) and the micro-levels (children of poor households receive less education)

A gender perspective on poverty and education highlights several possible strategies to tackle female disadvantage. These include:

- Reducing opportunity costs to girls' schooling, i.e. through child care provision or investment in labour saving infrastructure, or flexible or non-formal educational provision;
- Incentives and scholarships for girls' enrolment to reduce the direct costs of girls' schooling;
- Educational initiatives out side of the schooling system, such as adult education and literacy programmes, for those who 'misses out';
- Improving the quality of education and tackling gender bias in the curriculum;

### ➤ **Educational and Employment**

#### **Introduction:**

The central government's national sample survey takes a sample of the population every year and asks it all kinds of questions. In the 61<sup>st</sup> round, held in 2004-05, NSS asked questions about employment, education earnings. Team lease, the placement firm, got indices, the data processing firm, to tabulate the results. According to them, 3.1 percent of the adult population was unemployed.

The more educated the people were, the higher was the rate of unemployment. Amongst those who did not finish primary school, it was 1.5 percent. Amongst those who completed primary, secondary and college education, it was 2.2, 6.1 and 10.2 percent respectively. Dropout rates are 8, 23, and 29 percent in primary schools, secondary schools and colleges respectively.

Unemployment amongst the educated is also not so dire. In the 21-25 age group, only 1.3 percent of illiterates are unemployed.

The unemployment rate for primary school graduates in that age group is 2.2 percent. For secondary school graduates, it is 11.2 percent; and for university graduates, 31.7 percent. Almost a third of graduates are unemployed in their early years.

By the time they reach ages 45-50 however, the picture is completely changed. In that age group, unemployment is 0.3 percent amongst illiterates, 0.4 percent amongst primary school graduates, 1.3 percent amongst secondary school graduates and 0.4 percent amongst university graduates. By their forties, almost all find some job or other, whatever their education.

If there are jobs for graduates in their forties, why cannot graduates in their 20s take them? Of course they can; it is just that they do not. Instead, they wait around for a better job.

The reason why more educated people have higher unemployment is that they can stay unemployed waiting for a good job; they have got parents or fathers-in-law to support them while they wait.

The converse is also true. Poor people take or keep their children out of school because they cannot afford to educate them; they need their children's earnings.

Whereas an unskilled labourer can get work almost anywhere, a primary school graduate may be able to work in a shop or a godown; such jobs are not easy to come every where.

According to the NGO, Pratham, 43 percent of schoolchildren can read a story, 17 percent can read a paragraph, 15 percent can read a word. 14 percent can read a letter-and 11percent can read nothing at all. And 31 percent can divide, 24 percent can subtract, 27 percent can recognize a number- and 19 percent can do nothing.

The economics of education is examined to see what practical guidelines have emerged from recent research, particularly on the question of the economic value of education,

### **1) The Employment Problem:**

A review of various definitions, and evidence of unemployment, or underemployment, shows that the "employment problem" in developing countries is really a series of overlapping problems, including visible unemployed young people, and the low incomes, and hence poverty, of certain groups of employed workers.

- a) The allocation of educational resources.
- b) The economic value of education.
- c) Educational reforms which may alleviate educated unemployment.
- d) Labour market reforms.

### **2) WEP (World Employment Programme) Research: A critical Review:**

- i. Income distribution and employment.
- ii. Technology and employment.
- iii. Rural employment.

To the changing characteristics of employment.

- i. The preparation of quantitative manpower plans as a guide for educational planning;



- ii. The development of vocational education;
- iii. Adult education and accelerated trading schemes for adult workers;
- iv. Non-formal education;
- v. Some attempts at curriculum reform and counseling.

Any education strategy which attempts to combat poverty must simultaneously attack problems of;

- a) Lack of work;
- b) Nutrition/hygiene;
- c) Lack of community awareness;
- d) Traditional values which impeded change.

In particular, five topics are singled out for future research;

- 1) Private and social profitability by kind of field.
- 2) The financing of education.
- 3) Institutional factors which determine low pay,
- 4) Increasing the flow of information.
- 5) Curriculum reform and greater flexibility.
- a) The relationship between education and worker productivity.
- b) Training people for particular jobs.
- c) The use of education in selection for employment.
- d) Alternative method of selecting workers for employment.
- e) Attitudes to work and career aspirations.
- f) Education and income distribution.
- g) Adult education and work
- h) The growing problem of youth unemployment.
- i) Steps towards a solution.

➤ **Economic of Educational Planning in Developing Countries with Special Emphasis on India-Manpower Requirements Approach.**

**Introduction:**

The history of planning is deeply rooted in human history. It is well remembered that nearly 2500 years ago Plato mentioned about planning in his 'Republic'. Intellectuals and Thinkers have always been arguing for state intervention for the removal of inequalities in the society and the misery attached to it. Later this has resulted in a systematic socio-economic planning during the 20<sup>th</sup> century. Economists and educationists during this period have also indicated the relation between education and economy.

It was developed in the western countries during the 19<sup>th</sup> century whenever there was some sort of planning in building schools and training teachers.

In fact the first systematic attempt at educational planning took place in 1923, the year of the first five-year plan in USSR. After the World War II the countries, which were involved in the reconstructions of their economies felt serious manpower shortages.

It is said that, "a deliberate and conscious choice of educational priorities by a central agency", can be called as educational planning. P.H. Coombs said that educational planning.

**The need for Educational Planning:**

The need for planning arose with the intensified complexities of modern technological society. Problems such as population, manpower needs ecology, decreasing natural resources and haphazard application of scientific development.

Therefore, the need is felt to integrate educational activities under educational planning which will in turn is related with the overall planning of a country.

**Format of Planning:**

A format of planning activities is essential to overcome the inadequacies of planning.

**1) Educational Planning in General Terms:**

Development of sound theoretical background to draw up regional and school district plans in broad quantitative terms.

**2) Education Planning in Physical Terms:**

Planning of all physical dimensions such as school building and their proper setting, establishing environmental criteria for learning activities.

**3) Educational Planning in Social Terms;**

Statement of peoples wants, needs and aspirations and linking them with curriculum and instructional strategies.

#### **4) Educational Planning in Administrative Terms:**

Development of control and decision making rules and procedures, inventory control, decentralization and delegation of powers.

#### **5) Educational Planning in Economic Terms:**

Laying out the financial requirements and relating the economic processes with manpower needs and skills.

#### **Educational Planning as a Part of Economic Planning:**

Educational planning is not independent activity. It is a part of an overall planning of a century that provides signals for manpower requirements of the country. The development of education on four different phases can be considered here. They are the,

- 1) Reconstruction phase,
- 2) The manpower shortage phase,
- 3) The rampant expansion phase, and
- 4) The innovation phase.

