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CHAPTER - I

INTRODUCTION

In the infancy of humanity, education was at dormant state. In trying to get food, shelter and safety man originally learnt to observe Nature, to use it to his ends and to save himself from its destructive forces. Thus, in addition to the inborn instincts, which he had common with other animals, he brought into play his own special powers - physical and mental. Experience was the next means of training. The younger generation learnt from the elders what was wholesome and what was harmful, how to enjoy pleasures and to keep away from pain. The art of cutting, hunting, building and defending contributed to the development of human intellect, the observation of the striking phenomena in Nature laid the foundation of man’s ideas of worship and religion and both increased his knowledge of the physical world. The inventions of fire and language were also great steps in the advancement of his worldly welfare, of a settled life and of his idea of social relations.

Man learnt to rise brutal instincts first in the family under the power of the patriarch, later in the village under the rule of the headman and again in the society under the bonds of customs and laws. This was the beginning of conscious education. (Nigam : 1993)
But this conscious education is not a physical science. Its aim and organisation have always been determined by man according to his ideals and convenience.

1.1 Nature of Education in Ancient India.

In order to understand the nature of Education in Ancient India, we shall have to consider on one hand the original nature of the people who lived there and on the other the character of the environment in which their inherited capacities were called into active development.

The Ethnic Factor

People who lived in Ancient India did not belong to one race but to many. At different times, waves of different people reached India and left their mark on society to a more or less lasting degree. Anthropological enquiries have revealed that four main types of races had come to live in Ancient India, viz., Dravidian, Aryan, Scythian and Mongolian. The four main types are not to be traced as distinct from one another but there has been a fusion of them all on a large scale. But it is the Aryans who have carried the lion’s share in controlling the destiny of the country. Let none, however, imagine that the non-Aryans have contributed nothing of value to Indian life. Contact with them made Hindu civilisation varied in aspect and deeper in spirit. The Dravidian was no theologian but expert in imagination, music and construction. He excelled in the fine arts. The pure spiritual knowledge of the Aryans mingling with the Dravidian’s emotional nature and power of aesthetic creation formed a marvelous compound which was neither Aryan nor non-Aryan but Hindu. Thus the spiritual and moral ideals of Ancient
Indian Education were essentially the product of the Aryan mind, while its vocational and aesthetic aspects were mainly inspired by the material and emotional nature of the Dravidian.

**The Geographical Factor**

After the Indo-Aryans had entered in India, their material spirit was for a long time kept alive by the necessity of holding their own against the enemy. When this had been effected and the resistance of the non-Aryans was broken, there was left very little scope for the development of the manly virtues. Henceforward they began to develop in their character a deep delight in the contemplation (to survey with the eyes or in the mind) of the secrets of Nature and an enthusiastic devotion for subtle speculation. The rich soil and the genial climate bringing the means of subsistence within easy reach made the struggle for existence an easy one and left men sufficiently at leisure to develop the various arts of civilisation.

Thus while in Europe long cold winter, barren soil and conflict of interest between small countries have developed in the Aryans there “the instinct of self-preservation” to the highest pitch and have made them comparatively more ‘active’, ‘combative’ (ready or eager to fight) and enterprising, (resourceful), the peculiar geographical conditions of India have tended to make her people more passive, meditative, and philosophical. The absence of any keen struggle for existence has enabled the people to maintain at the head of their society a thinking class that made light of worldly concerns and devoted themselves almost wholly to philosophical contemplation. Hence owing to differences in the geographical conditions of the two countries the people in them though they originally belonged to the same
stock and possessed similar virtues, now present such marked distinctions in the development of their character. The different geographical conditions of the two countries have not only affected their nature but have also influenced their institutions, their sciences, arts and literature. Moreover, the lofty mountains and seas that shut the country off from the world outside not only rendered the Indian civilisation at once original and unique in character but also allowed time to the Hindu institutions, educational or otherwise, to become deep-rooted and in a great measure able to withstand the modifying influence of later invaders.

The Social Factor

Coming to the Social environment we find that the most characteristic feature of the Hindu society is its caste system. It is a matter of common knowledge that in the Rigvedic age the caste system was not well developed, if indeed, it existed at all. Each man was a priest, a warrior of a husbandman. In course of time to keep pace with the growing needs and complexity of society differentiation became a necessity. Hence the Indo-Aryans like Plato made an intelligent application of the principle of division of labour and became gradually divided into four castes according to their occupation and innate qualities.

Yasya yalikhitam proktam pumso varnabhibyan jakam

Yadanyatapi drishyet tat tenaiba binirddishet.”

“If in an individual there appears worth other than that characteristic of his class he should be designated accordingly.”(Srimadbhagwat, Canto VII.Ch.XI.)
Thus in agreement with the tendency of the modern world, there was in Ancient India sufficient scope for the development of one’s own individuality. In fact, by the system of caste alone was self-realisation made compatible with social service. Thus it may well be said that even in those early times the Indo-Aryans saw that, for social efficiency, the individual should be allowed to develop along the lines of his greatest power. From this there follows the pedagogical principle that it is the function of education to determine the line of the greatest power of each individual and then to prepare him for the service in that direction. This is the formulation of the ancient Indian ideal of a liberal education.

In fact in ancient times the greatest care was taken to discover the aptitude and fitness (adhikara) of an individual to receive any particular kind of education. The sudras were, in general, denied the study of the Vedas only because they had neither the tradition nor the aptitude for acquiring language and spirit of the Vedic literature. Indeed it is bad policy to spend time and energy in making an ‘indifferent’ priest out of a citizen who could have become an ‘excellent’ soldier or an ‘expert’ craftsman.

The Religious Factor

The most potent influence on Ancient Indian Education was that of the religious environment. The Indo-Aryans when they settled in the Indus valley were deeply impressed with the most imposing manifestations of Nature. They picked up what was beautiful and striking in Nature, looked upon that as the governing force in their region and tried to propitiate it by prayers for their own welfare.
The Hindus from a very early time have held that each man is born a debtor, that he has obligations first to the sages who were the founders of his religion and culture; secondly to the gods, thirdly to his parents. The first debt he repays as a student by the careful study of the Vedas; the second he repays as a householder by the performance of a number of sacrifices; the third debt he repays by offerings to the manes and by becoming himself the father of children. When a man has thus paid all the three debts he is considered free and becomes fit for applying himself to the attainment of final liberation. The early Hindus, therefore, considered education as a life-process and divided the life of an individual into four stages to each of which different duties were assigned in such a way that their due performance in any stage might prepare the individual for the next higher stage. (Ibid)

Educational Heritage of India

The most important contribution of ancient India, not only for India but also for the world is in the field of education. To emphasize this fact the following views of great scholars and thinkers deserve to mention:

- Mark Twain, an American writer – “India is the cradle of the human race. Most valuable and the most instructive materials in the history of man are treasured up in India only”.

- Albert Einstein – “We owe a lot to the Indians who taught us how to count, without which no worthwhile scientific discovery could have been made”. (Aggarwal : 2004)

- Even, Max Muller, the great German ideologist and scholar, in the article, “India What Can it Teach Us,” has paid tribute to the rich intellectual heritage of India. (Collected works of Max Muller, Vol. XIII)
1.2 Phase wise Development of Education in India.

Dr. Radha Kumud Mukharjee in his book 'Ancient Indian Education: Brahmanical and Buddhist (1947)' divides the periods as Rig Vedic Education, Education in the other Vedas, Later Vedic Education, Education in the Sutra Literature, Education in the Time of Panini, Education in Kautilya’s Arthashastra, Education in the Epics - all under Part 1 titled Brahmanical Education. The second part deals with the Buddhist education. (Ibid)

1.2. A- The Brahmanical (Vedic) Education

1.2. A-a - Aims, Ideals and Objectives of Vedic Education:
Aims, Ideals and Objectives of education are always with relation to the ideals of society. While discussing this aspect, we may keep in mind that modern terms like democracy, secular communism, socialism, autocracy etc. were not in use during the Vedic age.

Following were the main objectives of Vedic Education.

1. Ultimate Objective as Moksha (Liberation) or self Realisation:

Ancient Indians believed that education should prepare an individual to attain the objective of liberation, i.e., to be one with the Almighty and to be free from the cycle of births and deaths.

2. Infusion of Piety and Religiousness:

In Ancient India as religion played a prominent part, the spiritual background was provided so that a student may withstand the temptations of life.
3. **Education for worldliness - Vocational Aim:**

Preparation for living was also one of the most important aims of education. All the rules of conduct and duties of daily life of different 'Varnas' show that they wanted man to prepare for present life. One must be true to his duty (Dharm).

4. **Character Formation:**

Education must form character. Morality or the right behaviour was the highest 'Dharma'. Education was regarded as a means of including values such as strict obedience to elders, truthfulness, honesty and temperance. It was believed that through good conduct, man gets spiritual merit, wealth and beauty. A student had to give up the bad habits like indulgence, selfishness, luxury, enjoyment, pleasure etc. He had to learn to distinguish between right & wrong, good & evil.

5. **Development of All Round Personality:**

Ancient Indians believed that personality should be developed through education. Personality was developed through the following method:-

- **Self-restraint** – Self restraint meant simplicity in life and habits.

- **Self-confidence** - From the very first day the education in the 'Upnayan' ritual self-confidence was fostered in the minds of the students.

- **Self-respect** - A well educated youth was to be honoured more than the king himself. Such an environment developed the students self-respect.
Discrimination and Judgment - Powers of discrimination and judgement were developed in students to enrich their personality. They specialised in law, philosophy, poetry and literature. These subjects were full of controversies and the student had to understand both the sides from his own judgement and define his position in literary debates.

6. Stress on Social Duties:

A student was not to lead a self centred life. His wealth was not for his own sake or for his family he must be hospitable and charitable. All professions laid stress on civil responsibilities.

7. Promotion of Social Efficiency and Welfare:

It was equally important aim of education. Education was not imparted simply for the sake of culture or for purpose of developing mental powers but for the purpose of training every member of society in the profession which he was expected to follow. Society had accepted the theory of division of work which was later on governed by the principle of heredity. Each family trained its children in his own profession. The purpose was to make each individual socially efficient.

8. Preservation and Promotion of culture:

The preservation and promotion of national culture and heritage was also stressed. (Ibid)

1.2. A.b. The Planning of Education

To materialize the theory of education developed by the Vedic Ruosies, education was planned in a scientific manner. The planning of the system of
and established ideas and practices of the Vedic society. Though subjects and courses of study vary in different periods, the system of education, its methods of training and discipline remains the same under all conditions.

Since individual was the centre of education an intimate relationship developed between the teacher and the student. This relationship was inaugurated by an initiation ceremony called 'Upanayan'.

1.2. A.c. System of Admission:

Student life in Vedic society began with 'Upanayan', when the student goes to his chosen teacher called Acharya. The centre of learning was called 'Gurukul', which was considered as the second womb for the child. The ceremony was performed for three days. During these three days period, the 'Guru' holds within him the 'Sishya' as in a womb, impregnates him with his spirits and delivers him in a new birth. The pupil emerges as a dwija or twice born. His parents give him only his body, or physical birth. But his Guru or the teacher gives him his second birth, which is spiritual. This 'Upanayan' ceremony unfolds his mind of soul. After this ceremony, the pupil, emerges as a Brahmachari, a new and changed individual both externally and internally. The home of the teacher was the centre of learning in Vedic period. Education was imparted to each individual with their differences. The Guru acted as the super ego or conscience and inculcated in the minds of the students the high ideas of morality and spirituality. (Dash: 2003)
1.2. A.d. Main Features of the Vedic Education:

1) Free Education  
2) No State Control on Education  
3) High Status of Teachers  
4) Wide–Spread Education of women.  
5) Residential Schools  
6) Individual Teaching  
7) Forests as Centres of Education  
8) Sanskrit as the Medium of Instruction  
9) Self–Control and Self–Discipline  
10) Teacher as Parents

1.2. A.e. Commercial Education in Ancient India:

Knowledge of commercial geography needs of the people of various localities, exchange value and quality of articles, and languages spoken at different trade centres were considered necessary. Theory of banking was also included in the course. In the hereditary training families of high status, such a wide training might have been possible, but generally the knowledge about commerce and trade was picked up by working in the family shops or trades. There were no organized educational institutions, though most of the trades had formed efficient guilds during the first millennium of the Christian era.

1.2. A.f. Mathematics Education in Ancient India:

Ancient India quite early evolved simple system of geometry urged by the necessity of accurately laying the open-air sacrificial places. Shulvasutra are the oldest mathematical works, probably composed between 400 B.C. and 200 A.D. Aryabhata (476-52) is the first great name in Indian mathematics. To the period immediately preceding him belongs one of the most significant of human discoveries, the zero, though the name of the discoverer is unknown.
1.2. A.g. Science Education in Ancient India:

Vedic science included astronomy, mathematics, chemistry and biology. The Atharva Veda is known as ‘the Science of Medicine.’

1.2. A.h. Role of Travel in Education:

Travel was regarded as necessary to give a finishing touch to education (Aggarwal:2004)

Altekar sums up the chief characteristics of the ancient Indian education system in these words – “Indian education system was able to develop character and personality, to inculcate civic virtues, and turn citizens well qualified to follow their professions and discharge their duties in life. It was not only able to preserve the heritage of the past but also to enrich it from generation to generation. It produced a galaxy of able scholars and thinkers from age to age, who made important contributions to the advancements of knowledge in the spheres of philosophy, logic, mathematics, astronomy, medicine and chemistry. It enabled India to achieve high material prosperity by the excellent arrangements it made for training young men in arts, crafts and professions. The general principles which underlay the system, e.g., plain living and high thinking, the intellectual freedom, individual attention to students, the monitorial system, gurukul (hostel) system, location of the educational institutions away from the din and dust of city life, are sound and capable of giving good results even in modern times, if applied with due regard to changed circumstances.” (Ibid)
1.2. B. The Buddhist Education:
In the sixth century B.C., people in India were disgusted with the growing mass or rituals and sacrifices involving slaughter of innocent animals and the hegemony of the Brahmin priests with a false air of superiority, which embittered the relations between different social groups. The so-called sudras were placed outside the ambit of Aryan culture. To purify Hinduism from this social evils, two great religious reformation movements- Jainism and Budhism started in India under the leadership of two master-mind - Mahavir and the Buddha- who showed a new light to the world, and gave moral support to the depressed, grieved and downtrodden. (Dash: 2003)

Buddhism came into being when several ills had crept into Vedic Thought or Hinduism. Mahatma Buddha laid great emphasis on leading a poor life. He avoided reference to metaphysics (the philosophy of mind) which he considered to be superfluous (Needless). Mahatma Buddha practiced several types of penances (an act of self punishment as reparation for guilt) for finding out the truth. (Aggarwal: 2004)

Buddhist education was also a product of the prevailing Brahmanical Educational System. But it is not based on Vedic study and its teachers were not brahmans, except those who had become converted to Buddhism. The most important aim of education is to sow the path by which an individual can assimilate the carving for existence or remove the selfish desire for material enjoyments and earthly things and ultimately obtain ‘Nirvana’. Buddhism promoted mother-tongue as the medium of education. In the Buddhist system, there were no vocational subjects in the curriculum. (Dash: 2003)
1.2. C. The Jain System of Education

Jainism preached the importance for man to be released from the cycle of rebirth and attain ‘Nirvana’ by following the three-fold path of right cognition and right conduct. The conquering of the senses is basic to attaining ‘moksha’ (salvation) and this religion gets its name from Jaina (the conqueror of all senses) which was the name given to the first pro-pounder Lord Rikhabha-dev and to Lord Mahavira who is considered as the founder of the religion. (Chaube:1996)

The education system that the Jains organised reflected their religious principles. The concept of doing one’s duty on earth is the essence of man’s existence, for the world is considered, in Jainism, as being “Karma Bhoomi” (place of bondage of the being). (Ibid)

Summing Up

The educational status and vocation of the parents have a significant correlation with the level of capacity of the children. Hence universal & compulsory education in ancient India was imparted to all on the basis of their worth, merit and capacity which is technically known as ‘Adhikarveda’.

