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Chapter 1
INTRODUCTION

1.01 EDUCATION AND SOCIETY

The term “Education” is in wider in its connotation. Education merely means the acquisition of knowledge. It is meant for the overall upliftment of the entire mankind. It makes a person suitable for the society.

Education is universally accepted fact that educated and enlightened citizens are essential for a successful functioning of a country. Education is the reflecting mirror of the culture of any nation.

“Education is a force of social regeneration. It must march hand-in-hand with the living and creative forces of social order” - S.Counts (1976).

Education develops the scientific and technological skills, which in turn continue to raise the standard and values of life. Education is the major force which continuously reorganises and reconstructs the past experiences for the future generation, thus making a society grow and develop.

According to Vivekananda, “the training by which the current and expression of will are brought under control and became fruitful is called Education”.

Education is preparation for complete living. It has been subjected to violent shocks from time to time.
India is a developing country and a large portion of her revenue is spent on Education. Naturally the Government and the people have got every right to demand, that the educational institutions justify the large expenditure being incurred by them, by making their products useful to nation which is now undergoing a process of reconstruction.

1.02 EDUCATION POLICY IN INDIA

The development of education is a continuum which gathers its past history into a living stream, flowing through the present into the future. It is essential to see the historical background of educational development to understand the present and visualise the future. Hence, the present chapter aims to look at educational developments from ancient period 2\textsuperscript{nd} millennium B.C. upto modern period in brief.

The development of education system in India can be broadly divided into three stages.

1. Pre-British period,

2. British period,


While discussing the pre-British period an attempt has been made to see the evolution of education from the second millennium B.C upto Muslim invasions. Focus is made on the character of education, the role of the state (King), Religious heads and Institutions, people and its accessibility to the larger community.
1.02.1 Education in Indian Classical Cultures - Ancient Period

India has one of the ancient civilizations in the world. About 2\textsuperscript{nd} millennium B.C. the Aryans entered the land and came into conflict with the dasas, the non-Aryan tribes and dominated them in all spheres. In the course of time, this led to the emergence of Chaturvarna (four varnas) system in which dasas were absorbed as sudras or domestic servants (Sharma, n.d.) By about 500 B.C. the classes became hardened into castes. This was typical hierarchical society. Religion played a vital role in it. It influenced education also. Study of vedic literature was indispensable to higher castes.

The stages of higher instruction were very well defined - namely, upto the age of seven at home, from eight to 16 at school and then at a university. During the first period, the child received primary education at home. Formal schooling, however, began with a ritual known as ‘Upanayana’ or thread ceremony, which was more or less compulsory for the three higher castes (at a later stage, it was exclusively confined for Brahamins). This ceremony marked the beginning of secondary education. Then the boy will stay at preceptor’s ashrama or house. Study at this stage consisted of the recitation of the vedic mantras or ‘hymns’ and the auxiliary sciences - phonetics, grammar, astronomy, prosody and etymology. For a boy of the priestly class, there was a definite syllabus of studies. The trayividya or the knowledge of these Vedas was obligatory for him. The period of studentship normally extended to 12 years. Those who wanted to
continue their studies join a higher centre of learning or a university presided over by a Kulapathi. Advanced students would also improve their knowledge by taking part in philosophical discussions at Parishad or Academy. Education was not denied to women in principle but normally girls were instructed at home.

The method of instruction differed according to the nature of the subject. The first duty of the student was to learn by heart the particular veda of his school. Every word and line of the text had to be learned from the lips of the teachers, and so correct pronunciation was stressed. In the study of such literary subjects as law, logic, rituals and prosody, comprehension played a very important role. The third method was the use of similitudes. They used to tell a fable or story to illustrate some doctrine. This was usually employed in the personal spiritual teaching relating to the upanishads, or conclusions of vadas. Dialogue method or catechism - which was a compendious system of teaching drawn up in the form of question and answer or discoursing was the method in higher learning in the teaching of sastras “(Sciences)”. Memorization also played the greatest role.

The exclusiveness and formalism of Brahanamic system by the end of 6th century B.C. where education became generally confined to Brahmins and discarding right to upanayana to other castes antagonized the other larger sections which led to the emergence of two new religious orders - Buddhism and Jainism. Mahavira and Buddha did not recognize the
supremacy of Vedas. They gave education in the common language of people irrespective of caste, creed or sex. It was a mark of development.

Another important mark of development in History of Education in India was with the establishment of the Imperialistic Nanda dynasty in 413 B.C. and then of the even stronger Mauryas some 40 years later shook the very foundations of the vedic structure of life, culture and polity. There were changes in hierarchical structure of society and in its occupational rigidity. This produced changes even in education. Schools were established in growing towns and studies were chosen freely not according to caste, and teachers admitted students of all castes. During this period Takshashila and acquired international reputation which was a great centre of learning included special institutions of law, medicine and military science.

The 500 years from the 4th century. A.D. till the end of the 8th century under the Gupta and Harsha and their successors, it is a remarkable period in Indian History of education in which the universities of Nalanda and Vallabhi were established and there was significant advancement in the field of Indian Sciences, Mathematics and Astronomy. The other great centres of Buddhist learning in Post-Gupta era were Vikramasila, Odantupuri and Jagaddala.

Development prior to Muslim invasions, began in the 10th century. Nearly every village had its school master, who was supported from local contributions. The Hindu schools of learning known as Pathasalas in Western India and Tolos in Bengal were conducted by Brahimin acharyas.
at their residence. Each imparted instruction in an advanced branch of learning. Larger or smaller establishments, specially endowed by rajas and the other donors for the promotion of learning, also grew in number. The usual centres of learning were either some kings’ capital such as Kanauj, Dhar, Mithila, or Ujjayani, or a holy place, such as Varanasi, Ayodhya, Kanchi or Nasik. In addition to Buddhist Viharas (monasteries), there sprang up Hindu maths (monk’s residence) and temple colleges and agrahara villages (where spiritual and pedagogic functions are performed by learned Brahmmins) in different parts of the country. It is noticed that growth of temples in India is an indication of growth of education, because religion dominated education. It should be noted that girls were usually educated at home and vocational education was imparted through a system of apprenticeship.

Indian society at the end of the 18th century was essentially a feudal society. It was stratified, hierarchical and in egalitarian. There was a small group of well-to-de persons at the top consisting of feudal lords and their dependents and supporters, the higher castes, cultivators of large tracts of good land, traders, merchants, and money lenders. The bulk of the population was underprivileged and poor. Few women could rise to the highest position in society. The Schedules Castes who were treated as untouchables and Schedules Tribes who were not integrated into the mainstream of the society turned the lowliest, the poorest and the most
exploited groups. The socio-economic background of the society was itself reflected in the educational policy.

The princely governments of the day had not accepted any responsibility for the education of the people and all their educational effort was limited to the provision of some financial support to learned persons and institutions of higher learning mainly on religious considerations (Naik and Nurullah, 1972). These institutions were administered by small priestly class in which some elementary was also, imparted to the well-off sections. The principal means of education was non-formal. This was so even in vocational education and they generally obtained it working at the family occupation. Woman did not go to schools. They learnt the art of home-making, child rearing and participating (where necessary) through and apprenticeship in the family. It was social status that determined and individual’s access to education, as well as its type of extent, rather than vice versa. The objective of the system was not to promote vertical mobility but to educate individuals to their pre-determined status in the nature of its exploitation while saying that the education system also made a distinction between intellectuals who did not produced wealth with the sweat of their brow were not supposed to need any formal education. This created two classes i.e., exploiters and the exploited, Unfortunately, education became negation of social justice.

At the beginning of 19th century, the following were the types of indigenous Indian educational institutions, schools of learning which more
or less can be equated with modern day colleges which were of two types i.e (a) Pathasalas of the Hindus and (b) Madrasas of the Muslims; and elementary schools which were again of two types, i.e., (a) Persian Schools, (b) Schools teaching through modern Indian languages (Naik and Nurullah, 1972).

Both Pathasalas of the Hindus and Madrasas of Muslims received assistance from rulers. Chieftains and opulent or religious citizens. They were medieval in character used a classical language (Sanskrit, Arabic or Persian) as the medium of instruction and imparted thought on traditional lines. Generally, these institutions were attached to temple or mosque. State had nothing to do with the governance of these institutions. The chief objectives of these institutions was to produce Moulvis or Pandits. These institutions were replicas of conservatism, obsolete ideals and methods of instruction. Elementary schools were main agencies for the spreading of mass education namely the three R’s. These institutions are for fulfilling the mundane requirements of the perrt Zamindars, Bania and well-to-do farmers (Naik and Nurullah, 1972). Small number of girls of upper classes and children of many communities formed the large majority.