The educational planning both in the advanced as well as in the underdeveloped countries. They are:

- 1) The demand for education approach.
- 2) The rate-of-return approach, and
- 3) The manpower requirements approach.

The demand for education approach is a consumption approach to education. Robbins has followed the social demand approach in U.K. for the Education Committee in 1960s.

The rate-of-return approach has not been used as an exclusive methodology for the planning of an education system.

An excellent review of the studies has been given by Blaug in an article in the Manchester school in 1965 and the World Bank provides up to data now.

In the manpower forecasting approach, the manpower required in future with different skills with reference to a particular GNP is estimated. H.S. Parnes has explained the procedure of estimating it in three steps.

- a) An analysis of the existing situation which includes education,
- b) Place the targets for future should be fixed.
- c) The forecasting is made based on the recent experiences.

The study has influence the planning strategies of several developing countries.

#### **Educational Strategies for India:**

A strategy, in fact is an innovation. The innovation must take into consideration the specific conditions of a country. The extension programmes, teaching of science and agriculture labour in building

roads, bridge, etc. However no nation can afford to neglect its industry in the 21<sup>st</sup> century. The important problem is the illiterate population. Therefore, the non-formal system of education. Finally, the people must be convinced psychologically that the development is not only desirable but also possible.

As a matter of fact, the UNESCO has denounced such common and universal strategies for education. It has suggested that the countries particularly the less developed should develop their own strategies matching their situation, needs and possibilities.

In 1972, J.P. Naik, member secretary of the education commission, 1964-66 has suggested a strategy for the break-through in higher education in India.

- 1) Freezing of grant-in-aid to private colleges by the year 1973-74,
- 2) Recruitment of students to various cadres in the public sector at the end of their secondary stage,
- 3) Employment of unemployed graduates as teachers at the primary and secondary stages.
- 4) A considerable increase in the fees amount so that the college can maintain themselves without aid and,
- 5) Reservation of sufficient amount of seats for weaker sections in all educational institutions.

The National Policy of Education 1986 and the Programme of Action 1992 have identified several schemes including the district specific DPEP district primary education programme, educational loans, quality assessment, staff development, revision of syllabus, etc., to rejuvenate the system of education in India.

### **Conclusion:**

Planning as a discipline is necessary to organize things in an efficient way. There is need for planning for education also. Educated labour is a prerequisite for enhancing productivity. Universal education goal is the order of the day. It is through planning only we can organize educational activities in an efficient way.

## **The Manpower Requirements Approach (MRA)**

**Introduction:** Human Resources constitutes both on the demand side as well as the supply side of production of goods and services, in any economy. On the demand side, Human Beings consume produced goods and services leading towards poverty alleviation, health improvement and enhancement of educational level and so on and so forth. By that they generate better living conditions.

**HRP at Macro Level:** Manpower Planning is largely concerned with labour supply. Employment planning is largely concerned with the demand for jobs than with the supply side of the employment equation. HRP is interested to know the number of people coming onto the labour market, their education and training levels, age etc. Therefore, Manpower Planning is becoming a critical issue for developing countries like India. Therefore, Manpower Planning is becoming a critical issue for developing countries like India.

Manpower planning cannot be carried out in isolation from macro-economic phenomena. The part of macro-economics interested in creating jobs must take care of who are for the jobs in terms of the skill, sex and age base of the population hand in hand. The reason is that, determinants of economic growth are related to the characteristics of the labour force in a very strong way in terms of its skill, education, flexibility so on and so forth. Manpower is the primary resource of an economy. Without manpower resources, physical and financial and all other resources cannot be put into use. However, macro level manpower planning is uncontrollable and micro level manpower planning is controllable.

The dominant model of manpower planning is known as the manpower-requirements approach (Youdi, 1985). It first came to widespread prominence in the Organization for Economic Co-operation and Development's (OECD) Mediterranean Regional Project (MRP) in the early 1960s. The three major steps in manpower forecasting are (a) projecting the demand for educated manpower (b) projecting the supply of educated manpower and (c) balancing supply and demand.

### **(a) Projecting the demand for educated manpower**

There are five main steps to assess the number of workers by educational level over time by following the MRP methodology

Note: i=economic sector, j=occupation, k=educational level, a=age, s=sex;

1. Estimating the future level of GDP or output (X)

2. Estimating the structural transformation of the economy as expressed by the distribution of output by economic sector ( $X_i/X$ ) as it evolves over time.
3. Estimating labour productivity by economic sector ( $L_i/X_i$ ) and its evolution over time.
4. Estimating the occupational structure of the labour force within economic sectors and its evolution over time ( $L_{ij}/L_i$ ).
5. Estimating the educational structure of the labour force in given occupations within economic sectors over time ( $L_{ijk}/L_{ij}$ ).

Hence the demand function for educated labour looks something like:

$$LD_{ijk} = f(X, X_i/X, L_i/X_i, L_{ij}/L_i, L_{ijk}/L_{ij}) \text{----- (1)}$$

**(b) Projecting the supply of educated manpower**

There are four basic steps:

1. Estimating the population  $P_{a,s,k}$  by age, sex and educational level.
2. Assessing the number of graduates, dropouts by age, sex and educational level,  $E_{a,s,k}$ .
3. Finding the labour force participants (LS) by applying age, sex, educational level, labour force participation rates to the number of graduates,  $l_{a,s,k}$ .
4. Estimating the occupational supply based on the labour supply by education level possibly using an education to occupation matrix  $M_{k,j}$

Hence the supply function for educated labour looks something like:

$$LS_{j,k} = f(P_{a,s,k}, E_{a,s,k}, l_{a,s,k}, M_{k,j}) \dots (2)$$

**(c) Balancing labour supply to demand**

According to Youdi, (1985), this adjustment is normally done in two ways. First, if  $LD_{j,k}$  is very different from  $LS_{j,k}$ , due to poor data quality and not backed up by a proper reasoning, the manpower planner will tend to use an ad hoc adjustment mechanism in revising one or more of the key assumptions.

For example, too much optimism on labour productivity could reduce the demand for labour. On the contrary too much optimism on labour force participation rates could increase the supply of labour. To deal with such paradoxical situations, it is necessary to reconcile labour supply and demand.

### **The critics of MRA**

Psacharopoulos and Blaug (1970) and Ahamad and Blaug (1973), criticized MRA by evaluating ten manpower-forecasting studies in different countries. They have identified, considerable forecasting errors with projections of employment by occupation using the MRP (Mediterranean Regional Project) or manpower requirements approach methodology.

The errors were primarily due to the fixed-coefficients model and assumed labour-productivity growth as mentioned in equation (1).

Forecasting errors go parallel with the time-horizon of the forecast.