Even the ‘Sudras’ received some amount of education in this scheme of compulsory education on this basis of their Adhikar or merit or worth. Thus in ancient India, democratic principles were followed to provide education to all on the basis of their Guru & Karma (Gita). Education was not denied to anybody, but for a particular type of course of study & training, only a particular type of person was allowed on the basis of his Guru & 7 Karma.
Buddhist education, on the other hand, was open to all comers. All castes were equally admissible to the Buddhist community, though it seems to have been specially welcomed by the wealthy & respectable & supported by rich merchants & powerful rulers to whose influence it owed a great deal for its achievement. (Dash: 2003)

The outcome of the Jain system of education could not be measured in terms of mastery of content alone. Change of attitudes and development of scientific temper and scientific enquiry were aimed at, which implied that a different way of life had to be accepted. It was the process of education which determined the success of the education system. (Padma: 2005)

Initially, Buddhism and Jainism were indifferent towards women and the Buddha was reluctant to admit women into his faith. In the course of time, however, women were admitted to both Buddhism and Jainism, and nunneries were established. Perhaps one of the greatest attractions of becoming a nun was that a woman had the opportunity to study, teach and preach. This was a welcome change in the position of women in society, for it allowed women to be educated, to travel as missionaries and even to remain unmarried. (Nigam: 1993)

1.2. D. Education in Medieval India
The period under review covers from about the 10th century A.D to the middle of the 18th century, i.e. before the British rule. It is true that during this period, Muslim System of Education was the predominant system. All the same, there existed Hindu System of Education also which cannot be ignored while discussing Medieval System of Education.(Aggarwal:2004)
The rise of Mohammedanism is one of the most extraordinary events in the history of the world. It changed the whole history of India. The beginning of the eighth century A.D marked the vent of Mohammedan invasions in India. The Arabs and Turks brought many new customs and institutions in India. Of these one remarkable was the Islamic Pattern of Education, which in many respects vastly differed from the Brahmanic and the Buddhist systems.

1.2. D.a. Islamic Education - Objectives

Education in medieval India can be understood only against the background of Islamic education based on the teachings of the `Koran'. In Koran, is enshrined the lofty concept of God, expressed in belief in Allah as the most important principle. Knowledge is one of the seven major attributes of ‘Allah’. Education is the greatest duty of man.

Islamic education springs from the Mohammedan concept of God expressed in belief in Allah. While the traditionalist go by absolute faith in Koran and object to modern education, the progressive stand for reform to suit the modern age. However education was highly valued by the followers of Islam. According to the prophet the ink of the scholar is holier than blood of the martyr. Muslims regarded general education as an integral part of Islamic education. Being instigated by vehement fanaticism, they destroyed ancient Buddhist & Hindu temples, schools & other educational centers & erected on their ruins, mosques and madarsahs.

In the Muslim period learning was held in high esteem. The great Mughal emperors were patrons of learning and promoters of education. Their example was followed by the Mughal nobility and upper classes. Learned
people were loved and respected all over the country. Important posts of the states like the post of judges, lawyers, commanders of the army and ministers were filled up from the educated classes. Many Hindus were attracted towards Muslim education with a view to get these employment facilities. Thus Muslim education prepared the students for practical life. (Dash: 2003)

1.2. D.b. Vocational Education

During the Muslim period, there was provision for vocational, technical, and professional education. Professor Weber says, “The skill of the Indians in the production of delicate woven fabrics, in the mixing of colours, the working of metals and precious stones and in all manners of technical arts ---- enjoyed a worldwide celebrity. The fine fabrics, the beautiful shawls, the painted wares and the gold and silver ornaments of India are ample proof of the fact that there were arrangements for artistic, vocational and technical education. The presence of so many magnificent buildings shows that the art of stone cutting had reached climax. Feroze Shah Tughlaq maintained a regular department of Industries.” (Aggarwal: 2004)

The institution known as 'Karkhanas' was provided technical training in handicrafts based on the system of apprenticeship. They were, in fact, manufacturing centers where apprenticeship would observe and practice craftwork under the guidance of a teacher who had earned reputation in a particular vocation. No regular fees would be paid to the 'Karakhanas’. An offer of a small present to the proprietor or foreman of the workshop and a religious ceremony would mark the beginning of this vocational education. (Dash:2003)
1.2. D.c. Hindu System of Education - Chief Features

- Lack of State Support
- Religion Oriented Education
- The ‘Pathshalas’: Elementary education was imparted in ‘Pathshalas’ which existed both in villages & towns. ‘Pathshalas’ were held in the verandah of some house or under trees. There were also separate houses for ‘Pathshalas’. Specific type of buildings for them did not exist
- Fees: No regular fees were charged from the students. The parents gave present to the teachers. Students were required to render personal service to the teachers.
- Curriculum at the Elementary Stage:
  - Knowledge of weights and measures was considered essential. Therefore, arithmetic was a compulsory subject at the elementary stage.
  - Literature was included in the curriculum, real literary taste was not cultivated.
  - Moral and religious instruction also had a secondary place in these schools.
  - In some schools, salutation to Goddess Saraswati (the Goddess of Learning) was learnt by the students.
  - Instruction in mythology and sacred love of the Hindus was also given in some schools.

1.2. D.d. Hindu Higher Education Institutes in Medieval India

It was really very unfortunate that some of the best institutes of higher learning of the Hindus were destroyed by Muslim conquerors. The most notable example is that of Nalanda – an international centre of learning. (Aggarwal: 2004)
1.2. E. Education in British India

1.2. E.a. Pre Colonial Education

The mid 1700s to the beginning of the 1800s may be termed the pre colonial period, during which time ‘indigenous education’ flourished in India. The purpose of education in this system was deeply rooted in religion and was mostly spiritual. ‘Tols in Bengal’, ‘Pathshalas’ in western India, ‘Pyols’ in south India’, ‘Chatuspathies’ in Bihar, and similar schools existed for Hindus in other parts of the country, headed by Brahmin pandits. Sanskrit was used in the education of Hindus, and Arabic, Persian for Muslim children in ‘maktabs’ and madarsas headed by ‘maulvis’. Laws, scripture, literature, grammar, penmanship, logic, rhetoric, natural philosophy and arithmetic were taught for an average duration of 10 to 12 years. There were also village primary schools, which catered to sons of shop-keepers, artisans and peasants, where instruction was in the vernacular and was not religious. Since Persian was the official court language in those times, a large number of children, even Hindus, attended the Persian schools in Bengal.

The zamindar or landed gentry generally got their children, particularly daughters, educated at home. A few missionary schools came up for the purpose of conversion, with English as the medium. So it was a motley group of institutions, small rather than big and diverse in nature, catering to different groups. It was not ‘institutionalised’ nor had the State any role in promoting it. Education was still mostly oral and so everything had to be learnt by rote, remembered and understood. There were no printed books (they came much later with the Missionaries)-only slate and chalk, if at all
and writing on sand or on the floor. The teacher was paid a small fee by the students in cash or grain. The teacher needed to know only the ‘three R’s’. Schools of 15 to 35 students were managed mostly by single teachers. A large part of the pupils belonged to the better-off class. (Padma: 2005)

As for higher or advanced learning, it had not developed. In the few institutions that existed subjects, were taught mostly by Brahmins in Sanskrit and the teachers were mostly in the Hindu schools. In the 1820s, in Poona city, there were 164 Hindu schools of higher learning. Surat had 18 pandits who gave instruction to 66 scholars in Sanskrit. The same town was also well known for a college of Bohras with 125 scholars. The chief functions of traditional learning appear to have been to conserve custom, to organise and sanction the existing political and economic order and to provide philosophical and religious enlightenment to the ruling classes. Learning in pre-British India was not designed to investigate the natural world through scientific methods, nor to record historical events, nor yet to experiment with social innovation. (Basu: 1982)

By the late 18th century, schools languished because there were no big donors among the ‘zamindars’ or the Peshwas (who used to give ‘dakshina’ (funds)to Brahmins to run schools), as Peshwa rule came to an end in 1818. Vernacular education suffered as English was the language of the new rulers and traders. English schools became very popular from 1817 onwards in Calcutta (now Kolkata), Madras (now Chennai) and Bombay (now Mumbai). (Padma: 2005)
So when the Europeans first came to India by the sea-route towards the end of the 15th century, they spread over the whole country a network of educational institutions of all grades, both Hindu and Muslim. But unfortunately no authentic account exists of the extent of education in India during the 16th, 17th, and 18th Centuries. The Europeans powers during these years were too busy with trade and with consolidating their own position to think of the education of the Indian people. (Dash: 2003)

1.2. E.b. Efforts of Missionaries (1500 - mid 1800s)

The aim and work of the earliest missionaries from the time Vasco de Gama landed in Calicut in South India, in 1498, was related to spreading Christianity. There were Portuguese, Dutch, French, Spanish and Danish Missionaries and they started schools as the medium through which they could spread their message. The incentive was to give books and free food to those accepting ‘conversion’. They were taught Portuguese and local languages, Christianity and Arithmetic. They started a degree college in Goa in 1575 and St.Anne’College in Bandra, in Bombay. However, the Portuguese were overpowered by the British.

In the late 1600, when the Danish and English Missionaries came to India, their only aim again was ‘conversion’. In the charter of 1698, a clause was inserted for maintaining ministers of religion at the Company’s factories in India-every ship brought a Chaplain, more or less. The purpose was to spread Christianity among the employees of the Company, which included European, Anglo Indian and local employees of other faiths.
Many charity schools were established, supported by donations, and supplemented by grants from the Company. This was neither widespread nor uniform. Although the sum total of the efforts of all the Missionaries put together till then was very small and touched only a fringe of the population, what must be acknowledged is that they introduced the printing press in India and began the printing of books in Indian languages. And they promoted the vernacular languages, many of them, learning these themselves, before undertaking teaching. They also promoted the use of English.

In the later part of the 18th century, the missionaries gradually lost the support of the Company, as the latter was assuming political and administrative importance. The Company wanted to have an image of religious ‘neutrality’, and started to discourage missionaries, their schools and their teachings. This was a very big set-back for the missionaries. (Padma: 2005)

In England, William Wilberforce, Charles Grant and others lobbied for the revival of the missionary spirit and for missionaries to be sent out to India. Charles Grant studied the problems of education in India very closely when he had come to India in 1773. He wrote an essay entitled ‘Observation’, which contained a description of the educational conditions of the Indian people.

Charles Grant was of the view that medium of instruction should be the Indian language along with English as well. Special importance should be given to English in the education of Indian people, because it was through
English that they could catch up the latest trends in literature, science, philosophy, religion and other subjects. English alone would revolutionise the thoughts of the Indian people for enabling them to hold their own uniqueness ultimately. At first English teachers should be appointed and later they might be replaced as able Indians were available.

The British Parliament gradually accepted the suggestions given by Grant and the same were implemented. But this process took 40 years when in 1813 a Charter was published. This charter of 1813 revolutionized the enlightened opinion in India, gave a new direction to education. Therefore Charles Grant is regarded as the father of modern education in India. (Chandra: 2003)

Now it became a responsibility of the Company to make arrangement for education of the Indian people. Charter Act of 1813 made a provision for an annual grant of not less than one lakh rupees for the promotion of learning in India. The Christian missionaries were made free to spread education in the country on their own lines. The Charter had a good impact on the Indian people. Many enlightened Indians opened their own educational institutions to protect their civilization and culture. Thus there was expansion in the country before the next Charter was published after 20 years in 1833. During these 20 years both the modern and indigenous system of education expanded. Private Indian enterprise in the field of education, however, was very meager.
1.2. E.c. Educational History of Modern India.

To trace the growth of the modern system of education which came to be established in India during the British period, we can divide the entire period of the history of education in modern India under the following phases.

1. **First Phase: A Period of Neglect (1813-1902)**
   (Starting of Colonial Education System)

2. **Second Phase: A period of Intensive Agitation (1902-1918)**


1. **FIRST PHASE: A Period of Neglect (1813-1902).**

East India Company came to India for exploring business possibilities but it ultimately wanted to establish its own empire in the country. Towards the achievement of this goal, they mingled in Bengal politics. They obtained the Diwani powers in Bengal and acquired full control over the Nawab. They wanted to prove that they could control the affairs of the government much better than the Nawab. They paid attention to education in order to show that they were really interested in the public welfare. (Chandra: 2003)

The British parliament directed the East India Company to accept the responsibility to educate the people of India. The Company, which ignored the education of India for more than two long centuries, accepted this assignment being compelled to by the British Parliament.

When the modern education system began a question arose. The question was: should the Government educate a class or should it educate the masses as a whole. The East India Company adopted a mistaken policy, for
which mass education was obstructed. This policy is popularly known as the ‘Downward Filtration Theory’, which evolved between 1780 and 1833. This famous theory was openly supported by Lord Auckland in his minute in 1839.

Declaring it as Government policy, it was followed up to 1870 and emphasis was laid on the education of the people of higher classes in the society with the hope that this class would spread education among the masses through Indian languages. In the beginning this theory did not produce the desired results, mainly for two reasons. First, every person who received education in English schools got employment under Government and therefore, he had hardly any opportunity to go and teach the common man. Secondly, persons who were taught in English schools, in most cases, developed a superiority complex, and they formed a class by themselves.

Ultimately, however, the theory did work in the desired way. A stage was soon reached when all the English–knowing young men could not be absorbed in Government services. Consequently, several educated men took up the work of spreading education among the people as a means of their livelihood. Fortunately there were at least a few noble souls who turned to the development of education from a patriotic spirit.

Educated on western lines some people with a wider vision started schools for educating the general public. Thus an awakening took place.

The second major error of the education policy of the British Government was to emphasize higher education through English and to neglect primary
education. A controversy between the Orientalists and the Anglicists regarding the policy of education, medium of instructions, and method of teaching started.

On this issue opinions were divided into three schools. One school advocated the cause of Sanskrit and Arabic, and suggested that Western science and knowledge should spread through the medium of these languages. The second school advocated English as the medium of instruction. The third school upheld the cause of modern Indian languages. Though there were three schools, the real flight was fought between the first two schools. The oriental party was led by H.T. Princep who was then the secretary to the Government of Bengal in the education department. Old member of the Company’s service generally supported Princep. The anglicists had no definite leader. This group generally consisted of the younger servants of the Company of missionaries. (Dash: 2003).

When the controversy between the Orientalists and Anglicists (Classicists) reached a very acute stage. Lord William Bentick, the then Governor General, asked Macaulay’s the law member of his council to submit a minute on the issue. Macaulay presented his lengthy minute to lord Bentick in 1835. In the minute he advocated education of the classes in India and made a vigorous plea for spreading Western learning through medium of English. He thought that it was possible only through English education to bring about a class of persons, Indian in blood and colour, but English in tastes, in opinions, in morals and intellect.
Lord William Bentick at once accepted Macaulay’s views and opened a new chapter in the educational history of India. Princep, the leader of the Orientalists part, was asked to express his views on medium issue. In his letter of February 15, 1835, Princep dealt with all the arguments of Macaulay and advanced suggestions for improvement of Oriental literature and education. However, Lord Bentick rejected it. This ended the controversy between Anglicists and Orientalists. (Chandra: 2003)

**Wood’s Education Despatch-1854**

The next milestone is Charles Wood’s Despatch of 1854. The Despatch (drawn up by Wood’s Secretary, who became the Governor General of India later, Lord Northbook, at the time of the passing of the Indian Universities’ Act in 1904-05.) was the first authoritative declaration by the Government of its educational policy. The main purpose of the Despatch was to systematize Indian education which till 1853 was conducted by different agencies in the light of their own ideas of ideals. In order to fulfill the main task the Despatch suggested the introduction of some new schemes.