Merits of this system was its adaptability to local environment and vitality and popularity they had earned by centuries of existence under a variety of economic conditions. The narrow curriculum traditional methods of instruction, exclusion of girls and Harijan Pupils were some of the defects of these institutions (Naik and Nurullah, 1975).
Decay of indigenous Indian education started with the advent of the British. The colonial interests of the British shaped the then educational policies of India.

1.02.2 Education Under British Rule

As mentioned earlier the development of education system during the British period was determined by the needs of the colonial powers. The end of the 18th century and the beginning of the 19th century was the period of consolidation of Industrial capital in Europe and England corresponding to this, the emerging intellectual opinion argued for the spread of English language and culture in the colonies. The utilitarian, Evangelists and liberals from their own standpoint of view, favoured the spread of English education. The debate between the anglicists and the orientalist with regard to India was finally clinched with Lord Bentick asking Thomas Babington Macaulay for his opinion. In his famous note of February 2, 1835, Macaulay noted that selective natives must be educated 'as interpreters between us and the millions, of whom we govern; a class of persons Indian in blood and colour but English in taste and opinion, in morals and intellect'.

Before the intervention of the British Government the Christian missionaries spread the education. Then the East India Company was compelled to do something for the spread of education. Enlightened Englishmen, enlightened Indian intellectuals, Movements like Aryasamaj, Muslim reforms movements also worked for the spread of education.
A month after Macaulay’s note, Bentick ruled that ‘the great objective of British Government was henceforth the promotion of European literature and science - all funds appropriated for the purposes of education would be best employed on education alone” There were at least three important reasons that had significant bearing on the ruling of Bentick. The first was the increasing opinion and the recognition of the fact that the British could derive political benefits from English education. Amongst others, who held this opinion was Charles, E. Trevenlyan in 1838 notes that ‘the spirit of English literature cannot but be favourable to the English connection” and argued that this would stop Indians from treating Britishers as foreigners and make them, ‘intelligent and zealous co-operators”.

Secondly, the framing of the education policy was guided by the practical administrative needs of the colonialists. At the time of passing the 1833 Charter Act, the East India Company was in serious financial difficulties and hence it was suggested to cut down expenditure on European employees and instead employ Indians at much lower salary. The 1833 Charter opened the lower order Civil Service jobs to Indians. But this required English educated clerks. Hence the police of 1835.

Thirdly, English education was also seen as an important basis for expanding the British market in India by reining English values and tastes. As Macaulay noted ‘but wearing our broad cloth and working with our cutlery, they should not be too ignorant or too poor to value and buy English manufacturers”. Macaulay’s note, Bentick’s ruling and the
establishment and growth of English education in India was an expression of the direct needs of the ruling colonial power. The education system in India, a legacy that continues till date, originated not because of any individual opinion but because of contemporary needs of the ruling classes.

In 1837, English replaced Persian as the official and court language, and in 1844 Hardinage announced preference for English educated Indians in the Civil Service. These two steps effectively sealed any growth of education other than English education (Basu, 1982).

The pursuance of these needs and the consequent rise in demand for English education, led to the famous dispatch of Sir Charles Wood in 1854. Popularity known as the “Wood’s Dispatch”, this recommended the setting up of Universities of Bombay, Calcutta and Madras which were established in 1857 (Basu, 1982). The recommendations reflected the needs of ruling colonial powers to train a section of upper classes in higher education, and set up the administrative structure for education, which continues till date.

The following five decades saw a rapid expansion of educational institutions. At the turn of the century confidential and semi-confidential circulars were being issued to local authorities to curtail Government grants to Universities and Colleges because British officers saw a direct link between English education and rise of Indian Nationalism. (Basu, 1979). Following the murder of an officer of Poona, Lord Hamilton, Secretary of State wrote to Lord Curzon, “it is impossible to dissociate their ideas and
their hatred of England from the course of education and training through which they have passed” (Basu, 1979).

Consequently, Lord Curzon proceeded to initiate steps for reforming the education system in order to curb the growth of nationalism. The commission of 1902, under the Chairmanship of Sir Thomas Raleigh and the Act of 1904 recommended various measures curtailing the growth of education and changing the composition of university administrative structure (Babu, 1979).

The education system which is British had worked out to consolidate their rule, within four decades produced results contrary to the expectation. The Curzon reforms reflected the fact that necessary changes had to be made corresponding to the needs of the ruling classes. This is only a brief description of British official educational policy in India.

After the establishment of British rule in India, some of the English intellectuals like J.Duncan, William Jones were attracted by Indian literature. The result was the establishment of Asiatic Society of Bengal in 1784. Sanskrit College in 1791 and the starting of Bombay branch of the Royal Asiatic Society in November, 1804. People like Charles Grant, Lord Minto and some Christian missionaries had endeavoured to establish English Schools before 1813. But the efforts of these people were not fruitful. The first attempt made by Europeans to impart Education in India was the result of private benevolence and enterprise, and that too not to natives but to Christian children (Naik and Nurullah, 1972).
There was a lot of political unrest in the universities. This was, in fact, an expression of the rising class—the Indian bourgeois and its aspirations. The Indian National Congress at its sessions of 1902, 1903 and 1904 adopted special resolutions condemning the Raleigh Commission, Indians on the senates took up the issue and Surendranath Banerjee and Gopal Krishna Kohhale led protests in the streets (Naik and Narullah 1971).

The conflict between the contending classes found expression in the field of education, Jamshedji Tata visualizing the need for scientific and technical manpower necessary for the development of independent capitalism, worked out a scheme for a research institute which culminated within the establishment of the Indian Institute of Science in Bangalore in 1909. The leaders of the Swadeshi movement started the Jodavpur Engineering College in 1907, Prior to this the Victoria Jubilee Technical School was established in 1887 and in 1904 an association was formed in Calcutta to send Indians to U.K., U.S.A., and Japan for higher studies in science. In 1906, the British turned down the proposal of the Madras Provincial Government for a department of Industries and in 1911 rejected a bill moved by Gokhale for free and compulsory education.

The debates in educational policy reflected the clash of interest between the British and Indian bourgeois. While the former attempted to restrict education, impose a control with a view to stop students from taking active part in politics, the latter saw the advantages of expansion of higher
education as strengthening the national movement and for providing the human resources for the development of capitalism in independent India.

1.03 EDUCATION SINCE INDEPENDENCE

After the Sargeant Commission, there were no major commissions or reports in the British period. Even the Sargeant Report did not see the light of the day. Following the transfer of power, the Central Advisory Board of Education (CABE) decided to set up two Commissions - one to deal with University Education and the other to deal with Secondary Education, recognizing the fact that the requirements of independent India would be different, and hence a restructuring of system is imminent.

This decision came at a time, when the promises made to the people in the field of education during the freedom struggle, were to be implemented. Free and compulsory education upto the age of 14 was being debated in the Constituent Assembly, which ultimately found expression in the Directive Principles of State Policy. The scheme that seems to have been worked out was that universal elementary education would be achieved by 1960, and necessary changes in the secondary as well as higher education would have to be made in accordance with the needs of an independent India.

i) University Education Commission, 1948

The first of the Commission to be appointed was the University Education Commission in 1948, under the Chairmanship of
Dr. S. Radhakrishnan, to report on Indian University Education and suggest improvement and extensions that may be desirable to suit the present and future requirement of the country.

The Commission, which product a comprehensive and voluminous report, got for itself the task of reorienting the education system to face the “great problem, national and social, the acquisition of economic independence, the increase of general prosperity, the attainment of effective democracy, overriding the distinctions of caste and creed, rich and poor, and a rise in the level of culture. For a quick and effective realization of these aims, education is a powerful weapon if it is organised efficiently and in public interest. As we claim to be civilised people, we must regard the higher education of the rising generation as one of our principal concerns’ (Ministry of Education and Culture, 1983).

Implicit in this was the task that was also repeatedly stated by Nehru, that the achievement of political system towards achieving economic independence and attainment of values to ensure an effective democracy.

Towards this end, the report of the Commission discussed the re-orientation of higher education in relation to the five basic tenets of our constitution - Democracy, Justice, Liberty, Equality and Fraternity. The idea of the report was to mould “the education system as an ideological support to parliamentary democracy”. Our education system must find its guiding principles in the aims of the Social order for which it prepares, in the nature of civilization of hopes to build. Unless we know what we are tending, we
cannot decide what we should do and so we shall do it. Societies like men need a clear purpose to keep them in a world to bewildering change.