There was no evidence linking manpower forecasts to any real educational policy decision.

In some cases manpower forecasts corroborated to what turned out to be a wrong decision. Therefore, forecasting does not improve policy decisions always. One of the most crucial assumption according to Youdi in MRP-type manpower-forecasting methodology is that the elasticity of substitution between different kinds of labour is equal to (or near) zero. The elasticity of substitution is:

$$e = - d \log (Lk1/Lk2) / d \log (Wk1/Wk2)$$

Where k1 and K2 are two kinds of labour, say university graduates or post graduates, or even mechanical or electrical engineers, and W is the level of their wages determined during the forecast period. Yet, it is clear that the elasticity of substitution cannot be zero. It would vary depending upon the degree of substitutability of one type of job for another. Again this is also highly dependent on the amount of training or additional education required to substitute one job with other.

**Summary** Macro level manpower planning is an important objective of the Government for long-term economic growth. However, the art of manpower planning is in a mess. After decades of manpower forecasting practices, it has been suffering from repeated and sustained criticism. The planners practicing the art of manpower planning might rightly be confused with its mandate. The methodology and overall usefulness of manpower planning is also questionable. Therefore, Manpower Planning at its core is suffering from the problem of mismatch between labour supply and demand resulting in unemployment.

## UNIT-III

### ➤ **Health Dimensions of Development;**

#### **Introduction:**

Health is a comprehensive concept. It is not merely a disease-free physical condition of human being. Since 1948, world health as a state of complete physical, psychological, and social well-being and not simply the absence of disease and infirmity.

Life expectancy at birth (LEB) rose dramatically in both developed and developing countries. In India, for example, LEB increased from about 37 years in 1951 to 64 years in 2001.

Robert W. Fogel, the economics Nobel laureate of 1993, has explained these long-period trends through the synergy between biomedical and economic development.

#### **Development: Meaning and Significance in the Context of Health:**

Development is a very loaded value word. It implies change that is considered desirable in a society.

The elements of the set of goals of a modern economy might include, among other things, the following:

- Increase in real per capita income (economic growth),
- Fairer distribution of income (socio-economic justice).
- Improvement in health and nutritional status,
- Increase in basic freedoms, and
- Improvement in quality of environment

Quality of life refers to the state of living a long, healthy, well-informed and meaningful life with basic freedoms. Development of the health sector not only promotes human longevity, but also enhances the physical and psychological well-being of people.

#### **What is Health Economics?**

Health economics originated through the 1960s as an interesting branch of applied welfare economics. Its tremendous policy significance immediately caught the attention of world health organization (WHO), and many governmental and non-governmental agencies and institutions.

Those that use monetary amounts based on the individuals' willingness to pay (WTP) or willingness to accept (WTA), and that use quality-adjusted life-years (QALYs) based on utility measurement.

#### **Health and Development:**



There is a reciprocal relationship between health services and socioeconomic development. Good health is not only outcome of socioeconomic development. In the following two sub-sections, we explore influences in some detail.

### **1) How Health Promotes Development?:**

It is well-established that investment in health is justified on purely economic grounds.

- i. It reduces production due to caused by worker illness.
- ii. It reduces the losses due to morbidity and mortality.
- iii. It permits the use of natural resources that had been totally or nearly inaccessible because of disease.
- iv. It saves resources for alternative uses, which would otherwise have to be spent on treating illness.
- v. It increases the enrolment of children in school and makes them better able to learn.
- vi. It makes life more satisfying by contributing to better quality of life.
- vii. The social justice dimension of health sector development is prominent.

#### **a) Increase in Productivity:**

Disease and weakness compromise with the working capacity of an individual. It has been estimated that prevention of deformity can enable a leper in India to increase his annual earning by about Rs. 10,000.

As early as in 1936, J.A. Sinton calculated that malaria cause a loss of Rs. 1,000 crores per annum in India.

#### **b) Decrease in loss Due to Mortality and Morbidity:**

These losses are of three types; cost of death (the value of each life saved), cost of morbidity (loss of work days and work efficiency due to sickness) and cost of treatment (money spent on purchase of drugs; medical services, transport to hospital, etc.).

#### **c) Improved Utilization of Natural Resources:**

Some health investments raise productivity of land. Areas previously blighted by mosquitoes became alternative for settlement.

#### **d) Benefits in the Next Generation:**

We all know that like education, health is an investment into the future.

Poor health and nutrition reduce the gains from schooling in three important areas; enrolment, ability to learn and participation by girls.

#### **e) Reduced Costs of Medical Care:**

Health care expenditure that reduces the incidence of disease can produce big savings in treatment costs. This is so, because the individuals, with AIDS are typically more prone to pneumonia, diarrhea and tuberculosis.

**f) Better Quality of Life:**

The major social effect of health services is to improve the quality of life. Two of the three determinants of the physical quality of life index, relate to health, viz. infant mortality rate (IMR) and longevity life, the third being the literacy rate.

**g) Promotion of Social Justice:**

Health development contributes to the goal of reducing poverty. Malnourishment and the legacy of past illness imply that they are more likely to fall ill and slower to recover, especially as they have little access to health care.

**h) How Development Influences Health?**

Health and health services cannot but be desirable.

- i. Effects upon health services;
- ii. Demographic effects;
- iii. Effect of unsustainable development;

The main causes of environmental degradation include;

- Extent and nature of poverty
- Wasteful consumption patterns of the very affluent
- Short-term, rather than long-term, perspective of development.

**Conclusion:**

Health economics is a branch of applied welfare economics. Its aim is to organize, allocate and manage the health service resources with optimum efficiency and equity in preventive. The detrimental effects of poor health on individuals and households, and on the use of resources suggest that better health leads to better economic performance at all levels.

At the national level an analysis was made in the World Bank (1993) Report to find out the relationship between the growth in income per capita from 1960 to 1990 and an indicator of initial health status (the CMR – child mortality rate) in about 70 countries.

Economic development leads to expansion of the health services. Monitor the Human Development Index (HDI), developed by the United Nations Development programme (UNDP), which is a comprehensive measure of the state of human conditions based upon life expectancy, child mortality, literacy, income, gender disparity and freedom of people.

➤ **Determinants of Health Poverty Malnutrition and Environmental Issues:**

**Introduction:**

Investment in health is a virtue in itself. It is one of the most significant ways of investing in human beings. In the previous we have argued out several justifications for prioritizing health investment.

For example, investments in different intra-sector activities, like the communicable disease, urban health system and health care of the poor will have different impacts.

Apart from investment, several other factor influence the health status. Improvement in health is the result of the interplay of a number of explanatory factors. Income, nutrition, sanitation, education, environment and health care are some of the most frequently components affecting health status of individuals.