1. **Development of Public Instruction**
   
   The creation of the Department of Public Instruction in each of the five provinces of Bengal, Bombay, Madras, North-Western Province, the Punjab.

2. **Establishment of Universities**
   
   The Establishment of universities, in the three Presidency towns of Bombay, Calcutta & Madras, & if necessary at other places too. All the universities were to be modeled on the London University which was then an examining body.
3. Establishment of a network of high schools
Wood emphasised useful education for the public and increased the number of Primary, Middle and High schools. In order to co-ordinate education at these various levels, it was suggested to implement scholarships and other schemes.

4. Training of Teachers
In order to secure properly qualified teachers for schools the Dispatch suggested the training of teachers in normal schools. To induce men of better caliber to come to school service the Dispatch recommended ‘sufficient salary’ for school teachers.

5. Education of women
The Dispatch threw light on women’s education and praised the persons engaged in this pious work.

6. Vocational Education
The Dispatch put importance on vocational instruction, and to that end, suggested the need of establishing vocational colleges and schools of industry at suitable places, so that people may get such an education.

7. Encouragement to the Oriental Education
The Dispatch supported Western education through English medium for the Indians. However it also recommended the development of Indian literature.

8. Employment
About employment Wood laid down the following principle: while selecting candidates for Government services their academic qualifications should be well considered.
In short, as limited aim of education lay down by the Dispatch, it became the only means of earning one’s bread. The rich ancient Indian educational system was neglected. A time came when people educated on Western lines began to think that everything indigenous was bad, while anything Western was good.

Though it is true that Wood’s Dispatch clearly laid down the aim of education in India, due to it, British Parliament for the first time made an attempt to decide the educational policy in India and give it a legal form, but unfortunately this examination minded educational system destroyed the system of self-study and meditation. (Ibid)

The aims of education as described by the Dispatch were too narrow. The Dispatch did not aim at education for industrial regeneration or for leadership, or for fostering the patriotic spirit of the educants. Anyway the fact remains that the dispatch laid the foundation of the modern education system in India.

**Report of Hunter Commission (1882):**

Twenty eight years after the Dispatch of 1854 the Government of India appointed an education commission to enquire particularly into the manner in which effect has been given to the principles of the Dispatch of 1854 and to suggest such measures as it may think desirable in order to the further carrying out of the policy therein laid down. The commission of 1882 is popularly known as Hunter’s commission from the name of Sir William Hunter, the president of the commission.
Hunter commission tried to give a direction to Indian education which was in a bad shape. It drew the attention of the Government towards the neglect of vocational education and to overemphasis on bookish education.

However, following recommendation of the Commission have been very harmful:

- Support of English as the medium of instruction which resulted in neglecting the Indian languages.
- Charging lower fee in private institutions that led to the opening of schools of lower standard.
- Since education was entrusted to private enterprises, the Government became indifferent to education of the people.
- Control of inspection department over education caused loss of flexibility in education.

Through its inspectorate the government used to interfere in the working of institutions without any resultant responsibility for their improvement. (Ibid)

SECOND PHASE: A Period of Intensive Agitation (1902-1918)

The period from 1897 to 1902 was the period of silence in Indian history. Two dreadful famines and ravaging plagues had shaken India. In 1899 Lord Curzon was appointed Governor General of India. In his seven years’ rule, Curzon paid his attention to each and every aspect of administration.

Demand for National Education.

At this time, the wave of nationalism was flowing fast. Some able and sacrificing social reformers were demanding ‘National Education.’ They thought that only national education could safeguard the culture, civilization,
literature and language of India. Indian National Congress was established in 1885. It was the most popular national institution of the country. Later it brought freedom to India.

**Curzon’s Educational Policy.**

Lord Curzon convened under his chairmanship a conference at Shimla (1901) with the view to reform Indian education. He declared his educational policy as follows:

- British Government will continue to control every item of the education and also direct Indian education.
- Public Institutions will be established as and when needed. They shall serve as models for the private institutions.
- The Central Government will have complete control over Indian Education. Their educational policy shall also be conducted & directed.
- British Government will spend more money on education. (Ibid)

**The University Commission of 1902**

One of the first results of the Shimla conference was the appointment of the Indian Universities Commission in 1902 for the purpose of reforming the universities. The commission included two Indian members, and they were Sir Goorudas Banerjee and Syed Huesain Bilgrami.

On the basis of the recommendation of the Shimla Conference and the Indian Universities Commission, government issued the resolution on Government Education Policy in March, 1904, and passed the Indian Universities Act on 21st March, 1904. The Resolution noted that the Indian Education Commission’s (1882) recommendation to introduce alternative
courses in the secondary schools had not met with success. Government felt that there was necessity of diversified courses in order to meet the need of those boys who were detained for industrial or commercial pursuits. So the Resolution stated that it was essential to promote diversified types of secondary education, corresponding to the varying needs of practical life. In Pursuance of the Government Resolution, Lord Curzon adopted positive measures for improvement of every branch of education. (Dash: 2003)

The Government Resolution gave rise to high hopes and Indians expected that there would be a marked improvement of education within a short time. But as later events showed the hopes proved illusory. The government could not act on the declarations made by the Resolution. Of course, the outbreak of the First World War in 1914 was to a great extent responsible for arresting the progress of education in the country.

**National Spirit in Education.**

During the first quarter of the twentieth century an attempt was made to infuse education with a national spirit. This was considered necessary for weakening the foundation of British Empire and for winning freedom. The national movement also accelerated the development of this spirit. A demand for nationalisation of education arose. Mahatma Gandhi criticised the educational system and considered it unsuitable to Indian needs. (Chandra: 2003)

The partition of Bengal led to a country-wide agitation which developed into what has come to be known as the “Swadeshi Movement.” The economic aspect of this national movement was the boycott of foreign goods & the
use of swadeshi(i.e manufactured or made in India ) things, leading to a demand for technical and industrial education in order to manufacture all the articles needed by the country. (Dash: 2003)

At this time the leaders of the country felt very much agitated about the real nature of national education. Gradually, its shape came up on the surface.

- Education should be fully controlled by Indians.
- Education should generate this Spirit of Love for the Nation.
- The feeling of inferiority should be banished.
- The good things from all countries should be learnt.
- Vocational education should be encouraged.

These are some of the main features of ‘National Education’. (Chandra:2003)

‘National Education’ was organised firstly for those youths who were expelled from educational institutions for taking part in ‘Swadeshi Movement’. An official circular forbidding their participation in any political meeting or activities caused further uprising among the students and a more insistent demand for a national system of education. Rabindranath Tagore, Aurobindo Ghosh and Sir Goorudas Banergee led the movement. Lakhs of rupees were quickly subscribed for the purpose, and a comprehensive scheme of national education, from the infant class right up to the highest degree was drawn up. The National Council of Education was founded and a national college was established at Calcutta with Aurobindo Ghosh as its first principal. A technical institute and numerous national schools were also started all over the country.
The Japanese victory over Russia in 1905 also stimulated Indian nationalism. Everyone thought that it seemed to indicate that India also could now throw off the foreign yoke, if it followed Japan’s example.

But gradually the great enthusiasm subsided, the National College closed down and the National schools disappeared almost as quickly as they had sprung up. (Dash: 2003)

THIRD PHASE: A Period of Experiment (1918-1947).

The close of the First World War marked a turning point in the history of universal compulsory education in India. Though this economically unproductive war caused horrible destruction, it still brought a new era in the political, social and cultural life of the people of India.

The Government of India Act 1919 created provincial legislatures to which our people were elected. During the period from 1921, there was plenty of activity on the political front and educational developments were interwoven with them.

- Dyarchy was introduced in the field of education by which some subjects were under the Centre, some others were under the provincial Governments. These were called reserved and transferred respectively (Chandra:2003)
- The Central Advisory Board of Education which had been established in 1921 to abhor (regard with disgust and hated) advice on educational matters to the provinces and to conduct educational surveys was abolished in 1923 as a measure of economy.
- Meanwhile, the Indian National Congress was aggrieved with the Montague-Chelmsford (Montford) Reforms of 1919. (Dyarchy)
In 1920, the Non-Cooperation Resolution of the Congress was passed and there was a move to withdraw students from government schools to start a national education movement all over again.

**Hartog Committee (1929).**
The next milestone, again in the form of stock-taking and recommendations for remedial measures, was the Hartog Committee on education (set up to help the Simon Commission when it was deliberating on political reforms). Hartog committee noted the considerable progress in education in all the three tiers—primary, secondary and higher education—during the decade 1917-27. It gave some important suggestions regarding vocational educational. They are:

- A student should have the opportunity to choose industrial and vocational courses after middle school.
- To diversify the courses and curriculum at secondary school level so that children could take up suitable vocations at the end of that level, based upon what they had been taught and trained in. (Padma:2005)

**The Abbott-Wood Report, 1937**
Since 1931 there had been a slump in the economic field in India resulting into much unemployment. Therefore in 1936-37 the Government of India invited two British experts, A. Abbott and S. H. Wood, to come to India and prepare a plan for vocational education in the country.

By encouraging education a quick solution of the problem on unemployment was to be found in the reconstruction of educational system. The committee strongly believed the problem of unemployment in India could be solved only through industrial development of the country.
It, therefore wrote, “The development of the industry which will offer employment, depends upon the natural sources of the country, climate, conditions and upon actions in the fields of economics and politics, which do not come within our terms of references.” (Chandra: 2003)

Following are the important recommendations made regarding vocational education:

- Vocational education is not on a lower plane than literary education, since the full purpose of education is to develop the whole power of the mind, body and spirit so that it may be devoted to the welfare of the society.

- Effective machinery should be established for securing close and regular cooperation between industry and commerce, on the one hand, and education on the other. The establishment in each province of a Government Advisory Council for Vocational Education was recommended.

- General and vocational education are not essentially different branches, but the earlier and later phases of a continuous process. Each subject in the vocational school has its origin in the non-vocational school.

- General and vocational education should not, however, be provided in the same school, since the pupils in the two types have very diverse aims. Education for industry can, with certain safeguards, be given in the same school as education for commerce.

- Industry and commerce must co-operate with educational organisations if the vocational education provided is to be appropriate and adequate. Organised co-operation of this kind does not yet exist in India.

- There should be full time Junior and senior vocational schools on the model of Junior and senior technical schools in England.
i) “The Junior Vocational Education Schools, receiving its pupils at the end of class VIII and providing a three years” course, would be parallel to the "higher secondary school," and should be held in the same repute.

ii) The senior vocational school, receiving its pupils at the end of class XI and providing a two years’ course, would be parallel to the ‘intermediate college’.

- Part-time schools should be provided for the further education of young men already in employment and, if possible, the classes should be held in the day time, the students being released by their employers for two half-days a week in order that they might attend.

- The ‘leaving certificates’ at the end of the vocational school courses should “testify not only to the success obtained in the final examination, but also to the quality of the work done throughout the course,” including the candidate’s “percentage of attendance, and his marks for work done in the classroom, the workshop, the laboratory, and at home throughout the whole of his course.”

- “A limited number of higher secondary schools should have a bias towards the needs of agriculture throughout their curriculum, which should be a continuation of that of the rural middle school.”

- There were several trades, industries and technical schools in the U.P and the other schools of arts and crafts should be started. Greater use of the museums should be made by building up a “Loan collection” and Departments of industries concerned were advised to “consider (a) the policy of concentrating the instruction into a smaller number of institutions, and (b) the policy of raising the standard of entrance to some of the schools, and thus diminishing the time spent in them by each student.”

- The schools in India devote insufficient attention to the teaching of art and there is a serious risk of the artistic traditions of India being weakened. The spheres of influence of the existing schools of art and
crafts should be enlarged considerably lending good samples and photographs of these to the industrial and technical schools.

In view of the importance of the vocational guidance of boys when they are on the point of deciding upon their future occupations, it is desirable that the problem of devising suitable methods for this should be attacked in India, as it has been in so many other countries. (Abbott-Wood Report: 1937)

For various reasons little effect could be given to the recommendations of Messrs Wood & Abbott. As the Second World War broke out and the Congress ministers had to resign, the report remained only a valuable piece of document.

Between 1938 and 1943 the Central Advisory Board of Education, however appointed several committees to review various educational problems in the country and make suitable recommendations. The recommendations of all these committees have been generally incorporated in the most important reports of the Central Advisory Board of education on “post-war Educational Development in India” (1944) which is popularly known as the “Sergeant Scheme”. Sergeant Scheme of Education has a historical importance from the point of view of development of national education system. It is a comprehensive treatise on the problems and future organizations of Primary to University education in India. This was the first report that presented a comprehensive picture of education in India. (Dash: 2003)

**A Decade of Provincial Autonomy 1937-1947**

The Government of India Act, 1935, introduced some constitutional reforms and Congress ministers were formed in 7 out of 11 provinces. The
All-India Educational Conference held at Wardha in October, 1937 discussed the ideas of Gandhiji regarding the problem of education in India and about the education should be given through "a profit-yielding vocation" and passed the following resolutions.

- Free and compulsory education be provided for 7 years on a nationwide scale.
- The process of education throughout this period should centre round some form of manual and productive work and all other training to be given to the child should be integrally related to the central handicrafts.
- The medium of instruction should be the mother-tongue.

This conference also appointed a committee under the chairmanship of Dr. Zakir Hussain to prepare a scheme of education based upon the suggestions made in this resolution. (Ibid)

**Zakir Hussain Committee's Report**

In 1937, the Congress Ministry assumed responsibility of administration in seven major Provinces of India and concentrated their attention on educational reforms. In October 1937, an all-India National Educational Conference was summoned at Wardha under the presidentship of Mahatma Gandhi and the following resolutions were adopted:

- That in the opinion of this conference free and compulsory education be provided for seven years on a nation-wide scale;
- That the medium of instruction be the mother-tongue;
- That the conference endorses the proposal made by Mahatma Gandhi that the process of education throughout this period should centre around some form of manual and productive work, and that all other abilities to be developed or training to be given should, as far as possible, be integrally related to the central
handicraft chosen with due regard to the environment of the child; and

- That the conference expects that this system of education will be gradually able to cover the remuneration of teachers.

The conference then appointed a committee 'with Dr. Zakir Hussain as its chairman. The Committee submitted its report on December 2, 1937, and the scheme of education suggested by it is popularly known as the "Wardha Scheme", the main features of which are as follows:

- A Basic Craft is to serve as the centre of instruction. The idea is not to teach some handicraft side by side with liberal education, but the entire education is to be imparted through some industry or vocation;

- The scheme is to be self-supporting to the extent of covering teachers' salaries and aims at making pupils self-supporting after the completion of their course;

- Manual labour is insisted on so that every individual may learn to earn his living through it in later life. It is also considered non-violent, since an individual does not snatch away the living of others with the help of a machine; and Instruction is closely coordinated with the child's life, i.e., his home and village crafts and occupations.

In short the Wardha scheme proposed by Dr. Zakir Hussain (or “Nai Talim” as it was known) emphasised complete development of the child to include character formation, a spirit of self-reliance and spiritualism along with democratic ideas. Dignity of manual and physical labour, non-violence, the adherence to truth and peace and access to education for all would be the pillars of such an education and this constituted Gandhiji's ideal of “Sarvodaya”.
The Haripura meeting of the Indian National Congress which met in February 1938, endorsed the scheme and it was immediately taken up for implementation in the seven provinces with Congress Ministers.

At this time owing to many political problems and the clouds of war looming large and the beginning of World War II in 1939, the Congress Ministers had to step down and that was the end of Gandhiji’s educational experiment. But by 1943, again, when the war was drawing to its close, provincial Governments were asked to draw up plans for reconstruction which included education development.