On the question of economic independence, the report noted that, ‘three is an urgent need of technicians and for such occupations and skills all over the country”, which will train a large growing body of ambitions youth for employment as technicians, in various existing industries. We are strongly of the opinion that each province should have a large number of occupational institutes, preferably one in each district, giving training in as many occupations possible. (University Education Commission 1948).

ii) Secondary Education Commission (1952)

The recommendations of Dr.Radhakrishnan were reinforced by the Secondary Education Commission appointed in September, 1952 with Dr. L.S.Mudaliar as Chairman. The report was submitted to the first Parliament in 1953.

Reflecting the needs of the ruling classes, the report in the chapter, “reorientation of aims and objectives”, notes that “one of the (India’s) most urgent problems is to improve productive efficiency to increase the national wealth, and thereby to raise appreciably the standard of living of the people. The report went on recommend the setting up of Technical Schools, Polytechnics, Strengthening Multi-Purpose Education, Central Technical Institutions, etc., - infact the infrastructure that would procure the large technical manpower. Establishment of Multi-Purpose Schools was a major contribution of this Commission.
iii) Education Commission (D.S. Kothari) 1964-66

After the establishment of Mudaliar Commission, to deal with all aspects and sectors of education and to advise Government on the evolution of a National System of Education for the Country, the education commission was appointment under the chairmanship of D.S. Kothari. Based on this Commission’s report, National Policy on Education 1968 was formulated.

This Commission has reviewed the development of education in India in the modern period and particularly since independence and has come to the conclusion that Indian education needs a drastic reconstruction, almost a revolution, to realize the constitutional goals and to meet the various problems facing the country in different sectors. This comprehensive reconstruction, says the Commission, has three main aspects:

✧ Internal transformation
✧ Qualitative Improvement
✧ Expansion of educational facilities

Internal Transformation

In the opinion of the Commission, ‘no reform is more important or more urgent than to transform education to endeavour to relate it to the life, needs and aspiration of the people”. This is extremely significant because it is only such a transformation that can make education a powerful instrument of social, economic and cultural transformation necessary for
the realisation of our national goals. It is also urgent and has to be accorded priority over expansion because the greater the expansion of the traditional system of education, the more difficult and costly it becomes to change its character.

The Commission has emphasized the following ten programmes to bring about this transformation.

**Science Education**: Science Education should be made an integral part of all school education. Its teaching at the University stage should be improved and special emphasis should be laid on the development of scientific research.

**Work Experience**: Work experience should be made an integral part of all general education. It should be oriented to technology, industrialisation and the application of science to the production process including agriculture.

**Vocational Education**: Vocational education should be emphasized, particularly at the secondary stage. At the lower secondary stage (age group 11-16) vocational education should ultimately be provided to about 20 per cent of the enrolment, at the higher secondary stage (age group 17-18) such enrolment should be increased to 50 per cent. In higher education, about one-third of the total enrolment may be in vocational courses. In particular, it is essential to emphasize the development of education and research in agriculture.
**The Common School:** A common school system of public Education which would provide equality of access to children from all social strata, and which would be adequate in quantity and quality was proposed.

**Social and National Service:** Some form of Social Service should be obligatory on students at all ages.

**Language Policy:** It suggested the development of all modern languages as the media of instruction and for the administration in the respective states. Hindi as both official and link language and English and Russian as library languages. It further said that the three language formula should be modified; only the mother tongue should be compulsory at the lower primary stage, a second language should be added at the higher primary stage - either Hindi or English at the lower secondary stage; all the three languages should be studies - mother tongue, Hindi (or a modern Indian language in Hindi areas) and English; any two of these languages should be compulsory at the higher secondary stage and no language should be compulsory at the University stage.

**Promotion of National Unity:** Curricula should promote national unity and consciousness and international understanding.

**Elasticity and Dynamics:** It observed rigidity and uniformity in the existing system. It suggested change in curricula, teaching methods and a large programme of in-service education for teachers and educational administrators.
Apart from full time education, part-time and own time education programmes should be encouraged.

The education system should emphasize the development of fundamental social, moral and spiritual values. There should also be some provision, in a multi-religious democratic society like that of India for giving some instruction about the different religions.

**Qualitative Improvements**

The Commission has emphasized the need for dynamic and evolving standards of education. For this purpose the Commission has recommended the adoption of the following measures.

**Utilisation of Facilities**

It suggested increasing the number of working days lengthening the duration of the working day, proper use of vacations and creating a climate of sustained and dedicated work.

**Reorganisation of Educational Structure and Teacher’s Status**

It recommend the 10+2+3 pattern and substantial improvement in remuneration of teachers particularly at the school stage and the gap in the remuneration of teachers at different stages of education is proposed to be abridged.

**Curriculum, Teaching Methods and Evaluation**

The Commission has recommended drastic changes in curricula, teaching methods and evaluation, with the scope for elasticity and
dynamism. It proposed autonomous colleges and experimental schools which would be free from the shackles of external examinations.

**Selective Development**

In view of the scarcity of money, material and men it advised the selective development of institutions. At the university stage, about five or six universities should be selected for intensive development by locating clusters of centres of advanced study in them and should be helped to reach internationally comparable standards.

**Expansion of Education Facilities**

Expansion of education facilities has been recommended by the Education Commission at all stages but more priority was given for internal transformation and qualitative improvement. The following programmes are recommended.

**Adult Literacy**

Part-time course of about one year’s duration should be conducted for all children in the age-group 11-14 who have not attended school or left it before attaining literacy.

**Primary Education**

Good and effective primary education should be provided to all children. The objective of education policy should be to provide five years of such education by 1975 and seven years of such education by 1985.
Secondary and Higher Education

This should be expanded on a selective basis and the output of educational institutions should be broadly related to manpower needs or employment opportunities.

It is criticized that the Commission did not give a clear picture of ‘development”, that is, of the future society we should strive to create in the country and the steps to be taken to create it (Naik, 1982), Naik (1982). He also further argued that while the commission did prepare a fairly good blue print of the national system of education, its report did not highlight the close links between education and society. Nor did it elucidate how the dialectical process of education leads, on the one hand, to a strengthening and perpetuation of status-quo and on the other, to social change and development.

The report was, in fact, was reflecting the social and political expression of the economic crisis of the period. On the one hand, it made recommendations that reflected the democratic aspirations of the Indian masses regarding free and compulsory education, increasing financial outlays for education etc., on the other, recommendations leading to the restriction of higher education.

The policy resolution following the submission of the report was adopted in 1968, at a time when the economic crisis out of the capitalist path of development was finding sharp political expression. The education policy resolution of 1968 in fact has very little to do with over all
recommendation of the Kotharai Commission. The following six recommendations of the commission were picked up by the government and intensive efforts were made to implement them (Naik, 1982).

1. Use of regional language as media of instruction at the university stage.

2. Non-formal Education.

3. Education for the people, i.e., Elementary and Adult Education.


5. 10+2+3 pattern.

6. Teacher’s salaries.

But the proposals like new priorities in educational development, differential systems or grants-in-aid, continuance of education as a subject, list, etc. attracted wide attention but were not implemented.

**iv) Banaras Hindu University Inquiry Committee, 1969**

In relation to governance, the government found the Kothari Commission lacking in many respects and appointed this commission in 1969. The recommendation of this commission regarding the appointment of Vice-Chancellors, structure and composition of university grants etc., which gave the state a greater control over the administration of higher education, corresponded to the ruling classes interest and hence was implemented.
The increasing general towards authoritarianism in the ruling class and its government penetrated into the field of education. Also recognizing the need to control effectively education and Educational institutions, one of the major developments was the constitutional amendment during the emergency to remove education from state list and place it in the concurrent list.

The formation of the Janata Government after the Congress in 1977 election saw another attempt at tailoring the education system with the draft education policy of 1979. This emphasized among other things non-formal education giving the Gandhian model as the ideological support to its argument. With the early fall of the Janata party, this education policy was not adopted by the government successfully.

An attempt to study the various aspects dealt by draft National Policy of Education (1979) is important since it is only the policy at the centre which was framed by a party other than congress even though it survived for a short period.