Thus we can express some measure of the determining factors in terms of the following functional relationship;

$$Hs = f(Y, P, Hc, N, S, E, Q)$$

Where Hs = health status of individuals,

Y = income

P = reduction in poverty,

Hc = health care,

N = nutrition status,

S = sanitation conditions,

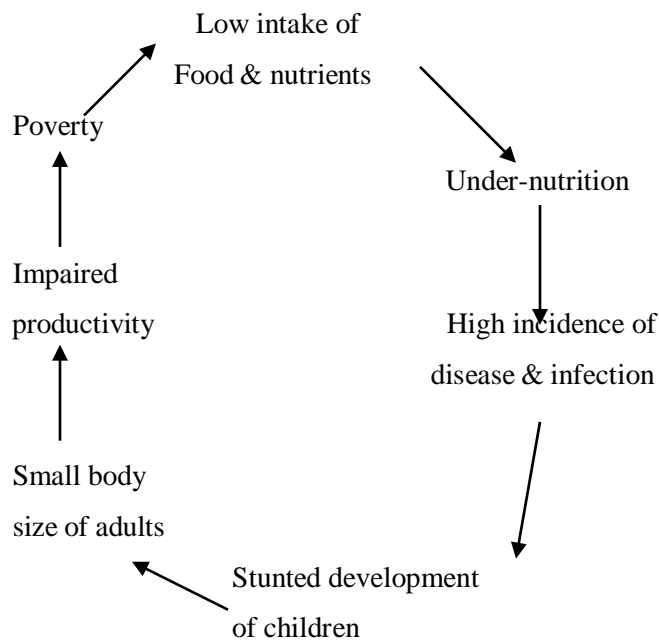
E = education and

Q = environment quality.

**Poverty as a Determinant of Health Status:**

Poverty refers to the lack of means at the disposal of a household to achieve minimum acceptable standards of living, in terms of food intake, housing and hygiene, education and health.

This index is defined as the percentage of the population that has an income below the absolute poverty line.



**Figure:** The various cycles of poverty and under-nutrition.

Countries such as China and Sri Lanka perform much better than would be expected for countries in their income groups, china and Sri Lanka, who had GDP per capita of 2387 and 73.10 years respectively.

**Poverty Matters of Health Policy:**

We have illustrated that poverty plays an important rate in co-determining the health status of the population.

It can also be in the form of public infrastructure, such as roads or water supply; or resources common to whole village or community, such as river banks or forests, referred to as the cated by the household to economic activities for income generation.

The main causes of poverty that are relevant to health improvement. Is it

- a) Lack of inputs and income.
- b) Lack of basic needs.
- c) Detrimental health behavior or
- d) Unhealthful environmental factors? If it is
  - a) Policy response should be in the areas of land reforms,
  - b) Problem, solution warrant food policies, housing programmes for the poor, investment in education, expansion of curative and preventive health care interventions.
  - c) Public resources should be directed to modify health behaviour and environmental conditions through the individual.

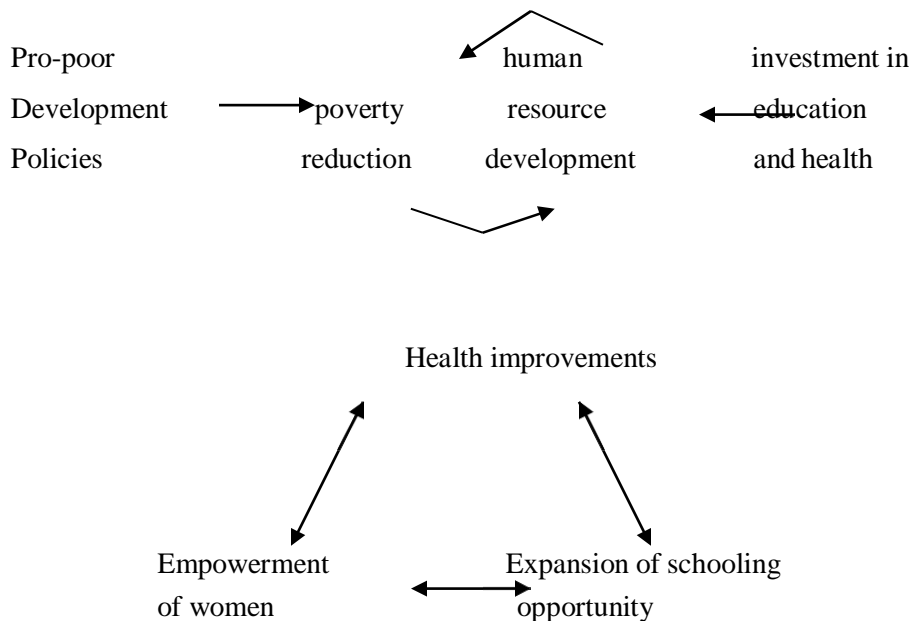


Figure: Mutually reinforcing cycle: reduction of poverty and development of human resources including health improvement.

### **Malnutrition and Health:**

Malnutrition refers to deviation from normal nourishment of a human body.

Malnutrition may be the result of several conditions.

- 1) Sufficient and proper food may not be available because of inadequate agriculture processes, imperfect distribution of food, or certain social problems, such as poverty or alcoholism.
- 2) It may result when certain foods containing one or more of the essential vitamins or minerals.
- 3) It can also arise acquired or inherited metabolic defects.

Malnutrition manifests itself in the forms of:

- a) Nutrition deficiency diseases such as marasmus, kwashiorkor, anemia, rickets, hypovitaminosis, etc.
- b) Nutrition excess health problems, such as obesity.

The body mass index (BMI) was less than the recommended level in nearly 36 percent of women.

### **Environmental Quality and State of Health:**

Health life is lived within a healthy environment. One way of defining health is to state it as ‘the extent of an individual’s continuing physical, emotional, mental, and social ability to cope with his/her environment’.

Mechanisms are continually at work to maintain a constant internal environment, known as homeostasis. Bacteria, viruses, and other microbiological agents pose obvious challenges to health.

- a) The maintenance of the internal environment.
- b) Resilience to stress situations,
- c) Defense against microbiological agents.
- d) Repair and regeneration of damaged tissue or cells and
- e) Clotting of the blood to prevent excessive bleeding.

Overexploitation of natural resources like forests fisheries, minerals and water generate air pollution, water pollution, soil and land pollution, radioactive pollution thermal pollution and noise pollution.

### **Conclusion:**

A long life with good healthy is a valued attainment in itself. We have seen that the state of health of people is determined by interplay of several factors, such as income, poverty, nutrition, sanitation, education, environment and investment in health. A healthy and lengthy life is lived through a sound environment. Pollution of the environment is responsible for a number of health hazards, the economic cost of which is very high. In India and other developing countries, the burden of environmental health risk is more for the poor.