**The Sergeant Report**

The Reconstruction committee of the Government of India asked the education Advisor of the Government, John Sergeant, to prepare a memorandum on post-war educational development. The (ABE at its meeting in October 1943 and January 1944 accepted his report which envisaged that India should catch up with contemporary England’s position within a period of forty years. The sergeant plan or the ‘Post war education Development Report’ 1944 was the last of the efforts undertaken by the British rulers to ‘improve’ education in India. It was based on the system prevalent in England at that time and drew also on earlier reports, including the latest one on basic education. But this was the first time any report talked of pre-primary education in a National Scheme of Education. The Report made recommendations for the system, the curriculum and on administration.
The Report also recommended that at the Middle School stage, provision should be made for a variety of courses, extending over a period of five years after the age of 11. These courses while preserving an essentially cultural character should be designed to prepare the pupils for entry into industrial and commercial occupations as well as into the Universities. It was recommended that the High School course should cover 6 years, the normal age of admission being 11 years & that the High Schools should be of two main types- i) academic, (ii) technical. The objective of both should be to provide a good all-round education combined with some preparation in the later stages for the careers which pupils will pursue on leaving schools. (Padma: 2005)

1.2. F. General Education in India since Independence

India is a democratic, dynamic and developing country, engaged in the task of bringing about social, political, economic, cultural and educational development of its national life in a systematic and orderly manner. This can be done only by adopting techniques and approaches of planning in its educational system.

Accordingly many new things were done such as the setting up of important Commissions like the University Education Commission, under the Chairmanship of Dr.S.Radhakrishnan, in 1948; the Secondary Education Commission under the Chairmanship of Dr.A Lakshmanswami Mudaliar, the Vice-Chancellor of Madras University in 1952,a National Educational Integration Committee under the Chairmanship of Dr.Sampurnanand in
1961, the comprehensive Kothari Commission 1964, and many other committees at national and state levels.

There was not much in the nature of ‘revolution’ in the changes that came about until well into the eighties – everything beginning well and ending with a tinkering of sorts. The ground had indeed been set by these committees with their many recommendations, but the country really came to grips with the monumental task of laying down goals for a national education scheme and devising a common policy, structure, design and strategy for implementation only with the declaration of the National Policy on Education (NPE) in 1986 with its Programme of Action (POA-1986). This was reviewed and the measures to be taken for correction and modification as necessary were brought out in a Programme of Action in 1992 (POA-1992). The NPE and POA of 1986 and the POA of 1992 have been and are the basic documents of guidance for planning and implementation in the field of education in India. (Ibid)

1.2. F.a. Present Education Scenario in India:

The education scenario in India today is briefly as follows:

- There is a broad uniform pattern of education provided by the State-ten years of school education, two years of higher secondary education (called ‘Plus Two’) and three years to obtain a degree. Pre-primary education of children is looked after largely by private bodies, though there is great government concern for providing early childhood care.

- A child enters school in Class 1 at five plus and is expected to complete primary education (class V) at age 11+ years, class VIII
(upper primary) at the age of 14+ years, the secondary education of two years by age 16 or so, and higher secondary (classes XI and XII) at the age of 18 years or so.

- Facilities not only for formal education in schools and colleges but also research facilities as well as technical and professional education at various stages are available through Institutes of Technical Education (ITIS), Polytechnics and colleges in spheres such as Teachers’ Training, Physical Education, Engineering, Agriculture, Medicine, Pharmaceutical and now Information Technology.

- There are also large numbers requiring education of some kind—be it out-of-school children, adults wanting or needing literacy, education and technical skills and those who could not pursue it in their early years, but want to do so after some years—for them, there are open schools and Universities and Distance Education and now Online Education is available through the help of Computers. Although quantitative expansion took place by leaps and bounds at almost every level and for different groups of people all over the country immediately after independence and is still going on, the facilities do not match the requirement.

Our concept of education and hence of educational institutions has undergone a great change in recent years. Education is no more limited to the building up of knowledge, skills and character of the students. Education now has to have social concerns for the employment of the youth and for the value system to be inculcated in keeping with the ideals enshrined in our Constitution. Students and institutions are to be involved in study, work and services related to national development which has come to be called the third dimension of education. Research and creative activities of the
students and institutions are also to be channelised for tackling specific problems of regional and national development. This new concept has great potentialities for making education an investment rather than merely a social service. Through its linkages with research institutions, industry, agriculture, a variety of services and the government, the University should be in a position to offer enriched academic programmes without in any way adversely affecting its autonomy. (Ibid)

1.3. The Status of Women in India

The status of women in Indian society has been a complicated one. It passed through fluctuations over the ages. While it was high during the Vedic period, it slumped in the post-Vedic period. Again, in the modern period it has risen. Education of women is directly dependent and closely related to their social status. Education of women is essential for happy and healthy homes, improvement of society, economic prosperity, and national solidarity. Education appears to function as an intermediate agency between the family and work by providing access to the economic or social rewards or financial benefits and prestige that accrue to individuals and their families from employment or work. (Desai Neera: A Trend Report)

Education will be used as an agent of basic changes in the status of women. The National Education System will play a positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigned curricula, textbooks, the training and orientation of teachers, decision-makers and administrators, and the active involvement of educational institutes.
Women’s studies will be promoted as a part of various courses. To remove the obstacles inhibiting women’s development, major emphasis will be laid on women’s participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate gender stereotyping in vocational and professional courses and to promote women’s participation in non-traditional occupations, as well as in existing and emergent technologies.

Having determined that the status accorded to women considerably influences the opportunities and facilities for their education, it is important for us to study the history of their social role in India, and attempt to relate it to the development of their education.

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traditional occupations, as well as in existing and emergent technologies. (Aggarwal:2004)

1.3. A. Education for women’s equality

1.3. A.a. Women’s Education during Ancient and Medieval Period

- Ancient Period

Women play a prominent role in the cultural, economic, political, religious and social life of a country. The ancient people of India fully realised this fact and accorded a reasonable status to women and encouraged their education. ‘Education of girls saw changes from Vedic (2000 B.C. to 1000 B.C) to Post-Vedic (1000 B. C. to 200 B.C) periods.’ In pre-Vedic times, women are known to have taken part in all religious activities. In the early Vedic period also, women particularly of higher castes were admitted to full religious rites and participated actively in religious sacrifices, along with their husbands. As women were required to utter some ‘mantras’ they had to undergo a period of formal education to help them acquire the competence to memorize and recite the verses with clarity and correctness. The ‘Upanayana’ ceremony also had to be performed for them.

We read of women scholars of the period who overcame many constraints. They equaled and at times even surpassed men in their scholarship. Gargi and Maitreyi, are well known among them. (Padma: 2005)

The institution of marriage was apparently well established, although not yet compulsory, it was considered a social and religious duty. The girls not only had an effective voice in the selection of a husband, but could remain single if they so wished – the unmarried scholars Apala, Atreyi and Ghosha may
be cited in evidence of this. Unmarried girls also enjoyed some property rights. The husband and wife were regarded as the joint owners of the household and the property. Widows were permitted to remarry. (Laxmi Misra: 1966)

Towards the end of the post-Vedic period around 250 B.C., there is a change in the position of women in society, although women were not confined to the house, their movements were restricted to prevent their appearance in public. Early marriage of girls had been advocated even earlier. It slowly became mandatory. Fathers were criticised for not arranging the marriage of the daughters before puberty and ‘Brahmin’ men were prevented from marrying girls older than twelve years. Education for girls was stopped after marriage. Married at an early age, women rarely received more than an elementary education, and they were deprived of the opportunity to devote their lives to study. ‘Upanayana’ ritual was not considered compulsory for women and was gradually stopped. Access to education was limited and education of women was not considered essential. (Padma: 2005)

Manu who exerted a great influence on the social customs of the time was of the opinion that marriage of girls was equal to initiation into the study of ‘Vedas’ and the period of their household duties was considered equal to the ‘Brhmacharya’ period. Further doing household duties was as good as participating in religious activities. (Vakil K.S.:1966)

During the period of 200 B.C. to A.D.1200, India was subjected to a virtually continuous series of foreign invasions and occupations, which seriously
affected the morale of her people. There was a growing tendency to regard women as fragile and morally weak. Ill educated and unfamiliar with the realities with the world outside their homes, their status remained very low. During this period the young bride learnt those things which were so essential for keeping up the tradition of the family. In her father’s house she learnt to perform her domestic duties and also that life was not for enjoyment but for the fulfillment of duty enjoyed upon her by society. She learnt to surrender her individuality in the interest of the family.

In the houses of learned persons young girls often heard lessons being taught to young students and they often learnt the subjects without being taught. In richer families special teachers were employed for teaching various arts which were treated as feminine embellishments. These arts included toilet ointments, music, dancing, painting, garland-making, sewing, patching, composing poems, magic and preparation of toys among many others (Dash:2003)

- **Medieval Period**

    Muslim rule which extended for over seven centuries is identified as the medieval period in Indian History. Purdah system has been a part of Muslim culture and was strictly observed during the Muslim rule in India. Girls were not allowed to go to a Madrasah for receiving higher education. However, they were allowed to go to a Maktab for primary education. The girls could learn only reading, writing and arithmetic. Arrangements for education of princesses were made in the palace. Similarly, rich people used to arrange for education of their girls in their own homes. However, as only the royal
princesses and ladies and daughters of very rich people could receive education during the Muslim Period, education of common Muslim women was completely ignored.

The period closed with Aurangzeb (1659-1707) who reacted against the growth of Hindu educational institutions, culture and art. (Chandra: 2003)

Thus at the dawn of British rule, women were in a sorry state. The Vedic Liberties enjoyed by them were long forgotten.

1.3. A.b. Education of Women in British India.
(From 1700 to the beginning of the Diarchy, 1921.)

Little indigenous effort was made in the field of education until the close of this period, and most of the credit for what was achieved was due to the British, American, German and Danish missionary organizations active in India, handicapped though they were in the early part of this period by restrictions imposed by the British legislature under its ‘non-interference’ policy. When the ‘non-interference’ restrictions were finally removed in 1813, there followed half a century of intense missionary activity in the field of education, they opened many schools, including day and boarding schools for girls and extended ‘Zenana’ education. (Laxmi Misra: 1966)

(‘Zenana’ education- Domestic instruction to girls and women in the families of middle and higher classes by Christian governesses, Hindu and Brahma associations, carried on especially in Calcutta)

By the year 1829 no fewer than 400 female pupils were receiving instructions in missionary schools. By 1854 there were probably 7000 girls at schools conducted by missionary societies, and, although the bulk of these were native Christians, there was also a considerable proportion of
Hindus belonging to the higher castes. (Report of the Education Commission: 1883)

Though, East India Company Act, 1813 sanctioned the grant for the introduction and promotion of knowledge of the sciences among the inhabitants of the British territories in India, none of this grant was spent on women’s education. It was not until 1854 that the Government recognized schools and colleges for women under the State Educational System.

Female education was an important item in the Despatch of 1854. It was the first time that female education was recognized as a responsibility of the Government. Even then, it had a long rugged path to travel. Hindu and Muslim prejudices against the education of women in India were strong and deeply rooted.

Purdah and child marriage still severely limited the number of girls permitted to receive more than an elementary formal education. Apart from that distrust in the western system of education, financial pressure on the middle classes, lack of women teachers and girls’ schools, absence of a suitable curriculum for girls and lack of material consideration, formed contributing factor in boy’s education, only added to the problems of women’s education. But owing to the efforts of some enthusiastic educational inspectors like Ishwar Chandra Vidyasagar and Gopal Singh, a number of girls’ schools were established in the United Provinces (now Uttar Pradesh). In the same way due to individual efforts, such schools were opened in many parts of the country.
Teacher Training

Despite Wood’s Dispatch recommending that the Government sponsor a programme to open many more teacher training colleges, no immediate action was taken. Only the Western missionary societies had established a number of training institutions. But as Bible-teaching was a compulsory subject, Hindu & Muslim women could not, or rather, would not attend them. Miss Mary Carpenter (1807-1877), a philanthropist, trained as teacher worked very hard to establish a number of teacher training schools. Aided by a Government grant and the generosity of certain Maratha chiefs and leading Parsis, she opened training schools in Bombay, Pune, and Ahmedabad in 1868. By 1882 her schools had produced thirty-four trained teachers.

Private Ventures in Women’s Education

A considerable amount of work was done in the field of education by private individuals and secular organisations. Bramho Samaj, a theistic sect of Bengal founded by Raja Ram Mohan Roy in 1828 published periodicals, the purpose of which was to promote women’s education. In 1877 Sasipada Banerji started a “Hindu Widows’ Home” where widows could find shelter, relief and be trained in teaching, a cottage industry or domestic science. (Laxmi Misra: 1966)

Ishwar Chandra Vidyasagar, Keshav Chandra Sen, Swami Dayanand Sarswati, B.M.Malabari, Swami Vivekanand and Rabindranath Tagore, among others, were great advocates of women’s education. In December 1893, Maharshi Dhondo Keshav Karve founded the “Widow Remarriage
Association" at Wardha, and three years later, the "Anath Balikashram" for widows. In 1907, he opened the "Mahila Vidyalaya" in Pune, the "Maharashtra Village Primary Education Society" in 1926, the "Samta Sangha" in 1944 and the "Caste Abolition Sangh" in 1948.

Maharshee Karve established first Women's University in India in 1916 and later, it is known as Shrimati Nathibai Damodar Thackersey, (S.N.D.T.) Women's University, Mumbai, with generous donation of Rs.15 lakhs given by Thakersey group. Today it is known as one of the best institutions in India.

Towards the end of the nineteenth century Pandita Ramabai opened the "Sharda Sadan" at Pune. The Parsi Community in Bombay established a number of schools; by 1913 they were running eight of the ten high schools in Bombay.

The early years of the 20th Century saw remarkable activity on the women's education front when many women missionaries came to India and gave a boost to women's education. Margaret Cousins an English woman, started the "Women's Indian Association" in Madras, for promoting women's education and for representing women's political and other interests before government, with support from Annie Besant & Sarojini Naidu. (Padma: 2005)

The Sadler Commission of 1917 noted the poor progress of women's education. It advised that women needed to be consulted in the matter of girls' education. In 1927 the All India Women's Conference which met in Pune, drew up a significant document, detailing, among other things, the
definition of ‘Education’, the need for moral training and physical education for girls and boys, as well as systematic medical inspection. It deplored the effect of early marriage on girls’ education, and suggested that for girls in ‘purdah’, proper facilities be provided for education. Girls must be taught the ideals of motherhood and maintaining a good home, it said. (Ibid)

The literacy percentage of women was only 3% in 1937. Great disparity existed between the education of boys and girls. In 1937, while 50% of the boys between the ages of six & seven years were attending schools, only 16 percent of girls (of that age group) were doing so.

Despite these low figures, one important feature of the period during 1922 to 1937 was that some modifications were made in the curricula to make them more suitable to the girls and to the local conditions and people. In a number of elementary schools in Madras, provision was made for vocational instruction such as weaving, spinning, basket making, lace-making, and embroidery. In Bombay, instruction in hygiene, first aid, cooking, household management, sewing, laundering, and gardening was given to girls in elementary and training schools. Vocal and instrumental music was introduced in all the schools in Bengal. The important feature in this period was not the actual figures of the girl pupils and institutions, but the change of atmosphere towards the education of women. Everywhere in India the need of education for girls as much as for boys was recognised.

There were many problems that were presented by women’s education:

- It was not a planned effort.
- It was merely an imitation of boy’s education.
- Resources for the education of women were ridiculously small.
• More arts, training and professional colleges were needed.

• Co-educational institutions were co-educational in name only, as the interests of girls were not properly looked after. The staff consisted mainly of male teachers.

• Courses of instruction had no direct bearing on the lives, surroundings and needs of the girls.

• Physical education was not imparted.