1.04 NATIONAL POLICY ON EDUCATION

National Policy on Education 1979 (Government of India, 1979) stated that an ideal system of education should enable individuals to know and develop the fullest, their physical and intellectual potentialities and promote their awareness of social and human values, so that they can develop a strong character and live better lives and function as responsible members of the society. It should strengthen values of democracy,
secularism and socialism. Education should promote national unity, pride and cultural heritage, and faith in the country’s future. The effort must be to inculcate scientific and moral values and facilities pursuit of knowledge.

The impact of Gandhiji’s “Basic Education” is very much on Draft National Policy, 1979. It discussed about moral education and socially useful productive work as part of education. It says that “the content of education at all levels needs to be made the educational process functional in relation to the felt needs and potentialities of the people”. It should abridge the gulf between educated classes and masses and overcome feelings of superiority, inferiority and alienation.

Regarding elementary education it proposed universal elementary education upto the age of 14 as laid down in the Directive Principles of the constitution, which has to be achieved through formal and non-formal methods. And at elementary stage the curriculum must be capable of catering to the requirements of wide range learners and learning circumstances and built around local situations. Incentives such as mid-day meals, free text books, stationary and uniforms should be provided to poor pupils, Special attention should be given to the education of girls and children of scheduled castes and scheduled tribes. It proposed common school system, the main feature of it will be the neighbourhood school plan to promote common interests and social integration apart from providing quality education.
Much emphasis was laid on Adult Education, in which the policy treated as an integral part of the Revised Minimum Needs Programme (RMMP). It is aimed at not only acquisition of literacy and numeracy, but also functional development and Social awareness with a view of cultivating the habit of self-education.

**Secondary Education**

It suggested improving quality of secondary education to enable a student to enter life with self-reliance and confidence. At this stage diversification of education programme is desirable. Secondary education should be comprehensive both to be terminal for those who do not want or cannot proceed for further education and to have a strong academic foundation for higher studies for those who show intelligence and aptitude for that education. It suggested the earlier foundations of vocationalization of secondary education through socially useful productive work with accent on practical work becoming an integral component of elementary school curriculum contribution to national development. It preferred relieving pressure on higher education and containing the proliferation of non-viable institutions, establishment of centres for excellence (Government of India, 1985).

Apart from these major recommendations, it also dealt with Agricultural education. Medical education, Physical education. Three language formula, examinations reform, role of teachers and teacher-education. Thought it recognized the importance of financial inputs, it gave
more importance to human intellectual contribution and suggested a review for every years to modify in the light of past experience. It is more or less an ideological prop to the short ruled Janata regime. Apart from its thrust on Adult Education there is no breakthrough in this policy if it is compared either with the past or present.

Indian education system which is a relic of colonial past is characterised by low levels of development and persistence of disparities in the social as well as economic structures. There are disparities between regions, sexes and the fruits of education did not reach the down-trodden. Enrolment and retention of girls and children belonging to Scheduled Caste and Scheduled Tribes community is not encouraging, the budgetary allocations for education is gradually on decrease and the achievement of universalisation of elementary education remained as a distant dream. Indian education system is not only quantitatively small but also qualitatively inadequate and dysfunctional. Added to this the changes in the world economic order and in technology, necessitated the policy-makers to overhaul the present education system. In this background, the India government released a document on educational development “Challenge of Education: A Policy Perspective” to discuss the challenges before the education and to formulate a new policy that can cope with the challenges.

The above analysis shows that even after the 40 years of Independence India is still lagging behind in the field of education. The colonial legacy still dominated the education policy, Education in India,
from the beginning has been catering to the needs of a few ruling sections of the community. The people's language, their needs and aspiration were never considered. There were attempts to change the education system whenever there was a crisis in the economy. In the ancient, and post-independent periods it received the same type of treatment, which resulted in further inequalities in the society.

1.05 THE POSITION OF EDUCATION AS IN 1986

1.05.1 Elementary Education

Provision of free and compulsory Education to all children until they complete the age of 14 years is a Directive Principle of the Constitution. According to Fifth All India Education Survey, 1986, the number of primary school and the gross enrolment of 6-11 age group and 11-14 age group were increasing. But universalisation of Elementary Education (UEE) in its totality is still an exclusive goal. The NPE 1986 and its POA gave unqualified priority to UEE and introduced many innovations. The emphasis was shifted from enrolment perse to enrolment as well as retention. The NPE, 1986 sought to adopt an array of meticulously formulated strategies based on Micro planning. Thirdly it reorganised the school enrolment, infrastructure of schools, and sufficient of Instructional materials. The learning was male child centred and activity based learning.

Non Formal Education (NFE) has to become an integral competent of the strategy to achieve UEE. NFE as envisaged by the NPE 1986 and its
POA would have enough flexibility to enable the learners to learn at their own pace and at the same time would have quality comparable with formal education.

Most of the directives of NPE-POA, have been operationised by the Union and State / UTS. Operation Black Board covered lakhs of Primary school pupils under the guidelines in the National Curricular Frame work, the NCERT revised the entire school syllabi and brought out revised text books. Total Literacy campaigns were conducted. The NPE, 1986 spells not minimum levels of learning (MLL) world conference on Education for ALL (EFA) held in March 1990 in Jometien, Thailand. It was organised by UNESCO, UNICEF, UNDP and the World Bank. The framework for availing external assistance for basic education was evolved at the 46th meeting of the CABE held on 8-9 March 1991 and at the 47th meeting held on 5-6 May 1992 Revised Policy Formulations (RPF) was carried out with some modifications. This RPF provide for launching of a National Mission for the achievement of the goal of UEE.

National Policy on Education Review Committee Perspectives

The National Policy on Education Review Committee is one with the NPE on salience of Teacher Education, overhaul of teacher education systems is considered to be the very first step towards educational reorganisation. The National Policy on Education Review Committee also gave credit to the NPE for launching a nationwide programme of strengthening teacher training institutions at the district level. It also noted
that after 1987, substantial funds were provided for construction of buildings, purchase of books and creation of other facilities under the centrally sponsored scheme of Teacher Education. In chapter 13 of its report, it made a large number of recommendations covering recruitment, contents and process of teacher education etc. The National Policy on Education Review Committee suggested that selection of students for teacher training courses should be regulated through stringent aptitude and attainment and not merely on university grade or marks (R.No.277) The selection should be objective and immune from undue inducements, thereby fastening the credibility of the selection process.

**DPEP**

Article 45, under Directive Principles of State policy laid down the responsibilities of providing free and compulsory Primary Education to the children of Independent India the Central and State Governments.

After implementing all the innovative programmes to improve the enrollment rate of school age children of 6-11, the results were not encouraging and not upto the mark of expectation. A special drive with special goals to achieve this aim was felt a dire need. “District Primary Education Program (DPEP) was launched in selected districts throughout India. DPEP was implemented in a physical manner. In Tamil Nadu State, 4 districts were selected to implement DPEP in the I phase 3 Districts were selected for the implementation of DPEP. Pudukkottai District was one among the 3 Districts in which DPEP was implemented in Phase II. In a
vast country like India with a growing population, the process of Education needs to be dynamic enough to cater the needs of the continuous addition to the total population.

The main aim of DPEP was to achieve 100% enrollment; 0% Dropout; 100% completion with an ensured quality in primary Education. DPEP was a tome bound project which had been operated in Pudukkottai District from 1997-2002 having a strong foundation to raise the standards in the quality of primary education as well as to supply the necessary infrastructure including the rigorous training programmes. All the B blocks of Pudukkottai District had been benefited by the DPEP. DPEP was a timely additionality provided at the right situation in Pudukkottai District because a flare / flair of awareness among parents lighted by the magnificent field work through “Arivoli Movement” DPEP focused on multifaceted programmes which resulted in tremendous achievements. With this additionality of DPEP, the primary educational scenario has been totally enhanced to a qualitative level. The indicators measuring the gradual improvement are given below:

<table>
<thead>
<tr>
<th></th>
<th>1997</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Access Ratio</td>
<td>88%</td>
<td>97%</td>
</tr>
<tr>
<td>Gross Enrollment ratio</td>
<td>91%</td>
<td>94%</td>
</tr>
<tr>
<td>Net Enrollment ratio</td>
<td>62%</td>
<td>73%</td>
</tr>
<tr>
<td>Completion Rate</td>
<td>40%</td>
<td>56%</td>
</tr>
<tr>
<td>Dropout Rate</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td>Retentran Rate</td>
<td>40%</td>
<td>32%</td>
</tr>
</tbody>
</table>

(Decimal places are rounded of to next whole number)
These encouraging trends the improvement of elementary education and the results enjoyed through the implementation of DPEP invited another scheme to be introduced throughout India to raise the standards of elementary education and that is the ‘Sarva Shiksha Abhiyan’, (Education for All).