## ➤ **Economics Dimensions of Health Care-Demand and Supply of Health Care:**

### **Introduction:**

Health care as an industry is developing with rapid strides. It is seen as a potential money spinner for businessmen. This has resulted in a number of corporate hospitals, catering to the needs of the industry also has demand supply characteristic like any other industry.

In health care the market is much more than two way relationship between buyer & seller. There is multilateral transaction. More than one agency is involved in providing health care. These needs may be different in different communities.

### **Characteristics of Health Care Services:**

The health care industry possesses some unique characteristics that are different from other markets. There are.

#### **a) Demand characters:**

- 1) It is irregular and unpredictable unlike other demands.
- 2) Illness is costly in itself. The ill person cannot go for work and loses his salary, in addition to the cost of treatment.

- 3) Government of some other organization of offer treatment at minimal cost that is not available in other markets.
- 4) There is certain uncertainty in the outcome of the health care services,
- 5) Health care services produces external benefits. Example: When a child is given vaccination for tuberculosis.

**b) Supply characteristics:**

Restriction in the supply include

- a) Licensing
- b) Limitations on admissions to medical/nursing or health related institutions.
- c) Lack of profit by medical care hospitals.
  - 1) The health care industry is governed by medical councils or other regulatory bodies. These bodies may be different in each country.
  - 2) The medical/nursing education costs are subsidized by the government.
  - 3) Advertising and competition in health care industry is unethical. Since it is unethical, most health providers only advertise their services and do not compete with each other in an unethical manner \.
  - 4) Hospital is the most focal point for health care and most government hospitals run as non-profit organization in developing nations. In developed nations, they are either covered by social security or health insurance.

This is the demand supply structure around which the health care industry functions.

The demand, the supply and the attribution rates of medical personnel in India (physicians, nurses, auxiliary nurse midwives and total number of medical colleges of allopathy system of medicine only).

It has been observed that the desired norm of mudaliar committee for required number of physicians in India would be achieved by the end of 1984.

There is no shortage of nurse as such, and the norms for ANMs is likely to be achieved in the near future.

In order to accomplish this, incentives should be offered to encourage physicians to go to rural areas. For nursing personnel and ANMs similar problems are in evidence.

In 1975, the Srivastava Committee in its comprehensive recommendation for medical and health education observed; “The fact is that there is no structure to bring about the needed changes...” (Health for all: An alternative strategy; Indian council of social sciences research 1981).

The important arguments put forth by proponents of private medical colleges are:

- i. There is a need for more doctors, especially in rural areas, and

- ii. There is a demand for medical education, the state has no resources to meet the demand, and hence private colleges are desirables.

In 1981, the study group set up jointly by the Indian council for social science research (ICSSR) and the Indian council for medical research (ICMR).

Indian medical council Act (1956). This ordinance was converted into an Act of parliament in 1993.

- Demand side: Microeconomics and household analysis factors that influence demand for health care.
- Demand-side financing.
- Supply side: Market failure in the provision of health care.
- Supply side financing and provider payments.

India has experienced a faster growth in demand for health and medical care than in the resources it can easily make available for meeting that demand.

Health also depends on many supportive services, such as water supply, sanitation, nutrition, public health and medical services, and human resources.

Within the health sector, an implicit or explicit distinction has always been drawn between demand and supply side mechanisms. Crudely, 'supply side' refers to service delivery inputs such as human resources and supplies provided on the basis of formal sectoral planning by technical planners and managers. 'Demand side' refers to the behaviour and inputs of the recipients or intended recipients of these efforts: Individuals, households and communities.

### ➤ **Institutional Issues in Health Care Delivery-Health Care Delivery System in India.**

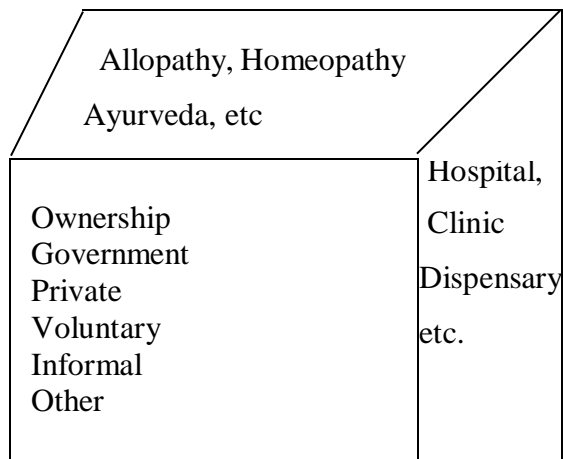
#### **Introduction:**

In India the health care system consists of different types of providers who practice different system of medicine and use various forms of organization in delivering health services.

The overlapping nature of the sub-systems in terms of their functioning and services makes it define precisely the boundaries of a particular segment of the health care system.



### System of medicine



**Figure:** components of health care delivery system in India.

However, using the ownership criterion, First, the public sector includes government-run hospitals, dispensaries, clinics, PHCs, Sub centres and other paramedics.

Second, the organized private sector includes general practitioner (generally having at least a bachelor’s degree or equivalent like MBBS and BDS), private hospitals and dispensaries (popularly known as nursing homes), registered medical practitioners, and other licentiates, again under different streams of medicine.

Third, the not –for-profit sector includes voluntary health activities and programmes, charitable institutions, cooperative institutions, missions, churches and trusts.

Fourth, the private informal sector consists of practitioners, not having any formal or adequate qualification, faith healers, quacks, tantriks, herbalists, priests, hakims and vaidyas.

In 1988, the private sector owned 56 percent of 9,831 hospitals and 30 percent of approximately 5,86,000 hospitals beds in the country.

First we give a brief outline of the health problems of India. Then we explore the levels and characteristics of the health care system.

**Health problems of India: A brief outline:**

At the outset, it is worthwhile to briefly discuss the major health problems of India. The population of the country was 1027 million in 2001. It is alarming to note that India’s population is more than that USA, Russia and Japan put together.

Yet another major category of health problems of the country relates to the high prevalence of communicable diseases. These include malaria, filarial, leprosy, diarrheal diseases, tuberculosis, viral hepatitis, enteric fever, kala azar, STDs including AIDS, etc.

**Health care: Levels and characteristics:**

Health care system refers to processes and programmes that go to reduce the extent of disease and infirmity so as to promote physical, mental and social well-being of a human population.

Health care is customarily described as comprising of the following three-tier pattern.

**a) Primary health care:**

This is the essential health care provided at the first level of contact of the individual or family with the system.

**b) Secondary health care:**

This refers to an intermediate level of health care. The complex health problems referred from the primary level.

**c) Tertiary health care:**

This is the highest level where super specialties are available and sophisticated investigations and therapeutic procedures and be performed.