• Moral education which is important for character building and which is the essence of Indian life was completely ignored.

• As regards expenditure, whatever money was sanctioned for education, was not properly divided between girls’ and boys’ education.

• Women’s education needed more financial assistance. (Laxmi Misra: 1966)

1.3. A.c. Education of Women during the “Provincial Autonomy” (1937-47)

The period between 1937 and 1947, is generally known as the period of Provincial Autonomy. These ten years witnessed the administration of Congress ministers, then a Caretaker Government and finally the Interim Government. This period began with another Act, this time the Government of India Act of 1935.It proposed autonomy for the provinces and federation at the centre, incorporating British India and the States.

The provinces became self-governing, that is governed by ministries responsible to the provincial legislatures and the electorate. Education, which until then had been a transferred subject, with some reservations, in the hands of Indian ministers, was now the sole responsibility of the provincial ministers.
The period immediately preceding the division of India was marked by frantic political activity and unrest. This political activity and national movement, though aimed at political freedom, had immense side effects on the position of women. The practice of purdah the main obstacle to the growth of education for women was almost completely stopped; women who took part in the political struggle became the champions of social awakening. The World War had already made them come out from behind their four walls. The need to educate women was universally acknowledged. Women began to be attracted by the idea of a career. Moreover, the economic aspect encouraged them to seek employment. The problems of women’s education were almost the same as mentioned before. Actually, the main problem of education in general, and specially of women’s education, was that it had grown at random. It neither aimed at definite results, nor produced them.

No doubt the British Government instituted inquiries with a view to improving the existing conditions many times. The Education Dispatch of 1854, The Hunter Commission of 1882, The Calcutta University Commission 1917-18, The Indian Statutory Commission 1927 and finally in 1944, the Central Advisory Board of Education—all these made thorough inquiries into the problems and made important recommendations, but financial restrictions and social customs always came in the way and somehow few of these recommendations could be brought into effect. (Ibid)
1.3. A.d. Women’s Education in Independent India.

It is only after the constitution of independent India guaranteed equal rights for women not only in legal, social, political spheres but educationally also. Education of girls has been high on the national agenda since independence. The Government of India, Ministry of Education accordingly set up following Committees and Commissions to discuss the various issues relating to women’s education:

- The University Education Commission (1948-49)
- Smt.Durgabai Deshmukh Committee (1959)
- Smt.Hansa Mehta Committee (1962)
- M.Bhaktvatsalam Committee to took into the causes of Public Support Particularly in Rural Areas for Girls Education & to enlist Public Cooperation.
- Education Commission (1964-66)
- Resolution on the National Policy on Education (1968)
- Challenge of Education (1985)
- Programme of Action (1986)

Several strategies were adopted to promote education of girls as an integral part of the planned socio-economic development of the country. (Nayar Usha: 2000) The status of women is being influenced by education, economic priorities, political decisions, family socialization and social values. Various researches – studies are undertaken in this context to provide deeper insights into the problems of women.
The growth of women’s studies, its acceptance in the institutions of higher education by the University Grants Commission and bodies like the ICSSR, ICHR, and NCERT have resulted in generating a new understanding and analysis of women’s problems. The major contributions of scholars of women’s studies have been undertaking research in areas where, so far not much work has been done and making problems of women visible, secondly, using methods and perspectives which help to understand the problems not only of middle —class women but also of poor women, thirdly their enriching of various disciplines through theoretical discussions and initiating new analytical concepts — and finally, by considering findings, contributing to efforts to remove the elitist bias of our societal system which negatively affects the status of women. (Desai Neera: A Trend Report)

The Constitution of India pledges equality of opportunity, social, economic and political justice and dignity of the individual to both men and women. Several laws incorporating social reforms are being made to remedy the injustice being made to women. But unfortunately equality in law becomes meaningless in light of the prevailing ignorance and complete lack of education among large masses of women, and the fact that social attitudes have not changed much except among a limited number. (Swarn Latha: 1993)
1.3. B. Studies related to Women’s Education in India.

Does education change the personality of women?

Many studies have been done regarding this i.e. Lindenbaum also found that percentage of divorce is less among educated women than illiterate women.

Amin studied in Bangladesh, Levine (1980), Lindenbaum (1990)

Lindenbaum and Amin both did studies in Bangladesh, but in different territories. They found totally different findings. According to Lindenbaum – because of education women can work independently, gain self esteem, financially have more importance, the reasons are because of less expenditure on their marriages, they are more capable of handling the home economy, by taking tuitions of their own children they can save the money. (1993), considering the same points which Lindenbaum studied. He found the results totally opposite of Lindenbaum’s findings. Shri Dasgupta did study in some villages of North India (1987, 1990). His findings are the same as Amin’s findings. So one can not say that their findings are universal. Lindenbaum thinks there should be more research done on, “what do parents think about their daughter’s education?” or “what perspective do girls have regarding their education?”

Theoretical discussion of Amartya Sen (1990) that education changes the status of women is correlated to Lindenbaum’s thinking. He says – through education an earning capacity increases in the women, which makes them able to face the problems that arise in their lives and also express their opinion firmly.
According to Trend Report: Neera Desai (Research in women’s education) where economic and social inequalities are widespread, the importance of educational equality as a goal assumes special importance. In a developing society, education is a fundamental pre-requisite of getting knowledge and skill which enhance status.

When a section of society (in the present context 90 percent of the girls) is denied access to knowledge and skills, this denial also means denial of status and power.

Sociologists have examined the notion of equality in the context of socio-economic structure (Gore, M.S.1986, Beteille, Andre1983; Chanana, Karuna, 1988). The intervention of class and gender forces also explains, to an extent, the paradoxical reality that more education does not mean more liberation for women (Karlekar, 1987). In the case of women, the promulgation of rights is not enough; efforts have to be made to change social attitudes, values and institutions affecting women’s participation in the larger life of the community.

A research area which needs exploration is the phenomenon of devaluation of education for women. Due to the pattern of economic development, more and more women are being employed in the unorganised sector and unpaid family labour. Most of the time, unskilled and semi-skilled female labour appears to enjoy relatively more employment opportunities than women with a secondary or even a non-science-based higher education in some countries. (Raj 1982)
1.4. Vocational Education

1.4. A. Introduction
Since the beginning of time occupational knowledge and manual skills have, in one form or another, been transmitted from man to man and from generation to generation. This transmitting process, whatever its form of organisation, has developed into the educational process that has now given rise to expansions and developments of what may be termed as “Vocational Education”. The term “vocational education” is meant to cover both unorganised and organised methods of transmitting knowledge, skills and competences.

Through the ages, however, there has been but one way for the unskilled worker to learn to do his work, namely, the “pick up” method, in which observation, imitation and individual initiative constitute the sole means of training. It is only in recent years that any serious attention is given to the training of the unskilled worker to do his tasks efficiently. The novel developments in science and technology have tended to expand vocational areas for which organised education or training is required. Vocational education and training has thus become both a consequence and a cause of progress. (Rao: 1999)

1.4. A. a. Definitions
For understanding the meaning and concept of Vocational Education, we may refer to its important definitions.

- The American Educator’s Encyclopedia’ (1982) Defines vocational education as “a part of the school curriculum designed to make the student employable at least in one occupation.”
Carter V. Good in ‘Dictionary of Education’ (1973) has stated, “Vocational Education is a programme of education below college grade organised to prepare the learner for entrance into a particular chosen vocation or to upgrade employed workers”

The Encyclopedia America (1985), defines vocational education in these words, “the preparation of young people and adults for skilled trades and semi-professional careers. It is most frequently offered at the high school or junior college level and does not normally offer training for professions such as law and medicine.”

UNESCO, in its recommendations of 1947 defined it as a “comprehensive term embracing those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in the various sectors of economic and social life.”

Regarding the concept of vocationalization, the Kothari Commission (1964-66) stated, “We visualize the future trend of school education to be towards a fruitful mingling of general and vocational education - general education containing some elements of pre-vocational and technical education and vocational education in turn, having an element of general education.”

In the words of National Review Committee or Adiseshiah Committee (1978) “The vocationalised spectrum of the Higher Secondary School is learning of a skill or a range of skills, through study of technologies, related sciences and form or other practical work.”

The National Working Group (1985) constituted by the Ministry of Education, Government of India under the chairmanship of V.C Kulandaiswamy, Vice-Chancellor of Anna University, explained the concept of vocational education as “Traditionally ‘vocational education’ has been understood as education designed to prepare skilled personnel at lower levels of occupations, trade or jobs. Vocational education has been usually provided at upper secondary level.”
The last definition quite fits in the present scenario of India.


There are several differing concepts of Vocational Education or Training

1. **Vocational education is the education or training of workers.**
   This concept implies that any kind of education or training in which a worker participates is Vocational education. Implicit in the concept is the meaning that working class children be trained for factory work simply because that is their destiny. This kind of thinking does not fit in with the principle of equal educational opportunity.

2. **Vocational education is the education for manual work.**
   This concept centers on the ideas of ability to work with hands rather than mind -- with a curriculum of certain manual activities like leather work, wood work, metal work, drawing work for example. This concept has resulted in the present-day practice of placing drop-outs, physically handicapped and socially disadvantaged young people in vocational courses without considering the learner’s interest and ability.

3. **Vocational education is education in certain specified subjects, which may be of a Vocational or technical nature, generally confined to the secondary stage of education.**
   This concept implies that a specified part of the curriculum is vocational or technical, the remaining part falling under general or liberal education coverage. Here vocational education is not designed to take the place of general education but to supplement it.

4. **Vocational education is that education which is craft-oriented.**
   The major objective of craft-oriented education or training is to aid learners in the greatest work efficiency possible in earning their living by providing special instruction in single crafts or trades. The education or training given in this manner lacks the academic aspects of education.

5. **Vocational education is education for productive purposes or socially useful productive work.**
   When the object is a product or a service for consumer use, the work involved is termed as productive work or socially useful productive work. Implicit in this modern concept is the meaning that as the individual
seeks and finds new and improved ways of working through education or training, he increases his vocational efficiency. This concept leads to the theme that “all education, when considered in relation to the great masses of the people of a country, must be measured finally by the single test of usefulness and utility.” Education imparted in this manner should aim at the development of proficient workers as well as good citizens. (Ibid)

6. Vocational Training
The part of vocational education that offers the special vocational knowledge and skills required for particular occupations. Vocational training usually is offered by organizations, which are outside the “formal” system, while the opposite happens with vocational education, which is included in the formal system.

7. Skill
The relevant knowledge and experience needed to perform a specific task or job and/or the product of education, training and experience which, together with relevant know-how, is the characteristics of technical knowledge. The notion of skill is sometimes ill defined. It refers to (and partly overlaps with) other basic concepts such as competence, qualification and knowledge.

8. Skill ownership (a new education concept)
The owner of a skill is conscious and owner of his/her possession of the ability to organize & effectively carry out such actions a will produce desired result (in a variety of contacts).

9. Vocational Rehabilitation Services
Services that include job finding/development, assessment-enhancement of work-related skills, attitudes, and behaviors as well as provision of job experience to clients/patients. Includes transitional employment.

10. Linkages: Curriculum Certification
- Establishment of required knowledge, skills, and abilities for secondary occupational education programs by federally recognized employer/labour organizations;
- Development of a procedure by which high schools can have their secondary occupational education program certified by the appropriate employer/labour organization as meeting their requirements; and development of a process by which successful completers of the approved occupational education program can receive industry-recognized credentials and access to related postsecondary education and training.

11. Apprenticeship

 Apprenticeship training, as a method of instruction, consists of an arrangement in which an employer and an employee (the apprentice) enter into a relationship in which the apprentice learns a highly skilled occupation. Each county vocational-technical school district employs an apprenticeship coordinator who is responsible for working directly with local sponsors in maintaining their apprenticeship training programs. The coordinator also assists new sponsors in setting up apprenticeship programs. The length of the apprenticeship program depends on the complexity of the occupation. The programs range from one to six years, with the average being four years in length. During the program the apprentice receives both structured, "on-the-job training" (OJT) and related classroom instruction.

12. Research

 To understand the labour market needs of particular sectors it is necessary not only to have good information and effective consultation mechanisms but also to carry out in-depth research at regular intervals. This research should be carried out by a combination of labour market and sectoral experts and should be overseen by a steering committee representative of the groups outlined above. (Wikipedia-Free Encyclopedia)

 These concepts and definitions of vocational education reveal varying interpretations, meanings and purposes. Such variations exist and come
about as a result of the history and development of a country and a means of the education system fitting in with the mores (customs) and traditions of the societies it constitutes. In recent years the progress of science and technology has resulted in the increasing demand for the systematic, organised, training of skilled manpower for new jobs and at the same time a modification for old jobs.

Operations once performed manually are now largely performed through machines, thus the emphasis in training shifting from the acquisition of manipulative skill to the acquisition of technical knowledge intelligently on the job or the activities associated with it. This fact has led to the central idea of organising education systematically and efficiently through the establishment of vocational institutions and modernized training at work places. (Rao: 1999)

Vocational education – involving the institution, the home, and the industry or business – frequently evolves processes and procedures different from those of general education. This fact makes it necessary to understand the importance of both systems.

The term general education is used to mean the education that should prepare persons to live more intelligently as citizens and to understand and enjoy life. To that end, general education implies the knowledge, skills and attitudes needed by persons for successful and purposeful living.

The term vocational education is used to mean the education that should prepare persons to work more efficiently. Efficient vocational education
implies specific education and training in the useable knowledge, skills and competencies for the occupation in question.

However, in the present-day situation, general education and vocational education are major divisions of the total education process. Each of them is of equal importance, and both of them are necessary in the education of workers. This suggests that general education and vocational education have much to contribute to each other and to the total process of education. Both general and vocational educators should, therefore, strive to achieve the proper co-ordination of these two divisions of education within the total education process.

1.4. A.c. Shifting Structure of Industrial Work Place

During the past thirty years, there are drastic changes in industrial development. There is a massive increase in the size of production units of the corresponding quality production, notable growth in divisions and subdivisions of labour process. These developments have given rise to a new order of industrial work place, a phenomenon of changing nature of industrialisation. As a result, modern industrial requirement in terms of work force are now cast in an altogether different mould. Jobs are becoming highly specialised and standardised, especially in corporate organisations. The diversity of industry’s work force with its various levels of hierarchy require different types of workers - with different personality structure with different levels of intelligence and initiative and with different levels of skill and competence.
In the modern settings, this specialisation of work force means requirement of less skill or craft and requirement of more culture of work. Order, regularity, punctuality, rationality, adherence to work techniques and schedules, the ability to co-operate with co-workers – are the important attributes of work culture.

At the same time, processes and methods of industries have become increasingly more dependant on the principles of modern science and technology. Corporate leaders emphasize the necessity for a new stress on for more math’s, science, technology and basic skills. Workers in a rapidly changing labour market will need to be generalists, adaptable enough to change courses and change for new careers with a minimum disruption.

1.4. A.d. Nature of Present Vocational Education

In to-day’s industrial environment, the emphasis is on two categories of work force: a sizeable number of workers which need skill, competence and work culture attributes and comparatively large number of workers which need skill only in a narrow range of operations. Therefore the traditional curriculum will have to give way to a new dispensation with a mix of knowledge, skill, competence and work culture. (Ibid)

The fundamental principle of the present-day vocational education is that every learner should be given as much education or training he needs at a particular time. Instead of complete preparation for a life occupation, it may be just enough when an individual is equipped sufficiently with knowledge and skills which may help him in meeting his immediate social or economic needs and responsibilities. Through a well devised system of further
education, persons may get prepared for newer or higher occupational callings and responsibilities under the rapidly changing socio-economic order. Further education can help a person in upgrading his job or in seeking alternative occupation or in getting training related to any other personal growth and development.