Programme specially designed for the universal elementary education. “Education for All” was launched with year 2001-2002 with the following main features.

✧ Institutional Reforms in centre and states to improve efficiency of delivery system.
✧ Sustainable financing - long term partnership between centre and states.
✧ Community ownership - VEC, PTAs women groups.
✧ Capacity Building - NCERT / NIEPA NCTE / SLERT / DIET to play a major role.
✧ Community based monitoring with transparency.
✧ Focus on girls and other special groups
✧ District Pre Project phase.
✧ Thrust on quality
✧ Central role of Teachers - Focus as their development needs through BRCS / CRCS.
✧ Habitations as a unit of planning.
✧ District Elementary Education Plans.
The main objectives of SSA

- All children in school, Education Guarantee centre, Alternative school
  Back to School Camp by 2003.
- All children complete five years of primary schooling by 2007.
- All children complete eight years of elementary schooling by 2010.
- Focus on elementary education of satisfactory quality with emphasis on
  education for life.
- Bridging all gender and social category gaps at primary stage by 2007
  and at elementary education level by 2010.
- Universal retention by 2010.

Thrust on quality

SSA aims to improve the quality of Education by providing the
necessary accessories. Quality in elementary education will revolve mostly
round the quality of teacher characteristics and teacher motivation,
preservice and in service education of teachers, curriculum and teaching
learning materials, classroom process, pupil evaluation etc. SSA provides a
sum of Rs.500 for their each teach for the preparation of own teaching
learning materials. Improvement of quality in these parameters has to be
sustained and this sustenance is a matter of grave concern for the whole
system of education.

In service Training to Teachers are designed very carefully so as to
reach the ultimate result of achieving goals of SSA regarding quality
Education. These in service training programmes have a tremendous effect on the teaching - leaving process.

1.05.2 Secondary Education

The NPE, 1986 stated that “access in Secondary Education will be widened to cover areas unserved by it at present” These has been a significant increase in the number of secondary and higher secondary schools and its enrolment. A considerable degree of uniformity has been achieved in regard in common education structure of 10+2+3. The secondary stage is divided into two very distinct sub stages - secondary (upto Class X) which is the state of general which is marked by differentiation and diversification.

The National System of education as stated in NPW 1986 envisages a National Curriculum Frame Work. The NCERT prepared the guidelines, syllabi and text books. The POA (1986) specified programmes for providing adequate playground facilities, construction of additional classrooms and provision of laboratory facilities. The Revised policy formulations take note of the increased demand for secondary education and go beyond NPE (1986) by calling for a planned expansion of secondary education facilities all over the country. Higher participations of girls, SCS and STS, reorganisation of Boards of Secondary Education, quality improvement and facilities professional Development Programmes for Heads of Secondary / Higher Secondary Schools reorientation of content are the main features.
1.06 TEACHER EDUCATION IN INDIA

Teachers are the torch bearers in creating social, cohesion, national integration and a learning society. They not only disseminate knowledge but also create and generate new knowledge. Every nation takes its efforts to provide necessary professional inputs to its teachers for designing about a change in their system. The tasks of bringing qualitative change in instructional efficacy of the teacher education system in itself is a challenging one.

Since independence, India has witnessed, several attempts to change, modify and indigenize the inherited system of teacher education. Teacher education, by and large, is conventional in its nature and purpose. The integration of theory and practice and consequent curricular response to the requirements of the school system still remain inadequate. Teachers are prepared in competencies and skills which do not necessarily equip them for becoming professionally effective. Their familiarity with latest educational development remains insufficient.

1.07 TEACHERS AND THEIR TRAINING

Teacher performance is the most crucial inputs in the field of education. Whatever policies may be laid down, here have to be interpreted and implemented by teachers. Teacher selection and training, competence, motivation and the conditions of work impinge directly on teachers performance. The NPE 1986 calls for a substantial improvement in the conditions of work and the quality of teacher’s education. It also
emphasises the teacher’s accountability to the pupils, their parents, the community in their own profession. The Revised Policy Formulations reiterate without modifications, the NPE 1986 postulates on Teachers & Teacher Education.

The area where significant advances were made since 1986 is teacher education. A centrally sponsored scheme of Teacher Education was launched in 1987. The Scheme of Mass orientation of School Teachers was carried out during 1986 - 89. This orientation was done through 10 day camps during summer vacation.

**Teacher and Teacher Education**

Teacher performance is the most crucial input in the field of education. Whatever policies may be laid down, in the ultimate analysis these have to be interpreted and implemented by teachers, as much through their personal example as through teaching - learning processes. We are on the threshold of the development of new technologies likely to revolutionise teaching in classroom. But, unfortunately, the process of updating the curricula of teacher-education has been very slow. Much of teacher-education is irrelevant even to contemporary requirements, leave alone those of the future. The selection procedures and recruitment systems for teachers have also not kept pace with the needs in terms of either number of quality. So much is expected of the teacher; yet teaching has become the last choice in the job market. We, therefore face a paradox
of having better books and research but progressively more indifferent teachers.

Lest the foregoing statement be considered a wholesale condemnation of teachers, it must be stated that whatever merit there is in the present system, flows essentially from the commitment, hardwork and innovative capacity of a sizeable number of teachers who have become deeply involved in the welfare of their pupils and have, despite the heartaches and the poor rewards available in the system, given their very best to their professional responsibilities.

The whole question of teacher’s selection, role, status, quality and training has been gone into indepth in the two Teachers Commissions set up by the Government of India. In this appraisal, therefore, it is intended to deal with only a few aspects of teacher’s performance which impinge directly upon the totality of the educational system.

It is widely believed, particularly by teachers themselves that selection of teachers is not based entirely on merit. Consequently, quite a few people, who have neither the inherent competence nor the aptitude for teaching come into this profession. This happens largely because no screening worth the name is attempted while admitting students to teacher training schools and colleges. The teacher training too is not planned and organized to develop the spirit of inquiry, initiative, scientific temper, manual dexterity, conceptual clarity and linguistic skills for effective speaking and writing which teachers are expected to impart to their
students. Adequate attention is also not given to develop communication skills which are crucial to the function of the teachers. The training programme also does not provide for developing receptivity to induction of modern educational aids nor does it impart skills to operate even audio-visual equipment. While it is increasingly emphasised that education should become an instrument of national integration, cultural cohesion and development of humanitarian values, the trainees in teacher training institutions are nor exposed to these ideas. No wonder, then, that they should fail to discharge this function.

On a world characterised by rapid changes in knowledge, technology and management, the teachers by and large, find themselves quite out of touch with intellectual and other forces shaping society. They also have no means of keeping abreast with technical aids for more effective teaching. If they happen to be working in a remote school or college, they are totally cut off from all meaningful debate with their peers. Many teachers never get an opportunity to go to a summer course or an orientation programme and the few who get this change find that the unimaginative one-way teaching routine they themselves follow with their students is adopted with them also.

The merit promotion scheme for university and college teachers did not envisage automatic promotion on the basis of length of service. However, the manner of implementation of these schemes had led to an expectation that promotions should be based on the basis of length of
service. A large body of informed opinion is greatly concerned with the consequences of this development. They feel that once age, rather than erudition and competence, becomes the basis for advancement in career, there will be no incentive left for self-study, experimentation and research and pursuit of excellence, which has, at least theoretically been the concern of universities.

Some General Issues

In this context, attention needs to be drawn to the inequities of quality and coverage of education among the various social and economic groups in the country. These inequities have wider implications to the extent education has an impact on the outlook, the self-esteem and the socio-economic and political progress of people.

Even though the rural areas account for three-fourth of the population they are getting much less by way of resources for education than the urban areas. An upswing is, however, noticeable in the relative share of rural areas. In 1950-51 educational expenditure in rural areas was of the order of only Rs.38.3 crores against the expenditure of Rs.71.6 crores in the urban areas, representing rural urban ratio of 0.53. By 1970-71 rural areas accounted for educational expenditure of Rs.494.6 crores while the expenditure in the urban areas was of Rs.623.7 crores yielding the rural urban rating of 0.79. Even so, since the size of the rural population is much larger, the disparities between rural and urban communities are evident even without a detailed analysis. The quality and maintenance of school
and college buildings in urban areas in very much better than in rural areas. The number of single teacher schools in kuchcha building and the incidence of non-availability of black-board, drinking water and latrines in also far more in rural than in urban areas. In fact urban schools generally have better library and laboratory facilities and also far lower incidence of teacher absenteeism. Because of these disparities and also due to considerable differences in life styles and occupations, between the rural and urban areas, the dropout rates amongst urban children is lower than in the rural areas. In terms of access to educational institutions also, urban areas have a great advantage.