The following criteria to offer such a service:

- i. Comprehensive;
- ii. Integrated;
- iii. Universal;
- iv. Continuity; up-to-date;
- v. Free;
- vi. Accessible;
- vii. Acceptable;
- viii. Holistic;

**Health care organization in public sector:**

“The state shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties”.

Union list. International obligations; Administration of central institutes like AIIMS; promotion of research through research bodies like ICMR; Indian council of medical research.

The DGHS renders a wide range of functions including the following;

- Conducting various national health programmes and schemes including CGHS; (central government health scheme).
- Promoting medical education and research through colleges and institutions under its control;
- International health and quarantine at major ports and international airports;

- Drug control, and medical CHEB; (central health education and bureau)
- Health intelligence through CHIB; (central health intelligence bureau)

**Primary health care:**

The world health assembly, 1977 gave a call for 'Health for all by 2000 AD'.

At the minimum, the PH care includes the following components;

- Education concerning prevailing health problems;
- Promotion of food supply and proper nutrition;
- Basic sanitation and supply of safe water;
- Maternal and child health care, including family planning;
- Immunization against major infectious diseases;
- Prevention and control of locally endemic diseases;
- Appropriate treatment of common disease and injuries; and
- Provision of essential drugs.

**The rural system:**

In India the Bhore committee recommended that an integrated health service comprising primary health units.

- a) Village level.
- b) Sub centre level.
- c) PHC level.
- d) CHC level.

**The urban system:**

As per 2001 census 285 million people, constituting 27.8 percent of the total population of India, live in urban areas.

**Secondary and tertiary health care:**

The secondary health infrastructure at the district hospitals and urban hospitals are currently taking care of the primary care needs of the population in the towns and cities.

**National health programmes:**

Some health problems are present on a large scale all over the country.

**Challenges of the system:**

The investment in the health, family welfare and water supply and sanitation sectors have significantly grown through the five-year plans in India.

**Conclusion:**

Health care system refers to the processes and programmes that deliver health services to the people by combining the medical knowledge, technology professional and functional units at primary, secondary and tertiary levels. Health is a State subject in Constitution of India. But in accordance with the provisions in the Union and Concurrent list, the Centre deals with international, national interstate health issues.

In the recent years, the increasing cost of medical care has been a concern, for which there is a need to promote health insurance as a mechanism to spread and share the health risks.

## UNIT-IV

### ➤ Financing Health Care and Resource Constraints-Health Status:

#### Introduction:

The health care services are divided under state list and concurrent list in India. While some items such as public health and hospitals fall in the state list, others such as population control and family welfare, medical education, and quality control of drugs are included in the concurrent list.

The union ministry of health and family welfare (UMHFW) is the central authority responsible for implementation of various programmes and schemes in areas of family welfare, prevention, and control of major diseases.

The current conditions of physical infrastructure, staff, access and usage are laid out here before identifying critical gaps and requirements in infrastructure and services. Issues related to institutions, financing, and policy are discussed in the context of these critical need gaps and the potential role of the private sector in healthcare provisioning in villages is explored.

#### **2) Public Infrastructure:**

##### **a) Physical Infrastructure:**

The health care in rural areas has been developed as a three tier structure based on predetermined population norms. Auxiliary nurse midwife (ANM) and one male multi-purpose worker (MPW{m}). A lady health worker (LHW), basic drugs and for minor ailments and are maternal and child health, family welfare, nutrition, immunization, diarrhea control, and control of communicable diseases.

PHCs are established and maintained by state government under the minimum needs programme (MNP)/ Basic minimum services programme (BMS).

Community health centres (CHC) forming the uppermost tier are established and maintained by the government under the MNP/BMS programme.

**Table-1**

**Provider absence rates by country and sector**

Country	Absence rates (%) in	
	Primary Schools	Primary Health Centre
<b>India</b>	25	40
<b>Bangladesh</b>	16	35
<b>Ecuador</b>	14	-
<b>Indonesia</b>	19	40
<b>Peru</b>	11	25
<b>Uganda</b>	27	37
<b>Unweighted average</b>	19	35

**Source:** Choudhury et al. 2006.

**Table-2**  
**Percentage Village with Access to Various Health Care Facilities Round the Year by Type of Family**

Infrastructure/services	% villages
PHC	68.3
Sub-centre	43.2
Government dispensary	67.9
Government hospital	79.0
Private clinic	62.7
Private hospital	76.7

**Source:** RCHS Round II, 2004.

**b) Access to Infrastructure:**

Even if a healthcare provider is not present in a village, he/she can be reached easily, some basic access issues would be take care of. Many of healthcare facilities, public or private, are not accessible throughout the year to about a third of the villages. Private and government hospitals are relatively more accessible as they are typically located in areas well connected by metalled roads (Table 2).

Administrative data above showed that

- (1) A well defined system of public healthcare provision exists,
- (2) There is some shortfall in infrastructure,
- (3) There is a significant problem with the adequacy of working facilities (supplies and equipment) within these centres,
- (4) There is a significant lack of adequately trained staff, and
- (5) There continues to be a lack of adequate access to the facilities that exist.

**3) Primary Healthcare:**

The objective would be to equip PHCs with basic diagnostic equipment that can be operated by paramedics or ANMs with doctors providing expert interventions from a distance;

While village may initially be reluctant to visit such a centre for medical purpose, the stationing of the ANM or paramedic inside the centre will lend it credibility.

**4) Secondary Care:**

OPDs of all government hospitals, whether at the block or district level, are overcrowded. There are queues for registration, consultation with the doctor, undergoing diagnostic tests, meeting the doctor with test results and buying medicines.

### **5) Mobile Healthcare:**

Getting a blood test, an ultrasound or an X-ray done invariably requires a visit to the nearest large town. The utilize a mobile diagnostic clinic equipped with X-ray, ultrasound, pathology lab (for blood and urine tests) and echo cardiogram.

### **6) Tele-Preventive Medicine:**

The term 'Tele-preventive medicine' is defined as the use of the internet to collect information from large number of people (both healthy and sick) to prevent outbreak of disease.

### **7) Financing Health Care: The Individual and the State:**

When we look at the profile of diseases the proportion of hospitalization within each ailment is negligible, except for the heart diseases.

The average medical expenditure on health for both hospitalization and non-hospitalization cases in rural areas is lower than in urban areas.

There are demonstrated differences between the payment patterns of the rich and the poor in both inpatient and outpatient health occurrence, the poorest sections are most propendent to sell their assets.

What is however surprising is that although clearly identifiable difference exist between the financing sources of the poorest and richest segments. In other words, the private sector does not appear to be charging much more than public facilities.