Educators and professional experts believe that a comprehensive process of occupational preparation should include both education and training. They argue, rightfully of course, that such a preparation will enable students to achieve their maximum in the knowledge, skills and behavioural accomplishments necessary for a successful satisfying life. To meet the requirements of good citizenship combined with efficient service in the context of the modern economy and technology, learning experiences must be enlarged and enriched by supplementing in class activities with out-of-the class experiences.

The integrated process of education and training could be developed along four inter-related stages: i. Academic education, ii. Pre-occupational educational training, iii. In-plant or on-the-job training, IV. In-service training.

**i. Academic Education**
- Theoretical knowledge – In terms of defining basic principal and fundamentals’ descriptions and applications about subject-matter related specifically to the work the student should perform in the shop / laboratory / field during a given educational period.
- The knowledge of the necessary elements of math’s, science and similar educational subjects in the general and applied fields to the extent it is considered essential to the career field the student preparing to enter.
ii. Pre-occupational and training

- The knowledge of materials, tools and techniques, operations of specific pieces of equipment, safe work practices and procedures, work standards and the application of technical information in the practical solution of problems typical to the career field the student is preparing to enter.

- The knowledge providing information about the broader occupation field, current developments in the field, work habits and relations and other related information, if any.

- Practical, shop and laboratory skill development training related to trades or occupations, communication skill development training, if any.

iii. In plant or on the job training

This kind of job entry training should be aimed at exposing the trainee to the actual working methods and techniques related to occupational tasks. The training process should be directed towards acquisition of manipulative skills, occupational competences and work culture and work discipline groundings.

iv. In –Service training

This kind of occupational training be directed towards upgrading knowledge, skills and competence of skilled workers so that they may advance up the ladder of job hierarchy while in service as and when the opportunity may arise. This extended system of occupational training should also correspond to career – longer training and retraining in specialized occupational areas. (Ibid)
Thus the students (workers) are continually in need of adaptation, re-adaptation to changing demands and exigency of situation, and are therefore constantly required to face renewal of knowledge and skills.

1.4. A.e. Views of Founding Fathers on Vocational Education

❖ Georg Kerschensteiner - (1854-1932)

Georg Kerschensteiner, German Educational theorist and pioneer in the field of vocational education, revolutionised the whole concept of vocational education at the beginning of the last century.

Kerschensteiner was a firm believer in “learning by doing” and he designed his schools to present this ethics as a necessary component of a well-rounded education. Kerschensteiner claimed that in learning a trade and understanding the economic and social impact of labour his students would gain a heightened awareness of their work and of themselves as members of society. (http://encarta.msn.com/text_761588269_0/kerschensteiner_Georg_Michael.html)

According to Kerschensteiner, Vocational Education does not restrict itself to teaching the art of mere production of articles on a quantitative basis but concerns itself with the quality of the articles as also education of the whole personality of the young boy. He must not only be a good craftsman or a technician but also a good, cultural and a useful citizen whatever may be his vocation. (Hirlekar: 1962)

Dr. Charles

Dr. Charles, a leader in vocational education in U.S.A. and the first Director of the Federal Board of Vocational Education laid down the general principles of vocational education based on his rich experience and
judgment and has stood the test of time. The principles for effective vocational education depend on the following factors:

- The environment in which the learner is trained as it is the replica of the environment in which the subsequent work is done.
- In training jobs the same operations, tools and machines should be used as that of the occupation.
- The training of the individual is directly and specifically done in the thinking and the manipulative habits required in the occupation itself.
- Enables each individual to capitalize on the interest, aptitudes and intrinsic intelligence to the highest level.
- It is given to the selective group of individuals who need it & are benefited from it.
- In the specific training forming of right habits of doing and thinking are repeated to the point till these habits become fixed to the degree necessary for gainful employment.
- The instructor should have successful experience in the application of knowledge and skills to the operations and processes he undertakes to teach.
- Individual must possess a minimum productive ability to secure or retain employment.
- Recognizing the conditions of labour market and must train individual to meet the demands of the labour market.
- A body of content which is peculiar to the occupation.
- Render efficient social service inproportion to meet any training needs of the group.
- The particular characteristic of any particular group which it serves should be taken into consideration.
The administration of the vocational education should be flexible rather than rigid and standardized.

Reasonable effort should be taken to reduce the per capita cost but it should not be below the minimum level. (Rao:1999)

**John Dewey**

John Dewey, an American educationist has commented that education is meaningful only when it aims at some vocation or employment. The vocational objective of education has the following advantages:

- **Solution of economic problems**:
  
  Technical and vocational training only can help to solve the economic problems, such as poverty, unemployment, famine etc. of any country.

- **Dynamism**:
  
  The principle of activity applies to the vocational aim of education. Dewey has commented that education imparted in this way makes use of the child’s tendencies and habits, pays attention to their interests and awakens their minds. It tests the mind, excites the intelligence and puts an end to lethargy and inactivity.

- **Moral, intellectual and cultural development**:
  
  As far as the vocational aspect of education is concerned, it is connected with earning money. For this reason, one can expect a high moral, intellectual and cultural level from an educated individual. If the educated individual fails to win economic independence, he tends to be immoral in his behavior. (degenerate in his intellectuality, indifferent to the arts and sciences.) (Chakraborty: 2004)

**Mahatma Gandhiji**

In Gandhiji’s opinion the aim of education is self-dependence. Education must enable every girl and boy to develop the ability to depend upon himself or herself. The ability to earn one’s livelihood is part of this
independence or self reliance. As he himself puts it, “This education ought to be for them a kind of insurance against unemployment.” That is why Gandhiji placed so much emphasis upon industrial training in his own plan for basic education which was intended to acquaint the child with real life. He wanted the educator to become the means of producing ideal citizens. Seeing the endemic poverty of the nation, he suggested that education in India should be based on industrial training and the development of manual skill and handicrafts. (Ibid)

1.4. A. f. Views of Scholars’ about Vocational Education

❖ Gavin Moodie:

Gavin Moodie, from Griffith University, Australia, has presented the paper at the 13th annual international conference on Post-Compulsory Education and Training, Crown Plaza Surfers Paradise, Gold Coast, Australia, 4-7 December 2005. In the paper-

“Vocational Education Institutions` Role in National Innovation”

Gavin Moodie distinguishes research – the discovery of new knowledge – from innovation, which is understood to be the transformation of practice in a community or the incorporation of existing knowledge into economic activity. From a survey of roles served by vocational education institutions in a number of OECD countries he argues that vocational education institutions have a potentially crucial role in mediating between the creators of new knowledge – researchers and their institutions – and the users of knowledge. They are ideally placed to develop this role since innovation is a local activity
and vocational education institutions are much more widely geographically dispersed than research intensive institutes. He concludes the paper by posing six steps vocational education institutions should follow to establish a role in national innovation. They are:

- **Emphasis innovation; eschew research:**
  Vocational education’s role should be to stimulate the timely take up, modification, and marketing of knowledge solutions that already exist but need to be adapted to local environments and not to conduct research in any of its pure or applied forms. It is necessary to keep emphasizing this because research so heavily dominates many countries thinking about innovation that many assume that is not possible to contribute to innovation without also having a research role. Furthermore, vocational education needs to protect its role in innovation from migrating to and being overtaken by the very powerful research paradigms.

- **Develop a distinctive role in the national innovation system:**
  This will be different for different countries and perhaps for different industries, but it could be based on two characteristics: that they don’t conduct research and that they operate locally.

- **Think globally, Act locally:**
  Innovation is a local activity, although it often applies knowledge learned from overseas. Each vocational education institute should therefore identify opportunities to stimulate innovation in their region.

- **Form multiple partnerships:**
  Vocational education institutions will contribute to innovation by broadening the partnerships they already have with local businesses, service providers and industry associations. They should also form partnerships with businesses and service providers in other regions in their own country and overseas which have practices of interest to those in their own region, and
other partnerships with universities and research institutes locally and overseas conducting research relevant to their region.

- **Establish a national network of vocational education innovation institute.**

  Since much knowledge about innovation is tacit, it is best learned and shared by networks of bodies with shared interests. Vocational education institutes interested in contributing to national innovation should therefore establish a national network to share experiences and insights.

- **Act in the long term.**

  While the final introduction and impact of a new technique may happen remarkably quickly, innovation builds on knowledge, skills, attitudes, capabilities and processes developed over a long period. Vocational education should therefore develop its role in stimulating innovation over a long period, say 10 years initially.

  ❖ **ii. The website viz. (www.vigyanashram.com/htm/D.39.pdf) describes the views on “Vocationalisation of All Education” which are based on Piaget theory of “Intelligence Development”**

  According to Piaget theory – **Intelligence is not inherited but acquired from interaction with the environment.**

  This interaction exists in the child / or the human engaging in physical actions on the outside world, and from its reactions he builds a mental model of the “reality” in his brain. With every one of our actions, we anticipate certain reactions in the environment; if our anticipation is correct, the mental model is reinforced, if it turns out wrong, our mind modifies the model to accommodate the new experience and thus assimilates some more of the outside reality. Thus intelligence is related to the mental structures that each one of us creates in our mind to accommodate all our experiences. Thus these mental structures will be more complete and more useful, the greater
the variety of experience it incorporates. Also if we force or induce the child to stop assimilating its experiences in the real world and preserve instead only “snapshots” of them, then it has not grown in intelligence but used up its memory for storing information it does not know how to use. Its mental model of the “reality” has not grown in this State.

The author comments further – this is what most of our present education seems to be doing to most of the students. They have information but not the capability to think and then act. Thought comes from using symbols in place of concrete objects and after some practice he develops abstract thinking. Abstract thoughts can be helped and supported by activity. If we do not do this, as happens in book learning, the symbols and abstract thoughts lose their meaning and we do not understand what is happening.

Thus vocationalisation of education means involving all physical activity in the real world, which is relevant to the life of the student. This reinforces his concepts and helps him to develop his abstract thinking and thus stimulates his intellect. In fact it brings him to learn from his experiences and improve his “model” of reality continuously. This ability to think for himself and to possess skills of everyday relevance, gives him the tremendous capability to act. He can then progress on his own. This is what vocationalisation of education is for not just to teach him one vocation. He will not wait for someone to offer him a job. He will try to seek out the opportunities and create his own future.

This is what author emphasizes on need of Vocationalization of Education and not mere Vocational Education. Author differentiates
“Vocationalization of Education” & “Vocational Education” as: Both Vocational Education and vocationalization of education will involve development of skills. Where as in vocationalization, skill development is intended to build the capability to act in a variety of real life situations, vocational education gives skills for a specific vocation under well-defined limitations. Without general skills development, specific skills cannot help him to survive in the competition that is life. Therefore vocational education can only be useful on a base of general skills development. Thus vocationalization of education is fundamental to all education and vocational education can only build on top of it and not substitute it.

This is what Mahatma Gandhi intended in his “Nai Talim” system, this is what was recommended by the Kothari Commission Report through “Work Experience” and “Socially useful Productive Work.”

1.4. A.g. Paradigm Shift in Vocational Education: World skills

Document of the World Bank January 2006 - "SKILL DEVELOPMENT IN INDIA - THE VOCATIONAL EDUCATION AND TRAINING SYSTEM" – is an Executive Summary. This summary presents a brief synopsis of the different sections of the paper and highlights key constraints faced by the vocational education and training system as well as the potential options to address some of these constraints. In one place it comments (pg ii-8) although productivity has been increasing and education levels rising, India still needs to improve education and training quality. While significant improvements will need to be made on quantitative indicators, little is known about qualitative indicators – e.g. because India does not participate in standardized international examinations there are no good comparative measures of
quality. Providing more education and skills cannot, by itself, be enough – quality and labour market relevance is crucial.

**What is World Skills?**

World Skills is a unique, not for profit, international membership organisation with a mission to raise the status and standards of vocational skills and training worldwide. Its principal activity is organizing the World Skills Competition in a different member country/region every two years. One of the criteria for accession is the establishment of the system of national vocational skills competition.

Nowadays, if you visit an International Vocational Training Competition, you will be pleased to see the young skilled workers' know-how and seriousness, their pride in having been selected and the pleasure they feel to meet their counterparts from other continents. In spite of language barriers, the experience they gain will certainly affect the professional, personal and human aspects of their lives forever.

(WorldSkills International - History of WorldSkills International 8 Oct 2009)

**From 2007 India became a member of the World Skills International, a non-profit international membership organization, which aims to raise the status and standards of vocal skills and training worldwide.**(Business Line:2007)

It should be noted that the competitions were not only designed for ranking member-countries and awarding medals. In fact, they give a new impulse to their vocational training systems. The competitions could stir youth to special
efforts, help adults to understand different working techniques and offer youngsters knowledge of trades which were unknown to them.

**Skill Categories:**

- **Transportation and Logistics**
  The “Transportation & Logistics” category covers all the skilled areas that are related to the transportation world. This includes creating, repairing and maintaining transportation vehicles.

- **Construction and Building Technology**
  The "Construction & Building Technology" category covers all the skilled areas that are related to the construction world. This encompasses everything from the foundation, grounds, building, finishing and maintaining of all sorts of buildings.

- **Manufacturing (and Engineering) Technology**
  The "Manufacturing (& Engineering) Technology" category covers all the skilled areas that are related to industrial development and creation. This encompasses everything from the design, creation, making and maintaining of anything involving electronics and machines.

- **Information and Communication Technology**
  The "Information & Communication Technology" category covers all the skilled areas that are related to information services. This encompasses everything from network creation and maintenance to development and finishing information technologies.

- **Creative Arts and Fashion**
  The "Creative Arts & Fashion" category covers all the skilled areas that are related to fine arts and fashionable design and creation. This encompasses everything from multi-media creative, interior decoration and fashion.

- **Social and Personal Services**
  The "Social & Personal Services" category covers all the skilled areas that are related to the service industry. This encompasses services related to the food and beverage industry as well as the hospitality and personal care.  
  (www.worldskills.organisation)
1.4. B. Modernising Vocational Education and Training

1.4. B.a. The role of national qualifications systems in helping to modernize Vocational Education and Training Systems.

National qualifications systems have become a policy tool in many countries because there are reasons to believe that they can help promote lifelong learning. Considering the nature and relationship of the qualifications system, the labour market and VET, it is possible to propose that the capacity of the national qualifications system to modernise VET depends on the extent to which it can change any or all of the following five elements of VET:

**First is governance of the VET system**, which encompasses all aspects of management and regulatory practice, at national and local levels. These aspects include government policy, setting an agenda for reform, research and monitoring arrangements, funding arrangements, institutional arrangements, institutional management and the involvement of social partners.

Governance is a key area when it comes to modernising VET because a modern VET system should be organised and managed so that it meets the needs of its users, particularly individuals and employers.

**Second is quality assurance of VET**, which includes any systematic process of monitoring that builds confidence and trust in VET and confers value on the learning that is acquired in the VET system. A modern VET system has an integrated quality assurance process managed by stakeholders and fit for purpose.
Third is information & guidance about VET, including national and local provisions that link potential learners, providers and other learners and aims to maximise participation and minimize drop out.

Fourth is the content of VET, the complete range of knowledge, skills and competences needed in the labour market. These include technical requirements for specific jobs and the general knowledge and skills required by most work.

Finally there is delivery of VET, which includes all the processes that convert desired competences (subject matter and skills) into learning outcomes. It focuses on pedagogy, evaluation strategies, teacher training & learning equipment. Modern technologies are often used. (cedefop: 2009)

1.4. B. b. Optimising stakeholder involvement in the qualifications system.

Agreements between stakeholders on developing the qualifications system may lead to greater stability. The involvement of stakeholders will help to ensure that unnecessary barriers to progressive qualifications are identified and removed and that information and guidance clearly show the progressive nature of qualifications.