Another factor which accentuates urban-rural disparities is that privately manages "quality" institutions are generally located in the urban areas which, because of the medium of instruction, provides greater exposure to a multiplicity of formative forces on pupils and a far more competitive environment, take away the lion’s share of unreserved seats in the prestigious courses in engineering, medicine and management. It has been argued that, despite efforts, it has not been possible to eliminate a cultural bias in favour of urban studies in general and public school products in particular, in the methods used for testing for admission for higher classes or jobs. Continuous monitoring of the persistence of this bias and research into methodologies of eliminating this has to be undertaken in the interest of equity.
As far as the participation of girls in education is concerned, it is clear that despite considerable acceleration in recent years because of deliberate measures to facilitate their participation, they are still way behind the boys. To a great extent this disparity is more the result of economic and occupational problems and cultural biases of society than the accessibility of educational facilities. Many parents still hesitate in sending girls to co-educational institutions and are particularly averse to those in which there are no women teachers. Even though the performance of girls compares favourably with that of boys, relatively fewer girls seek admission to professional courses, other than those pertaining to medicine, teacher-training and nursing.

As far as the participation of children from the scheduled castes and scheduled tribes is concerned, it is well established that even though the participation of scheduled tribes, except for the states of the North-Eastern region, has not been as high as in the case of scheduled castes, the trend growth for both the communities has been extremely impressive during the last five years (1977-83). Notwithstanding this, the spread of education among the girl students of schedules castes and scheduled tribes has not been as much as among the male members of thee groups. Moreover, this gap between the enrolment across the sexes has been much more in the rural than in urban areas.
Teacher Training

In the case of teacher’s training, the problem is not of equity or access but of relatively low standard of candidates. Considering the role assigned to education and the crucial position of teachers in it, it is necessary that recruitment to teacher training institutions should be regulated through stringent aptitude and attainment tests, giving special consideration to science students, sportsmen and people with manual dexterity and wider interests.

There is general acceptance regarding the need for reform of pre-service teacher training arrangements and also an increasing realization regarding in-service training or continuing education of the teaching community. The teacher today faces many challenges emanating from expanding horizons of knowledge as well as other forces impinging upon the consciousness of the pupils. Parental attitudes and their values, social interactions, play-mates, etc., have at all times influenced the students. Radio, T.V. and films now-a-days distort the process of education and make the task of the teacher that much more difficult. While this requires a fresh evaluation of the orientation of the media, it is also calls for effective and recurrent programme of in-service teacher education.

1.08 SCERT

The POA 1986 envisaged setting up District Institutes of Education and Training (DIET) to provide quality pre-service and in-service education to teachers and Adult Education (AE) / Non Formal Education (NFE)
personnel, to provide academic and resource support to the elementary and adult education systems and to envisage in action research and innovation in these areas. March 1992, 306 DIETs were sanctioned, of these 162 are already conducting training programmes.

The POA also, contemplated upgrading Secondary Teacher Education Institutions (STE’S) into Institutes of Advances Study in Education (IASE’s) and strengthening Colleges of Teacher Education (CTEs) one time matching grant of Rs.15 lakhs was sanctioned for strengthening of State Council of Educational Research and Training (SCERT) in each state. Statutory and autonomous status was conferred on the National Council of Teacher Education (NCERT). A UGC panel of Education is working to strengthen the Departments of Education in the Universities. To provide in service training to all teachers at the interval of five years, the existing scheme of Teacher Education will be modified and continued. While attempt will be made to provide maximum coverage through DIETs / CTEs / IASEs, special orientation programmes will also be launched.

The SCERTs will be made independent and autonomous overseeing the functioning of DIETs, DEVs etc. State Board of Teacher Education will be set up for effective role in maintaining the standard of teacher training institutions and other related functions. The norms of Central Assistance under the Scheme will be reviewed and revised suitably. Efforts will be made to provide training for per school education. A special programme will
be launched for preparation and production of teaching learning material for
teacher education in different languages.

1.09 DIETs: MISSION AND ROLE

Pursuant to the provisions of NPE on teacher education, a Centrally
Sponsored Scheme of Restructuring and Reorganisation of Teacher
Education was approved in October, 1987. One of the five components of
the Scheme was establishment of DIETs. Certain details about the Scheme
may be seen in Annex.2. Draft guidelines for implementing the DIET component were circulated to States in October 1987 and have, together
with certain subsequent circulars, formed the basis for its implementation
so far. Till October, 2009. Central assistance had been sanctioned under
the Scheme for setting up a total of 216 DIETs in the country.

Annex 3 gives a resume of progress, of other important initiatives in
the area of Elementary and Adult Education, as on 31-03-1989.

A DIETs Mission could be briefly stated in the following terms.

To provide academic and resource support (vide para 1.5) at the
grass-roots level for the success of the various strategies and programmes
being undertaken in the areas of elementary and adult education, with
special reference to the following objectives:

✧ Universalisation of primary elementary education.

✧ Adult Education:

✧ NLM targets in regard to functional literacy in the 15-35 age group.
The above is a general mission statement. It will have to be translated into specific goals for the DIET, so as to suit the needs of individual states and districts, and will be ultimately operationalised through specific performance norms set for individual DIETs.

**DIETs - Pace - Setting Role**

Pursuit of excellence would have to inform all activities of the DIETs, in which context, it will have two inter-related aspects:

i. Excellence in the Institute’s own work, and

ii. Helping the elementary and adult education systems in the district in achieving excellence.

As far as the first aspect is concerned, efforts will be made to provide to DIET’s all necessary physical and manpower resources. But it will be for them to harness these and other available resources in the best possible manner so as to achieve and promote excellence.

In the context DIETs will also have a very important pace-setting role to play. They will be expected to become models for other educational institutions in the district in terms of meticulous, efficient and effective planning and execution of functions, harmonious and creative organisational climate.

**DIETs : Part of a Larger Design**

DIETs are a part of a larger strategy to achieve national goals in the areas of Elementary and Adult Education. Various components of the

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*Study on Attitude towards Math Edn, Teaching Profession & Acad Achiev in Math Edn*
strategy are inter-dependent and mutually reinforcing. Annex. I also outlines DIET’s role in the context of the other components. DIETs cannot therefore afford to view themselves in isolation, and must faithfully discharge their role of supplementing and complementing other parallel initiatives.

**DIETs : Transactional Philosophy**

A DIET has three main functions, viz.

i. training (both of induction level as well as continuing varieties),

ii. resource support (extension / guidance, development of materials, aids, evaluation tools etc) and

iii. action research.

This section discusses the basic approach and philosophy to be followed in undertaking these functions, especially training.

**Basic Transactional Approach for the DIETs: Placing the Learner at the Centre**

The NPE and POA plead for adoption of a Child Centred approach in elementary education. The relevant portion of NPE reads:

**Child - Centred Approach**

A warm welcoming and encouraging approach, in which all concerned share a solicitude for the needs of the child, is the best motivation for the child to attend school and learn. A child-centred and activity-based process of learning should be adopted at the primary stage.
In the case of Adult Education Programmes also, it is clear that functional literacy should be imparted to adults in a participative, learner-active mode.

The above statements contained in the NPE and POA have profound implications for programmes of teacher education and training of instructors of adult and non-formal education. The child or learner-centred approach necessitates a fundamental change in the manner of curriculum transaction. The challenge is an especially daunting one in view of the special characteristics of our system-high pupil teacher ratio, multi-grade teaching, in adequate physical facilities, and so on. The role of the teacher/instructor would now be no longer one of transmitting readymade knowledge to the learner but, instead, that of a designer and facilitator of learning experience, a manager of instruction and learning resources, and an active contribution to the all-round development of the learner.

All programmes of pre-service and in-service teacher education and of training of AE/NFE personnel in the DIET would be so designed as to train the teacher/instructor in transacting curriculum, keeping the learner at the centre of the teaching-learning process. If the DIET is to achieve this, it follows that it will have to transact its own programmes in the same learner-centred mode which it would expect of its trainees. This basic approach would imbue the transaction of all programmes in a DIET. Some of the implications of this would be as follows:
Programmes will be need-based. Even within a group of trainees/participants, individual differences and needs will be identified and catered to.