While significant user charge are being paid by all economic segments for availing of health care services. Clearly it is not the user but the state or the central government budget that must bear the load of this expense.

States such as Bihar and UP have among the lowest budgetary deficit on a per capita basis. It would be no worse than many of the better performing states such as Himachal, Delhi or Kerala.

This provides us some hope. Those states that currently spend the least on health care, can at some cost to their deficit, increase health care expenditure. One potential source of funds could be the private sector backed by rural health insurance.

**Source:** 3 Network: India infrastructure report 2007 rural infrastructure Oxford University press New Delhi.

## ➤ Indicators and Measurement Global burden of Disease

### Introduction:

Any discussion of the state of health and health policy of a country or a region must start with a sense of the scale of health problems. Injury, pain, handicap, or other disability.

Therefore, there arises a need for a comprehensive, single measure of the health outcomes.

The concept of burden of disease (BD) has evolved, in response to this need in the 1990s. It is quantitatively evaluated through another new measure called disability-adjusted life year (DALY). We will describe the findings of the first assessment of the global burden of disease (GBD).

### **Burden of Disease: Meaning and Significance:**

The health problems translate into disease, disability, and death—collectively referred to by the international health community as the burden of disease.

The global burden of disease and injury (GBDI), jointly undertaken by the World Bank (WB), World Health Organization (WHO) and Harvard School of Public Health, which began in 1988.

Murray and Lopez (1996) have standardized the tool in two volumes. Thus it has become a popular tool for health sector planning.

The BD combines (a) losses from premature death, (b) loss of health life resulting from disease, injury and disability.

The estimation of BD in units of DALYs serve mainly the following three objectives:

- a) To use the burden in CEA (cost effective analysis) as an estimate of health effect.
- b) To compare a set of interrelated interventions, which have the goal of improving the health conditions in a particular sphere.
- c) To provide information useful to the decision about how to allocate scarce resources from the perspective of the health sector as a whole.

### **DALY: A Measure of the Burden:**

The DALY has been developed in the 1990s as an indicator of ill-health.

The use of DALYs as an indicator of BD. These are.

- To aid in setting health service (both curative and preventive) priorities;
- To aid setting health research priorities;
- To aid in identifying disadvantaged groups for targeting health interventions; and
- To aid planning and evaluation of programmes with a comparable measure of output.

### **The DALY Framework: Components and Postulates:**

Now let us discuss as to how the DALYs are calculated. The first thing to note is that the DALY framework measures the burden of illness through reduction in human function.



**Expectation of Life and Gender Gap:**

The DALYs lost to mortality and morbidity at each age is obtained from a standard schedule of expectations of life at that age.

For assessment of GBD, the WDR 1993 used expectations of life of 82.5 years for females and 80 years for males as the standards.

**Age-Weighting:**

Most societies attach more important to a year of life lived by a young or middle-aged adult than to a year of life lived by a child or an elderly person. Thus it is postulated that the relative value of a healthy year of life lived changes with age.

**Value of a Year of Life:**

Note that while the first year of life receives a vary low weight, the life of a newborn is valued according to the weights of all the years he or she is expected to live.

**Disability Weights:**

In the WB (1993), the multiple dimensions of the human function and its reduction through disability due to disease or injury were expressed along six classes of severity weight in the unidirectional scale of 0 to 1.

**Time Preference and Discounting Future Life:**

Since the stream of damage to health from current illness and injury can extend years or even decades into the future, it must be decided how to value the future relative to the present.

**The GBD Assessment:**

In the WB (1993), the GBD was measured using DALYs for 1990 and projections were developed to 2020. Since this was the first major effort for assessing BD at the global level, we can pursue the findings here. Estimates of GBD were combined with estimates of CEA in order define priorities for investments in health.

**BD and DALY: A Critical Appreciation:**

- a) Even though BD is a broad measure, it does not capture all the consequences of disease or injury.
- b) The exercise of allocating resources in the health sector so as to minimize the sum-total of DALYs is clearly an efficiency criterion.
- c) Pursuing the equity issue further, it has been argued that an equitable measure of ill health will place a common value on everyone's life years, irrespective of disability status, age, sex and time period lived.
- d) The DALY framework tries to capture different social roles at different ages through unequal age weights

- e) Some amount of subjectivity is involved in adopting a common definition of illness and in the construction of disability weights.
- f) Finally it has been criticized that resource allocation based on the criterion of aggregate DALY-minimization can lead to perverse outcomes.

**Conclusion:**

The burden of disease (BD), which is measured through the units of disability-adjusted life years (DALYs). It originated in the background study for the WB's world development report 1993 on the global burden of disease and injury and injury (GDB), jointly undertaken with the WHO and Harvard school of public health. The BD combines losses from premature death (the difference between actual age at death and life expectancy at that age in a low-mortality population). These relate to the life expectancy, gender gap, age-weighting, disability weights, time preference and discounting. It has no regard to interpersonal equity in DALYs suffered. It does not recognize the disadvantage of individuals in their socioeconomic circumstances.

➤ **Inequalities in Health-Class and Gender Perspectives:**

**Introduction:**

Women's health is of special concern. Women face disadvantages in access to services not only due to poverty but also gender-related inequalities adversely affect women's health in every phase of their lives.

**What is Gender?**

- a) The word "Gender" is used to describe the characteristics of women and men which are socially constructed.
- b) People are born female and male but learn to be girls and boys who grow into women and men.
- c) This learned behaviour and attitude make-up "gender" identity.

**Gender Issues:**

- It is essential to understand clearly the difference between gender and sex.
- Women's health is often equated with reproductive health.
- The formulation of a strategy for gender mainstreaming in health has to consider the social, economic, cultural and other perspectives.
- Different countries have their own specific problems with gender disparities manifested in different ways.
- Both physical and mental health should be given importance.

- Health for all 21<sup>st</sup> century must become a global concern with universal attainment of health and well being without any disparity.
- Women's health cuts across sectors, and hence cannot be addressed as a compartmentalized subject.
- Partnerships between WHO, UNICEF, (United Nations children's fund) UNFPA (the united population fund) and the World Bank need to be strengthened to avoid overlapping and duplication.

### **Draft Regional Strategy for Gender Mainstreaming Health:**

#### **1) Vision:**

Women and men have equal rights to be health through appropriate opportunity and access to preventive, promotive, curative and rehabilitative services.

#### **2) Goal:**

The goal of the regional strategy on gender mainstreaming is to ensure that policies.

#### **3) Objectives:**

- To create an enabling environment for incorporating gender concerns into policy formulation, programme design, implementation and evaluation.
- To identify and address factors influencing gender disparities and constraints in health and quality of health care.
- To incorporate gender concerns into various aspects of health promotion and disease control programmes with special focus on the vulnerable and disadvantaged.