Since efficiency of lifelong learning in general, and VET in particular, in terms of governance is influenced through developing a single coordinated system of qualifications (efficiency of scale) and maintaining stability in the system (change is expensive in a national system), it seems obvious that governance is affected by the involvement of stakeholders in the system.
Information and guidance will, in turn, be affected automatically since all stakeholders are involved and are, therefore, aware of the progress being made and the reforms planned. They could reasonably advertise these changes among their constituencies.

The optimization of stakeholder involvement will also most likely have impact on VET content because all these stakeholders will want to have a say in the reform and in the creation of new qualifications.

As a consequence, content will be influenced by the needs expressed by each of the stakeholders and by the nature of the consensus emerging from the form of negotiation going on. (Ibid)

**Industry-Institution Linkages**

Several types of linkages exist between industry and institutions:

- Recruitment to various industrial jobs is often carried out with institutional assistance.

- Industrial training is offered to the technical/vocational students undergoing study in institutions to make their education practical and field-oriented.

- Industries offer basic training to persons selected for various appointments.

- Sandwich courses providing for work-education alternation during a specified period are accepted by a number of industries as a move in direction towards the increase of technical manpower.

- Exchange of personnel between industry and institutions renders the teaching/learning process more purposeful and truly practical and provides for mutual enrichment of industrial and educational experiences.
• Consultancy services offered by specialists in educational institutions are often sought by industries to practice.

• Research and development cells in industry operate in collaboration with institutions.

• Industry-established institutions run various technical courses with a view to increasing productivity. (UNESCO:1985)

1.4. B. c. Improving the Attractiveness and Image of VET

Making vocational education and training (VET) systems more open, flexible and attractive has been identified as a major item in the Developed Countries’ economic, employment and social agenda. Potential measures for making VET more attractive include improved vertical and horizontal mobility, workplace learning and recognition of prior learning.

The status of VET teachers also has an influence on the status of VET overall.

The prestige of VET is reflected in the status of vocational teachers and their education, and vice versa. Prestigious VET is essentially based on broadly competent vocational teachers who respect their own work. The development of vocational teacher curricula, with respect to education strategic competence and international educational knowledge, are some of the challenges of quality assurance.

1.4. B.d. Parity of Esteem between Vocational and General Education

Parity of esteem between vocational and general/ academic education is related to the societal rewards resulting from education and training,
ultimately linked to the attractiveness of VET. Such rewards may be social status, salary, prestige and opportunities for further education and career development. Educational pathways should not restrict citizens’ opportunities to access further education and higher levels. Link sought to make vocational and general education formally more equal by connecting them through such measures as a common certification framework, arrangements for credit recognition and transfer, and common curricular elements. Cooperation with companies has been rapidly gaining momentum in mutual understanding.

1.4. B.e. Strengthening the vocational aspects of VET

As a method, on-the-job learning brings new challenges to classroom teaching and guidance given at school. Instructional differentiation and individual guidance are increasing, while the on-the-job components consist of the tasks at the workplace and also depend on the student’s personal goals. The involvement of business life in the curricular work of educational institutions leads to a better match between education and work tasks and brings theory closer to practice, closer to working life.

Attempts have to be made to increase the employer involvement in decisions about the form, content, context, and resourcing of vocational education. Employer involvement varies from taking on advisory roles as members of national, local, and institutional governing bodies and consultative curricular committees, or assuming key roles in standard setting bodies for vocational qualifications, up to direct delivery roles in relation to work-based training.. Work-based learning and on-the-job
training arrangements can provide opportunities for employers to get acquainted with their future employees in both school-based and apprenticeship-based education and training systems. (Cedefop:2009)

More attention should be paid to the image, status and attractiveness of VET:

In improving the attractiveness and quality of VET, more emphasis should be placed on good governance of VET systems and providers in delivering the VET agendas.

- Highly qualified teachers and trainers National quality assurance,
- Increased transparency of VET systems Improved guidance and counselling,
- Developing flexible and individualised provision and pathways,
- Facilitating transfers between the different parts of the secondary VET system,
- Improving access to related higher education,
- Close links with working life, including responsiveness to the needs of individuals and the labour market and active partnership between different decision-makers and stakeholders nationally, regionally and locally,
- Promoting the recognition of non-formal and informal learning. (Ibid)
Box 1:1 International Evidence on the Relevance of Vocational Education

This box summarizes some key findings on international experience of vocational education.

- **Vocational subjects are desirable on general education grounds, as part of a well-rounded education intended for everyone but they should not detract from efforts to improve the quality of core subjects. No study has shown that vocational courses offered as a minor part of a student’s total curriculum give an advantage in finding work (let alone self-employment) within the first few years after leaving school. This is particularly so when the labour market conditions for youth are severely depressed. Vocational subjects may foster an interest in the types of work for which the subjects are broadly intended and the skills learned may have private uses but tracer studies have found no positive impact on access to work after students leave school and no strong effect on access to relevant further technical training.**

- **Vocationalization is costly. Most variants are more costly per student class period than general education subjects, primarily because of smaller classes and the greater cost of facilities equipment, and consumables. Unless a course can be taught to a full class of students (few can) operating costs will be more than twice that of non-laboratory academic subjects.**

- **Enrollment in some types of vocational courses is often strongly gender biased. Many skills taught are culturally identified with one gender only, for example, domestic science and secretarial skills with girls, industrial arts skills with boys.**

- **Vocationalization is hard to implement well. It requires specially trained instructors preferably with work experience in the types of skills being taught. Teachers with these qualifications are hard to recruit and retain. Time spent on vocational skills training can detract from the teaching of basic academic skills, which are badly in need of improvement and also essential for labour market purpose.**

**Source:** Johnson and Van Adams (2004), Skills Development in Sub-Saharan Africa, (World Bank: 2008, pg.43.)
Figure 3.6: Education and Training Systems around the World

The German System
- Basic Education
  - Apprenticeship & Technical Workshop
    - Secondary Education
      - Tertiary Education
  - Labor Market

The North American System
- Basic Education
  - Secondary Education, incl. Vocational subjects
    - Community Colleges
    - Tertiary Education
  - Labor Market

The Latin American System
- Basic Education
  - Vocational Training
    - Internship
  - Secondary Education
    - Tertiary Education
  - Labor Market

The French System
- Basic Education
  - Secondary & Vocational - Technical Schools
  - Secondary Education
    - Tertiary Education
  - Labor Market

The Japanese System
- Basic Education
  - Secondary Education
    - Tertiary Education
  - Vocational Training by Corporations
    - Labor Market

The Australian System
- Basic Education
  - Vocational Schools
  - Bivocational Schools
  - Secondary Education
    - Tertiary Education
  - Labor Market

Box 1:2 Training Systems around the World

At the risk of oversimplifying things, and bearing in mind that all of these systems are constantly changing, six basic approaches can be distinguished:

- The Japanese system may have the simplest design. Students completing basic education go to general secondary education, and from there they either enter firms that provide entry-level training or go on to tertiary education.

- The North American system has no “streaming” until after secondary education and it relies on post-secondary education to facilitate transition to work. Students completing secondary education go to community colleges and polytechnic institutes (which provide vocational technical instruction) for short courses, and to universities, which provide both general and professional training.

- The French system streams students into vocational courses at the secondary level. Students in vocational courses are prepared for entry to the labor market, and those in the humanistic scientific streams are prepared for higher education.

- The German system is based on a long tradition of apprenticeships. For a (diminishing) majority of secondary school students, instruction consists of school-based general instruction and firm-based occupation-specific training (the “dual” system). The system, regulated by guilds, has a set of qualifications that provides broad equivalency between graduates of the academic and the dual subsystems.

- The Latin American training system is a hybrid of the French and German models. For students completing basic education: (a) it relies on autonomous vocational training institutes for those proceeding to the labor market, (b) on general (humanistic-scientific) education at secondary level for those proceeding to tertiary education, and (c) on school-based vocational education for others.

- The Australian system allows transitions between the vocational and tertiary education systems. Employers play a key role in the management of the vocational system.

Source: De Ferranti et al. (2003), World Bank: 2008, pg 61.
1.4. C. Vocational Education in India

It is widely recognized that the 21st Century will be driven by knowledge, and a nation’s competitive advantage in the global economy will be sustained by a focused and innovative education agenda.

To meet the challenges of this century, many countries around the world, and more particularly newly independent developing countries, including India, set their mind on the expansion of educational systems and made heavy investment in education. There was a growing realization that availability of educational opportunities to all sections of the society, irrespective of social status, class, caste, religion and gender, ensures non-discriminatory distribution of educational opportunities and socio-economic and political gains accruing from it. (http://vibha.org/xpressions/vol_2_No_6_June_2006)

India’s first Prime Minister Late Jawaharlal Nehru and the members of the Constituent Assembly responsible for framing the Indian Constitution (1950) sought to deal with the social and educational inequalities of illiteracy and discrimination by explicitly prohibiting discrimination in education on the grounds of religion, caste, sex, race or birth.

Current educational policy as related to structure and access is based on the objectives of the D.C.Kothari Commission, the recommendations of which form the basis of the 1968 National Policy on Education. The NPE (1968) called for a standard educational structure based on a 10+ 2+3-year model. The first Ten years were to be non-selective and provide a well rounded general education available to all children. After the first ten years of general
education the system would become highly selective and provide opportunities in both the academic and vocational streams. (Nick Clark: 2006)

There are two commonly used terms in India for the vocational education system one is vocational education and other vocational training. Vocational education is referred specifically to vocational courses offered in school at the level of class 11 and 12 under a centrally sponsored scheme termed ‘Vocationalization of Secondary Education’. Vocational training on the other hand broadly refers to certificate level craft training and is open to students who leave school after completing anywhere from class 8-12. Programmes are offered under the Craftsmen Training Scheme (CTS) and operated by Industrial Training Institute (ITIs), Polytechnics and Industrial Training Centres (ITCs). This scheme falls within the purview of the Director General of Employment and Training (DGET), under the Ministry of Labour and Employment. (MOLE) (Fozdar: 2008)


The ratio of enrollment in vocational courses at the lower secondary and higher secondary schools in India is only 6% as compared with 20% of China, 24% in France, 29% in Italy, 59% in erstwhile USSR, 65% in U.K. and 80% or more in Denmark, Germany, and Switzerland. This explains the reason for low productivity and unemployment in India.

The Education Commission (1964) pointed out, " Another programme which can bring education into closer relationship with productivity is to give a strong vocational bias to secondary education and to increase the
emphasis on agricultural and technological education at the university stage."

The Adiseshiah Committee 1978 observed that special attention has to be
given to the self employment factor. It recommended 64 courses divided
into 8 categories.

The Vocational Education Programme (VEP) was started in 1976-77 under
the programme of Vocationalization of Higher Secondary Education in
general education institutions. The National Working Group on
Vocationalization of Education (Kulandaiswamy Committee, 1985)
reviewed the Vocational Education Programme in the country and
developed guidelines for the expansion of the programme. Its
recommendations led to the development of the Centrally Sponsored
Scheme (CSS) on Vocationalization of Secondary Education which started
being implemented from 1988.

Merits pointed out by the policy:

1. Enhancement of Employability –
   Vocationalization of education enhances employability.

2. Reduction in Mismatch –
   Vocationalization of education reduces the mismatch between
   the demand and supply of skilled manpower.

3. Alternative Courses –
   Vocationalization of education provides an alternative for those
   pursuing higher education without particular interest or purpose.

4. Dignity of Labour –
   Vocationalization of education leads to dignity of labour.
5. **Self-Employment** –
Vocationalization of education enables individuals for Self-Employment.

6. **Increased Productivity** –
Vocationalization of education is related to productivity.

7. **Maximum Utilisation of Resources** –
Vocationalization of education is helpful in the maximum utilization of the human and material resources of the country. (Aggarwal: 2001)

1.4. **C.b. Infra Structure of Vocational Education in India**

Vocational education falls under the purview of the Ministry of Human Resources Development (MHRD). The All-India Council for Vocational Education (AICVE), under MHRD, is responsible for planning, guiding and co-ordinating the programme at the national level. State Councils for Vocational Education (SCVE) perform similar functions at the state level.

The Pandit Sunderlal Sharma Central Institute for Vocational Education (PSSCIVE), responsible for developing the courses, has listed 104 and has developed course materials for only a quarter of those. The six disciplines are:

- **Agriculture** (e.g.: veterinary, pharmacist/technician; watershed management)
- **Business and commerce** (for example: taxation practices; stenography)
- **Humanities** (for example: classical dance; entrepreneurship)
- **Engineering & technology** (e.g. lineman; cost effective building technology)
- **Home science** (for example: textile design; gerontology)
- **Health & para-medical skills** (e.g.: x-ray technician; health/sanitary inspector)

(World Bank: 2006)
1.4. C.c. Issues of Concern in Vocational Education

- The Vocationalization of Education at the higher secondary stage has achieved only partial success. The students prefer general courses like science, arts or commerce at the +2 level and later in tertiary section of Education. They constitute the bulk of the 60 million educated unemployed youth in the country. On the other hand, the country requires technical and skilled manpower particularly in view of the liberalization of the economy in recent years. (Tenth Plan-2002-07)

- It is difficult to tell from titles of the courses (as listed above) what their content might actually be. In many cases, similar courses are offered in other systems particularly in vocational training centres and through informal training mechanisms but with completely different course durations.

- In most states, students are streamed into vocational education on the basis of state level standardized examination in Grade 10. While a comparison of student performance in this examination for those going into different streams has not been done, the premium placed on general secondary and higher education by students and their parents, leads one to believe that students joining the vocational system are those who perform poorly in the Grade 10 examination.

- The outcome of the vocational education should be judged in the same labour market terms in which the programme was justified. However, there are very few evaluations that allow this to be done. A study by the Operational Research Group in 1998 reported only 28 percent
graduates of vocational education were gainfully employed. PSSCIVES’s reports on the programme appear to be case studies demonstrating the employment outcomes for selected individuals. No conclusions can be drawn as to whether the courses are relevant to the labour market. In fact, even vocational students appear intent on entering higher education rather than entering the labour market. Evidence of this comes from a study in Kerala, (Kremer, 2000). The study comments, "with the exception of a few vocational trades that have a certain employment potential and that are therefore highly in demand by the Public, most of the courses cannot provide under the present financial, material and human resources - any adequate preparation for their former participants to face the world of work."

(Kremer, 2000, Vocational Higher Secondary Education in Kerala, Ph.D. Thesis).

- The private sector is represented in the Joint Council for Vocational Education, but it seems to be only marginally involved in setting course contents and curricula and in managing the vocational schools. (World Bank:2006)

- National policy on Education 1986 (NEP,1986) and its Programme of Action (1992) aimed at diverting 10% of the students at higher secondary level to the vocational stream by 1995 and 25 % by the year 2000. It also visualized that steps would be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed. (Achievement data in this regard is not available. The
Annual Report 1998-99' of the ministry of HRD, Department of Education is silent on the data.)

- At present 5% of students choose this option. This figure is far low when it is compared with other countries.

- As per the report of the Working Group for the Revision of the Centrally Sponsored Scheme of Vocationalization of Secondary Education, NCERT,1998, vocational education, also viewed as an inferior option, suffers from poor infrastructure, obsolete equipments, untrained or under-qualified teachers (often on part-time basis), outdated and inflexible courses, lack of vertical or lateral mobility, absence of linkage with the 'word of work', lack of a credible evaluation, accreditation and apprenticeship system, and finally employability.