Trainees will be enabled to experiment, discover, learn, practice and innovate for themselves, rather than being lectured to. Learning activities will be suitably organised to individual and group modes.

Maximum possible use will be made of the local environment in the learning process. Curricula and learning activities will be suitably related to it.

Good work done by trainees will be duly recognised, encouraged, displayed and published.

The DIET will itself adopt the attitude of a “life-long learner” rather than that of an oracle or know-all. It will receive as much from the field as it would endeavour to give to it. The district will serve as the ‘school’ for its learning will serve as the ‘school’ for its learning experiences, while it may carve out one or two special areas as its ‘lab areas’.

**DIET’s Special Target Group**

“The concept a National System of Education implies that, upto a give level, all students, irrespective of caste, location or sex, have access to education of a comparable quality”, says the NPE. It goes on to say that “to promote equality, it will be necessary to provide for equal opportunity to all not only in access, but also in the condition for success”. This is quite the
essence of the universalisation task and means that needs of educationally disadvantaged groups would have to be given maximum attention. The largest such groups are:

i. Girls and women,

ii. Scheduled Castes and Scheduled Tribes,

iii. Minorities,

iv. The handicapped, and

v. other educationally disadvantaged groups e.g. working children, slum-dwellers, inhabitants of hilly, desert and other inaccessible areas.

It follows that DIETs also, in all aspects of their work, would have to give primary attention to promotion of education of the above groups.

**DIETs: Autonomy and Accountability**

An overhaul of the system of planning and management of education will receive priority. It also says that in this process, two of the “guiding considerations” will be:

i. “decentralisation and the creation of a spirit of autonomy for educational institutions”. and

ii. “establishing the principle of accountability in relation to given objectives and norms”.

In view of the above, DIETs would need to be given adequate functional - autonomy academic, administrative and financial - and would at the same time to accountable vis-à-vis clearly laid down objectivities and
norms. They would be institutions of the State Government or UT Administration, and will therefore be ultimately answerable to them. The State Government / NT Administration may exercise its supervisory functions through the SCERT and SRC.

However, the immediate accountability of the DIET will be to the District Board of Education (DBE) which, according to the NPE, is to be created to manage education up to the higher secondary level. The DBE will set specific goals (in the long, medium and short term) and performance norms for the DIET. It will do so in consultation with the Institute, and keeping in view general norms and guidelines laid down at the national and State levels. It will also review the Institute’s performance vis-à-vis such goals and norms on an ongoing basis. Till DEBs are set up, State Government may designate SCERT / SRC or some other suitable educational authority to perform the DBE’s functions vis-à-vis DIETs.

**DIET: Linkages**

Not merely will every DIET establish a close and continuing dialogue with ‘the field’ (i.e. with elementary schools, school complexes, teachers, head-masters, school supervisors, Instructors / Supervisors / Project Officers of AE and NFE, and with District level officers in these three sectors), but will also establish close linkages with organisations and institutions at the national, State, Divisional and District levels whose objectives and interests converge with its own. Some of these institutions would be as follows:
At the Divisional level

NGOs, institutions of higher education, secondary teacher education institutions, DRDA, local Radio Station (wherever applicable), etc.

At the Divisional level

University Dept. of Education, Institution of Advanced Study in Education (IASE), NGOs and other concerned organisations and institutions.

At the State level

SCERT, SIET, SRC for Adult Education, NGO.

At the National level

NCERT (including its Regional College within whose jurisdiction the state falls), NIEPA, Centre for Culture Resources and Training (CCRT), Directorate of Adult Education, Central Institute of Indian Languages, Mysore, Kendriya Hindi Sansthan, Agra, other premier organisations, institutions and NGOs working in the area of dementary and adult education, etc.

In specific terms, the linkages would be through a meaningful and continuous dialogue in which institutions share problems, experiences, achievements, information and resources. The DIET may also work as an agency for implementing some of the programmes, and activities of national and state level organisations.
DIETs to be Non-Vocation, Mainly, Residential Institutions

Organisations of in-service programmes for teachers and training programmes for AE/NFE personnel would be one of DIET’s main functions. This activity would go on throughout the year, but would peak during school vacations because that is when the Institute’s resources would be free from the work load of pre-service training, and also because that cause minimum dislocation in schools. Therefore, DIETs will be non-vacation institutions - their personnel would have to be classified as ‘non-vacation staff’, and given consequential benefits as per State Governments, Rules.

DIETs would also be expected to provide residential facilities to as many of their trainees as may be possible within the resources available for construction of hostel. In utilising available hostel accommodation first priority shall be given to trainees other than per-service trainees. The later shall be accommodated to the extent possible after accommodation needs of all other training programmes (e.g. in-service programmes for teachers, training programmes for AE/NFE personnel etc.) have been met.

Guidelines in this document - largely Indicative

As in the case of the earlier guidelines, the intention in this document too is not to lay down a rigid set of guidelines for the whole country. These guidelines should be treated, in the main, as indicative rather than prescriptive, and State Government would be expected to implement the programme of DIETs with such local variations and adoptions as may be necessary in their respective contexts. At several places in this document,
alternatives and flexibilities have also been specifically indicated. In some areas however, these guidelines would have to be applied more rigidly, e.g. in regard to total number of posts, pre-conditions to be fulfilled by State Governments. While an attempt has been made in this document to spell out the areas of work, functions and activities of a DIET at considerable length, these can be fully appreciated and worked out only if these Guidelines are read in conjunction with certain other important documents. Some of these are as follows:

1. NPE.
2. POA.

9. Suggested Lists of Recommended Books and Equipment for DIETs, prepared by NCERT.

**DIETs Functions in Tamil Nadu**

The context, mission and role of the DIETs have been discussed in the preceding Chapter. Their functions, as spelt out in the POA, have been quoted in Annex 2. These could be re-stated as follows:

1) Training and orientation of the following target groups

   i. Elementary school teachers (both pre-service and in-service education).

   ii. Head Masters Heads of School Complex and officers of Education Department upto Block level.

   iii. Instructors and supervise of Non-formed and Adult Education (induction level and continuing education).

   iv. Members of DBE and Village Education Committees (VECs), Community leader, youth and other volunteers who wish to work as educational activities.

   v. Resource persons who will conduct suitable programmes for the target groups mentioned at (i) and (iii) above, at centre other than the DIET.
2) Academic and resource support to the elementary and adult education systems in the district in other ways e.g. by (i) extension activities and inter-action with the field, (ii) provision of services of a resource and learning centre for teachers and instructors (iii) development of locally relevant materials teaching aids, evaluation tolls etc., and (iv) serving as an evaluation centre for elementary schools and programmes of NFE / AE.

3) Action research and experimentation to deal with specific problems of the district in achieving the objectives in the areas of elementary and adult education.

1.10 ATTITUDE

Attitude is an important factor which correlates academic achievement. It is well known that attitude of a person guides and directs his behaviour. Lacks of proper attitude may lead to under achievement also. According to Mehnens and Lehman (1969), “only about 50% of variation in grade is accounted for, by cognitive and intercepted factors. A large part of the unaccounted variance is due to effective factors, scheme of which are attitudes”. The attitudes are learned by the individual, in the course of his development. The environmental in which he grows has a tremendous impact on the formation of his attitudes. Studies on attitude have revealed that the family and environment have great influence on the formation and development of attitudes. The development of attitudes is
greatly influences by the family, social and economical factors. Attitudes are not rigid and static but they change radically under certain conditions.

CHARACTERISTICS OF ATTITUDES

1. Attitudes are not in born, they are learned through experience.

2. They have objective reference, one holds an attitude regarding some subject, person or issue.

3. Like most psychological concepts, attitudes can be inferred from the observed antecedent stimulus and the consequent behaviour pattern. They are thus of the nature of an intervening variable and a hypothetical construct.

4. Attitudes differ in variance having an attitude regarding an object signifies that the person concerned, is either favourably or unfavourably disposed towards it. So attitudes are positive or negative, pro and anti.

5. They orient the organism to the attitude object and channel the energy at the disposal of the organisms.

To understand attitude in relationship to other elements of the affective domain, Andersan (1981) began try delineating the essential features of affective characteristics in general. He identified five characteristics such as (1) emotion (2) consistency (3) target (4) direction and (5) intensity.
Emotions

Affective characteristics involve primarily the emotions and feelings of persons. Affective characteristics typically are contrasted with cognitive and psychomotor characteristics. An attitude is an affective characteristic and it involves a person’s feelings and emotions. Thurstone and Chaue (1929) have fixed attitude as a complex of feelings, desires, fears, convictions, prejudices, or other tendencies that have given a set of readiness to act to a person because of varied experience. In Chaue’s definition, “feelings are directly mentioned, desires, fears, convictions, and prejudices are quite clearly emotions”. As Carr H.A. said “The various emotions can be readily identified and defined only in terms of the behaviour situations in which they occur” (Carr H.A. Psychology, 1925).