### **Women's Health & Need for Gender Justice:**

There has been significant improvement in the health, education and employment status of women in India overtime. Yet, health indices for girls and women compare much less favourably with those for boys and men.

Many programmes aimed at the general population also impact women's health.

#### **Indicators of the Status of Women:**

A detailed analysis of national data shows some reduction in maternal death and an improvement in many indices, related to infant health.

The perinatal mortality rate, infant mortality rate and under-5 mortality rate are poorer for girls.

The suicide rate among young women is about three times that seen for young men.

Violence, against women and girls is common.

**Socially Devalued:**

Women's work at home, because of its invisibility is rarely recognized, although they work for roughly twice as many hours as men.

While gender equality and justice are among the United Nations' millennium development goals, their implementation in India has been slow and patchy.

**Health Justification for Gender Justice:**

Gender injustice is often viewed in the socio-cultural context and usually in terms of the social outcomes.

Social determinants, have a significant impact on the health of girls and women.

**Barriers, to Scaling up Interventions for Women:**

The major barrier to mainstreaming gender justice and to scaling up effective interventions is gender inequality based on socio-cultural issues.

**The way forward:**

While the constitution guarantees equality for women, legal protection has little effect in the face of the prevailing culture.

Many approaches have been suggested. They will all need to include approaches which examine, understand and confront gender discrimination in social, cultural and religious spheres.

The right to health is a fundamental right and the poorer health indices of half the population is a cause for concern.

The magnitude of the inequality related to health is often downplayed even within medical circles.

All plans and projects within community programmes should be assessed using the "gender lens" in order to achieve gender justice for women.

There is a need for aggressive gender justice in order that women in India achieve equal health and social status in the foreseeable future.

**Conclusion:**

We understand now that not only have the biomedical and gender-biased medical education and research system failed to address women's health concerns, they have also created and contributed to gender inequalities in health. Similarly, it is clear that due to the all-male basis of much medical research, doctors have been practising men's health on women, which both compromises women's health care and puts women's lives in danger.

Thus, we certainly cannot allow the gender inequalities in health and gender bias in medical education and research to continue. We must act promptly and globally towards a paradigm shift from that instilled since the eighteenth century, when medical education was first organised to mass produce medical doctors.

➤ **Health Policy in India:**

**Introduction:**

India is one of the few countries of the world to have come out with a national policy on health. The government of India adopted the first national health policy (NHP) in August 1983. Some of the policy initiatives outlined in the NHP-1983 have yielded results, while, in several other areas, the outcome has not been as expected.

**The National Health Policy 1983:**

The NHP-1983 gave a general exposition of the policies which required focus in the circumstances which prevailed in the health sector at that time

- a) A phased, time-bound programme for setting up a well-dispersed network of comprehensive primary health care services, linked with extension and health through education.
- b) Intermediation through 'health volunteers' having appropriate knowledge, simple skills and requisite technologies;
- c) Establishment of a well-worked out referral system to ensure of the hierarchy is not needlessly burdened by those who can be treated at the decentralized level;
- d) An integrate network of evenly spread specialty services;

**Need for a New Policy:**

The initiatives of the government in the public health sector have recorded some noteworthy successes over time. Smallpox and guinea worm disease have been eradicated from the country; polio is on the verge eradicated; Leprosy, Kala azar, and filariasis can be expected to be eliminated in the foreseeable future. Total fertility rate (TFR) and infant mortality rate (IMR).

**The National Health Policy, 2002: Objectives:**

- a) The approach would be to increase access to the decentralized public health system by establishing new infrastructure in deficient areas.
- b) Overriding importance would be given to ensuring a more equitable access to health services across the social and geographical expanse of the country.
- c) Emphasis will be given to increasing the aggregate public health investment through a substantially increased contribution by the central government.

- d) The contribution of the private sector in providing health services would be much enhanced.
- e) Primacy will be given to preventive and first line curative initiatives at the primary health level through increased, sectoral share of allocation.
- f) Emphasis will be laid on rational use of drugs within the allopathic system.
- g) Increased access to tried and tested systems of traditional medicine will be ensured.

### **Major Policy Prescriptions of NH, 2002:**

#### **1) Determinations of Access to Health Services:**

##### **Financial Resources:**

The public health investment in the country over the years has been comparatively low.

Under the constitutional structure public health is responsibility of the states. So it is expected that the principal contribution for the funding of public health services will be from the resources of the States.

##### **Equity:**

In the period when centralized planning was accepted as a key instrument of development in the country, an equitable regional distribution was considered one of the its major objectives.

#### **2) Strategies:**

##### **Delivery of National Public Health Programmes:**

It is evident that in a country as large as India, which has a wide variety of socio-economic settings, national health programmes have to be designed with enough flexibility to permit.

##### **Improving the Public Health Infrastructure:**

The NHP-2002 acknowledged that the existing public health infrastructure is far from satisfactory.

##### **Expending Public Health Services:**

The policy envisages that, in the context of the availability and spread of allopathic graduates in their jurisdiction.

#### **3) Human Resource Development:**

##### **Education of Health Care Professionals:**

Medical and dental colleges are not evenly spread across various parts of the country.

##### **Need for Specialists in 'Public Health' and 'Family Medicine':**

In order to alleviate the acute shortage of medical personnel with specialization in the disciplines of 'public health' and 'family medicine'.

##### **Nursing Personnel:**

In the interest of patient care the policy emphasizes the need for an improvement in the ratio of nurse's vis-à-vis doctors/beds.

#### **4) Support Areas:**

- Use of generic drugs and vaccines;
- Information, education and commutation (IEC);
- Population growth and health standards;
- Inter-sectoral contribution to health;
- Alternative system of medicine;
- Role of local self-government institutions;
- Role of private sector;
- Role of civil society;

#### **5) Ethic and Legislations:**

- Medical ethics;
- Norms for health care personnel;
- Regulation of standards in paramedical disciplines;
- Enforcement of quality standards for food and drugs;

#### **6) Health Statistics and Research:**

- Health statistics;
- National disease surveillance network;
- Health research;

#### **7) Other Important Areas:**

- Environmental and occupational health;
- Urban health;
- Mental health;
- Women's health;
- Providing medical facilities to users from overseas;
- Impact of globalization;

#### **Conclusion:**

The NHP-2002 tries to carry forward the unfinished task of the NHP-1983. The fundamental focus of the new policy is to provide equitable access to public health services through a comprehensive strategy which combines increased investment, decentralization of the system, strengthening and enhancing the infrastructure, involvement of local self-government institutions, enhanced contribution of private and NGO sectors, and the civil society, and inter-sectoral inputs to good health. In March 2005 the Government of India has launched a very broad based Mission to render the public health system people-friendly in the rural areas of the country.

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