1.4. C.d. Financing for Vocational Education:

Funding for vocational education is shared between the central and the state governments. The Central Government provides all the funds for 11 components - such as text book development, workshops, resource person training and curriculum development workshops. It meets 75 percent of the cost of vocational school staff (state governments the remainder), and 50 percent of the cost of operating the vocational wings of the state directorates of education, district vocational wings, provision of raw materials, and field visits by students. The state governments bear the cost of examinations and vocational guidance.
Outcomes and Issues:

- Public financing for vocational education and vocational training is not based in any funding formula. Although the resources available to the states are limited, no state seems to follow transparent funding formula in funding vocational education or training.
- The Funding model used by the states is largely ineffective.
- Unit costs of vocational education are roughly 60 percent higher than that of general secondary education. Because funds are limited and because the majority of the funds have to be spent on salaries, resources available for other items are extremely low. (Ibid)

1.4. C.e. Potential Solutions

According to document of the World Bank (2006), if India wants to emulate countries where the vocational education system has succeeded, sweeping reforms are needed. This will require significant commitment on the part of policymakers. Many of these reforms are similar to those being proposed by the 2005 Central Advisory Board for Education (CABE) Committee report on Universalization of Secondary Education. Key among them includes:

- Ensuring private sector participation in management of institutions and curriculum design to ensure a direct connection to the labour market for graduates, and an effective medium for bringing about organizational and productive innovations.
- Strengthening the general education component of these programmes for providing basic knowledge in humanities and sciences, preparing
students to work in various occupations, teaching them to solve problems and encouraging them to continue learning.

**Funding and Budget Allocations –**

This can be done by moving from a system which is exclusively financed by the government to a system which is increasingly financed by the private sector and by students paying user fees. The private sector would be willing to contribute only if they see the system is producing relevant graduates. Students are likely to contribute if they see accrual of labour market benefits from vocational education.

- **Ensuring** that vocational education is not a dead end - allowing well performing students in vocational education track to proceed onto higher education will ensure that the vocational stream is not seen as an option of last resort by prospective students.

- **Creating Skills for India** - (Need for Large Scale Skill Development)
  
The group’s findings indicated that, in the age-group 20-24, only 5% of the Indian labour force had vocational skills, which was much lower than other countries including Mexico which had 28%. (The NSSO Employment/Unemployment Survey (61st Round 2004-05) reinforces this position.)

- **Need for Stakeholder Involvement** -
  
  ➢ The levels of vocational skills of labour force in India compare poorly with other countries. Only 5% of the Indian labour force in the age group 20-24 had vocational training compared to 96% in Korea and varying between 60-80% in industrial countries. This points out to the fact that education
system in India is excessively oriented towards general academic education with little or no vocational orientation.

➢ All stakeholders have a role in skill development. The nature of employability as an issue would require the coordinated efforts of all stakeholders to address the issue. Industry (as a group and as individual companies) would need to proactively get involved in skill development activities.

➢ The role of the government would be to effectively facilitate the skill development initiatives by enacting implementing measures that would enable closing the skill gaps and funding initiatives at lower levels of education that would improve the skill levels of the mass of the workforce.

➢ The educational institutions need to improve their effectiveness in delivering quality output that is required by the industry by taking measures such as changing/updating curriculum, increasing industry orientation through practical training, improving teaching methods and techniques, investing in appropriate infrastructure and working towards enhanced industry-institute interaction.

➢ Industry, as a consumer of the output of the educational system, also has a proactive role to play in skill development initiatives. It would have to support the actions taken by the other stakeholders by participating in the skill development initiatives. (CII:MaCS Study)

For building an effective and dynamic programme of vocational education, National Curriculum Framework 2005 (NCERT, 2005) has suggested that vocational education programme should be implemented in mission mode, involving establishment of separate Vocational Education Institutions and
Centres from the level of village cluster and blocks to sub-divisional / districts, towns and metropolitan areas. This also talked about providing better infrastructure at VEP centres, there should be the provision of training of teachers and VEP curriculum should be reviewed and updated from time to time to meet the challenges of a globalized economy.

The Prime Minister of India in his Independence Day address in 2006 indicated setting up of Vocational Education Mission and a Task Force to improve vocational education system in India so that high economic growth through increased productivity can be maintained. For implementing this special provision has been made in both present 10th plan and coming 11th plan of the country. (Fozdar:2008)

Working group on Secondary and Vocational Education for 11th plan has suggested some plans along with higher budget attractions like competency based curricula should be reviewed and updated as per the present need of the industry, professional training of all teachers and trainers, a labour market information system should be established to collect necessary information on the skill requirements and skilled manpower needs for different sectors of economy. A National Board of Vocational Education and Training (NBVET) should be established for competency based assessment and certification.

The PSS Central Institute of Vocational Education (NCERT), Bhopal can serve as a National Resource Institution for policy planning, implementation and monitoring of VET programme and for developing a National Vocational
Qualification in the country. Presently, the PSS Central Institute of Vocational Education has six divisions, viz., Agriculture, Business and Commerce, Engineering and Technology, Health and Paramedical, Home Science and Humanities, Science and Education. In order to develop curricula and learning materials in more than 1500 vocations, the Institute may be expanded to include 17 more Departments such as Department of Animal Husbandry, Department of Research, Policy, Manpower Planning and Department of Information and Communication technology etc. (Report - 11th Five Year Plan)

In short, analysis of the overall scenario shows that secondary education rarely is a meaningful level of education. The most significant set back in secondary education refers to the extremely slow growth of vocational and technical education. Serious attention was not paid to vocational education, partly because of the need for heavy investments on one hand, and lack of sufficient demand for such education on the other. Vocational education, particularly in secondary schools, did not really take off, as it was planned to be of a second rate, meant for the poor, as a terminal one having inter-connectivity neither with higher education nor with the industrial or agricultural sector. It is also viewed as a strategy to reduce demand for higher education. Vocational education is costlier than general secondary education. Employment opportunities have not been particularly better for vocational school graduates and as a result, economic rate of return to vocational education was generally less than those to secondary general education. (John Keeves: 2002)
These are significant challenges which require huge investments in terms of time, effort and finances. To bring our GER at par with developed nations we need a massive expansion of the system of higher education. This can be brought about by creating new universities and by restructuring the existing ones. Such a quantum jump will have to be well planned and funded.

To increase investment in the vocational sector, alternative sources of financing should be tapped, including industry linkages, philanthropic contributions and private participation. To enhance quality in the system, reforms in teaching, faculty, curriculum and governance should be implemented.

Further, as we seek to expand the higher education system, entry norms will be needed for private institutions and public-private partnerships. The institutional framework for this purpose must be put in place here and now. Currently, there is a multiplicity of regulatory bodies in the higher education sector, often with overlapping mandates. The challenge therefore is to design a regulatory system that increases the supply of good institutions and fosters accountability in those institutions. In this context the creation of an Independent Regulatory Authority for Higher Education could be explored. Such a body would be at an arm’s length from all stakeholders and would accord degree granting power to universities. To ensure that all deserving students have access to higher education, irrespective of their socio-economic background, strategies for inclusion must also be incorporated, including well funded scholarships and affirmative action
takes into account the multi dimensionality of deprivation.

(http://vibha.org/xpressions/vol_2_No_6_June_2006)

BOX-3

<table>
<thead>
<tr>
<th>Conditions for Success of Financing Vocational Education-Training</th>
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<tbody>
<tr>
<td>• Funds should be used to develop demand-driven systems and should avoid perpetuating supply-driven models.</td>
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<tr>
<td>• Funds should be stable and sustainable.s</td>
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<tr>
<td>• The basis for allocating funds to institutions or to systems should be transparent and widely known and understood.</td>
</tr>
<tr>
<td>• A wide range of training providers should be allowed to compete for funds.</td>
</tr>
<tr>
<td>• Funds raised from sources other than the government should not be diverted to government revenues and spent for other purposes.</td>
</tr>
<tr>
<td>• Funds should be administered by industry-managed bodies. Employers, through their associations and individually, should be involved in making decisions about the allocation of funds at all levels.</td>
</tr>
<tr>
<td>• Responsibility – including the freedom to make financial decisions – and accountability for operations should be devolved to the lowest level practicable.</td>
</tr>
</tbody>
</table>

Source: (World Bank: 2008)
Status in Schools:

Schools also provide vocational training formally at 10 and 12th level. The following figure shows the percentage stake of all major states, providing vocational training in India.

Chart-1:1

Percentage share of the schools imparting vocational training for some major states in India

Source: MHRD, Annual Report 2002-03, India Year Book 2008, Manpower profile
Chart 1:2

A Flowchart of Academic, Technical and Vocational Parallel Training System in India

Source: Skill development in India: The vocational education and training system report no.-22 World Bank
Table No. 1:1

Cost of Vocational Education in 16 Major States of India, 2002-03

<table>
<thead>
<tr>
<th>States</th>
<th>Enrollment</th>
<th>Cost of Voc.Ed.(as a % of General Sec.)</th>
<th>Unit Costs (Rs.)</th>
<th>Costs (Rs. Mill.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>State Expenditure</td>
<td>Central Grant</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>35,280</td>
<td>1.4</td>
<td>3,200</td>
<td>113</td>
</tr>
<tr>
<td>Assam</td>
<td>3,780</td>
<td>0.4</td>
<td>3,298</td>
<td>13</td>
</tr>
<tr>
<td>Bihar</td>
<td>4,200</td>
<td>0.4</td>
<td>3,242</td>
<td>14</td>
</tr>
<tr>
<td>Gujarat</td>
<td>33,600</td>
<td>1.9</td>
<td>3,858</td>
<td>130</td>
</tr>
<tr>
<td>Haryana</td>
<td>13,440</td>
<td>1.5</td>
<td>3,390</td>
<td>46</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>2,520</td>
<td>0.7</td>
<td>4,000</td>
<td>10</td>
</tr>
<tr>
<td>Jammu &amp; Kashmir</td>
<td>1,680</td>
<td>0.5</td>
<td>3,715</td>
<td>6</td>
</tr>
<tr>
<td>Karnataka</td>
<td>30,240</td>
<td>1.5</td>
<td>4,827</td>
<td>146</td>
</tr>
<tr>
<td>Kerala</td>
<td>36,120</td>
<td>2.3</td>
<td>5,541</td>
<td>200</td>
</tr>
<tr>
<td>Madya Pradesh</td>
<td>10,080</td>
<td>0.7</td>
<td>3,238</td>
<td>33</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>1,32,300</td>
<td>2.9</td>
<td>3,455</td>
<td>457</td>
</tr>
<tr>
<td>Orissa</td>
<td>6,300</td>
<td>0.5</td>
<td>6,255</td>
<td>39</td>
</tr>
<tr>
<td>Punjab</td>
<td>14,280</td>
<td>1.6</td>
<td>4,733</td>
<td>68</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>10,500</td>
<td>0.7</td>
<td>3,913</td>
<td>41</td>
</tr>
<tr>
<td>Tamilnadu</td>
<td>77,700</td>
<td>2.9</td>
<td>3,200</td>
<td>249</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>31,920</td>
<td>0.9</td>
<td>3,302</td>
<td>105</td>
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<tr>
<td>West Bengal</td>
<td>7,980</td>
<td>0.4</td>
<td>3,224</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>451,921</strong></td>
<td><strong>1.61</strong></td>
<td><strong>3,863</strong></td>
<td><strong>1,694</strong></td>
</tr>
</tbody>
</table>

# Table NO. 1:2

**Source:** Report of the Task Force on Training.

**Microsoft Word- Authour Kanan**

<table>
<thead>
<tr>
<th>Vocational Education and Training System in India at a glance</th>
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<tr>
<td><strong>Under Government Auspices</strong></td>
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<td>Dept. of Education</td>
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<td>DGET, Ministry of Labour</td>
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## Chart 1:3  India at a glance - VET & the Economy, 0ct.2007

<table>
<thead>
<tr>
<th>Economic Data</th>
<th>Vocational Data</th>
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</thead>
<tbody>
<tr>
<td>1. Land area 3.29 million sq km</td>
<td>1. Labour Force as % of Population 45 %</td>
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<td>2. Arable land 48.83%,</td>
<td>2. India has one of the lowest productivity index in the world. Please details</td>
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<td>permanent crops 83%, other 48.37%</td>
<td>in our book –Transforming INDIA. Hence the need for VET!</td>
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<td>3. Irrigated land 0.558 million sq km</td>
<td>3. Number of people undergoing VET courses in the ‘organized sector’ about 3.5 million {&amp; 45 million in the ‘unorganized sector’ (estimated)}</td>
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<td>4. Population 1129 million</td>
<td>4. Percentage of work force undergoing some sort of VET course 8% to 10%</td>
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<td>5. Median age 24.8 years</td>
<td>5. Nearly 17 Ministries of the Government seem to be imparting VET courses</td>
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<td>6. Literacy 59.5 %</td>
<td>6. The largest are the Ministry of Labour and the Ministry of HRD. Ministry of</td>
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<tr>
<td>7. GDP 900 US$ billions</td>
<td>labour has 5114 ITI’s.</td>
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<tr>
<td>9. GDP - per capita US$ 820</td>
<td>has about 700 Polytechnics and about 6000 Vocational schools. Data from other</td>
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<tr>
<td>10. GDP by Sector Agriculture 20 %</td>
<td>Ministries not known.</td>
</tr>
<tr>
<td>Industry 20 %, Services 60 %</td>
<td>8. Thirty million is the labour force within the organized sector. Most of them</td>
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<tr>
<td>11. Labour Force 509 million</td>
<td>have elaborate in-house training. This data is not collated.</td>
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<tr>
<td>12. Labour force by occupation</td>
<td>9. Nearly 480 million work in the ‘unorganized sector’. All the informal VET</td>
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<td>Agriculture 60%, Industry 12%,</td>
<td>takes place here. This data is not recorded.</td>
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<td>Services 28%</td>
<td>10. There are an estimated 50,000 I.T. and software related training institutions</td>
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<tr>
<td>13. Population below poverty line</td>
<td>imparting I.T. related courses to a few million people.</td>
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<td>14. House hold income-Lowest</td>
<td>11. In November 2006 the Prime Minister has directed a Task Force to study and</td>
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<tr>
<td>10%,3.5%,Highest 10%,33.5%</td>
<td>suggest ways to improve both the quality and quantity of VET for the country’s</td>
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<tr>
<td>15. Inflation Rate 5.8 %</td>
<td>labour force.</td>
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<tr>
<td>16. Exports US$ 1140 billion</td>
<td>12. Significant positive changes are expected during the 11th Plan period.</td>
</tr>
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<td>17. Reserves US$ 248 billion</td>
<td></td>
</tr>
<tr>
<td>18. Telephones - land line 60 million</td>
<td></td>
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<tr>
<td>19. Telephones - mobile 110 million</td>
<td></td>
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<tr>
<td>20. Internet users 43 million</td>
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</table>

**Source:** Report of the Task Force on Training. Microsoft Word- Author Kanan
Points to be Concerned
However, the basic questions all along have been: Should education be liberal or vocational in nature? If it is to be both, what should be the proportion between the two? Should the educational system turn out a worker with a minimum amount of general education or should it produce a ‘person’ through an adequate grounding of general knowledge, appreciation of attitudes about the universe which help him to live as a liberated individual, along with the provision of a few manual skills? If skill development is the chief concern, is it desirable to prepare him for particular and specific vocational or technical skills, in contrast to his preparation as a generalist through polytechnic education? These problems have been solved to a large extent in East European Countries, the USSR (Union of Soviet Socialist Republics) and other centrally planned social systems. But the problems have persisted in the developing parts of the world, including India.

In India vocational education and vocationalization of higher secondary education is a part of general education in the 10+2 pattern and there is a lot of confusion in regard to the status of vocational education. There is no integrated policy for vocational education in the country. Philosophical and historical researches in vocational education along with comparative studies will be of good value for policy making and planning.

Establishing close links between education and employment, training persons for self employment in agriculture, small industries and the service sector, diversifying educational courses and training persons for middle level jobs anticipated in industry and the service sector were some of the objectives of this programme. Weaning away a large chunk of post-secondary aspirants for higher education from courses in general education was an implied objective.

Quite a number and variety of problems have been experienced in the implementation of programmes of vocational education. Most of them are micro level problems which deserve the attention of research workers. A research base for decision-making is very much needed.
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