Consistency

Consistency should mean like - behaviour in like situation (R.W. Washburn - A study of the infants - 1929). Consistency differentiates affective characteristics from affective reactions induced by particular situations or setting. A reasonable degree of consistency of responses is necessary before it can be inferred that a person possesses a particular effective characteristic. Allport, Fishbein and Afzen cite consistency as an essential feature of attitudes. It preparedness or readiness is activated in the presence of all related objects and situation, consistency of activation is clearly implied.
Target

As is indicated in Allport’s (1935) third essential feature, affective characteristics are related to particular objects, situations, ideas and experience. These can be subsumed under the general label “target”. All feelings and emotions including attitudes are directed towards some target. Allport identifies these targets as objects and situations but Fishbein and Ajzen limit the targets to objects.

Direction

Given a target, affective characteristics prepare people to approach or avoid it. Direction is an essential feature of affective characteristics. It is concerned with the positive or negative orientation of emotions of feelings towards the target. Differences in orientation are typically expressed, in terms of bipolar adjectives which indicate the opposite direction. Alport, Fishbein and Ajzen suggest the appropriate bipolar activities for attitude are favourable and unfavourable.

Intensity

Intensity refers to the degree or strength of emotions or feelings. It is an essential feature of affective characteristics. Some people experience more intense emotions than others. Some emotions are more intense than others. Allport said that intensity is related to the level of preparedness. Fishbain and Ajzen said about the extent to which attitude.
Predispose action

Anderson (1981) indentifies the five essential features so that attitude could be differentiated from other affective characteristics. Attitudes can be observed but must always be inferred from behaviour.

G.W. Allport (1935) has defined an attitude “as” a mental or neural state of readiness organised through experience exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related.

1.10.1 ATTITUDE TOWARDS MATHEMATICS EDUCATION

When we talk about a Mathematics teacher’s quality in teaching Mathematics, most people would take teacher’s Mathematics achievement as a correlated variable, which would relate to teacher’s teaching competency.

In Schofield (1981), Shulman (1987) and Ball (1991)’s papers, they took subject-matter knowledge as Mathematics teacher’s Mathematics achievement. Thus, subject-matter knowledge is considered as a measurable performance indicator for assessing teacher’s Mathematics achievement. In the past decade, teacher’s subject-matter knowledge was measured by the scores achieved on standardized tests, by number of academic modules, by number of courses taken in university (Ball, 1991; Shulman, 1987). In Hong Kong, most educators have the same view on taking Mathematics subject-matter knowledge as Mathematics teacher’s Mathematics achievement. But these quantitative measures do not
represent the teacher’s entire knowledge of subject matter, especially in the teaching profession, since subject matter knowledge also includes pedagogical content knowledge.

In recent years, pedagogical content knowledge has been considered as another category of teacher’s subject-matter-knowledge. Ball (1991) and Shulman (1986) feel that this kind of knowledge can be described as knowing the ways of representing and formulating the subject matter and making it comprehensible to students. As teacher’s instructional devices influence the process of learning, it is therefore important to understand how teachers explain Mathematics knowledge to students, what they emphasize and what they do not; and what methods they choose to help students understand. Although many researchers assumed that teacher’s pedagogical content knowledge is influenced by their subject-matter knowledge (Ball, 1991; Shulman, 1986), the interrelationship between the two is not clear enough. Up to the present, there still has been very little research, especially in Hong Kong, studying this correlation among Mathematics teacher. Therefore, there are strong rationales to support the researcher to investigate their relation in the Hong Kong context. As most teachers consider pedagogical content knowledge as another category of teacher’s subject-matter knowledge, in order to make the difference between pedagogical content knowledge (PCK) and subject-matter knowledge (academic) more unambiguous, in this study, the subject-matter
knowledge (academic) is replaced by the new term, Subject Content Knowledge (SCK).

1.10.2 ATTITUDE TOWARDS TEACHING PROFESSION

In literature it is regarded that studies on teacher trainees’ opinions about teaching profession knowledge courses are limited. Erden [1] has conducted a study about the attitudes of teacher trainees towards teaching certification lessons with 10-itemed Likert type attitude scale. In this study conducted by Erden, it is seen that the teacher trainees’ attitudes towards certificate lessons change with respect to subject fields and willing on being a teacher. Besides, Gorgen and Deniz [6] have conducted a study related with opinions of teacher trainees towards teaching certificate program with questionnaire included 10-item.

1.11 MATHEMATICS EDUCATION

India has a long history of teaching and learning Mathematics dating back to the Vedic Age (1500 to 200 BC). During the period of AD 200 to 400, several works on astronomy and Mathematics were composed, mainly based on indigenous knowledge. During the period of AD 400 to 1200, a new branch known as Ganita came into existence with three separate components namely (1) arithmetic, (2) algebra and (3) geometry.

The Educational Commission (1964-66) recommended Mathematics as a compulsory subject for students at school level. The commission points out that, “In teaching of Mathematics, emphasis should be more on
the undertaking of basic principles than on the mechanical teaching of mathematical computations”.

The National Policy of Education (1986) has considered the importance of Mathematics in general education and suggests that, “Mathematics should be visualized as the vehicle to train a child to think reason, analyse and to articulate logically”. Objectives of Teaching Mathematics are:

1. To help the pupils to understand mathematical concepts and their application in everyday life,

2. To enable the pupils to develop among them a spirit of thinking about mathematical concepts and to know the mathematical facts and knowledge,

3. To develop in them mathematical attitude, spirit of enquiry, mathematical reasoning and imagination,

4. To enable the pupils to handle mathematical instruments precisely, and

5. To help the pupils to solve the future problems.

1.12 OBJECTIVES OF THE PRESENT STUDY

The objectives of the present study are:

1. To find out the level of Attitude Towards Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Institutional Variables.
2. To find out the level of Attitude Towards Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

3. To find out the level of Attitude Towards Teaching Profession among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Institutional Variables.

4. To find out the level of Attitude Towards Teaching Profession among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

5. To find out the level of Academic Achievement in Mathematics education of the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Institutional Variables.

6. To find out the level of Academic Achievement in Mathematics education of the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

1.13 HYPOTHESES

To achieve the objectives stated above the following hypotheses have been formulated:

1. There is no significant difference in Attitude Towards Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to institutional Variables.
2. There is no significant difference in Attitude Towards Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

3. There is no significant difference in Attitude Towards Teaching Profession among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to institutional Variables.

4. There is no significant difference in Attitude Towards Teaching Profession among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

5. There is no significant difference in Academic Achievement in Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to institutional Variables.

6. There is no significant difference in Academic Achievement in Mathematics Education among the DTE Trainees of DIETs in the jurisdiction of Bharathidasan University with respect to Trainees Variables.

### 1.14 NEED FOR THE STUDY

The importance of education is growing all over the world. The relationship between education and development, of the nation is felt by everyone in the world. Education in math and science is of primary importance due to an increasingly interdependent global economy, the
labor market and the technological developments that characterize our era and the near future. (Third Meeting of ICSU Scientific Planning Group in Mathematics Education, 2008) Mathematics education is now understood as a right of all students as a specific type of preparation for life. In India also various measures have been taken to improve the mathematical literacy among the students right from primary level. The main duty of a teacher is to create permanent behavioural changes on the students in the direction of the objectives of the school Mathematics curriculum. To carry out this mission teacher needs a rich knowledge on both content and methodology of Mathematics. The teacher trainees who are going to become future teachers should have mastery in the primary school Mathematics content and methodology. The quality of Mathematics education depends not only on cognitive domain but also in the affective domain. Studies have found that affective variables, such as attitude, motivation, and anxiety, are strongly linked to learning Mathematics. That is, if a student has a negative attitude towards Mathematics, this will negatively impact upon his learning (McLeod, 1992; 1994). Thus the achievement in Mathematics education by the trainees during the training period depends on their attitude towards Mathematics education.

Teachers having mastery alone could not improve quality in the classroom Mathematics teaching. The teacher should have favorable attitude towards teaching profession. The Mathematics achievement in future classroom by the learner depends on the achievement in
Mathematics Education attained by the trainees during the Diploma in Teacher Education, their attitude towards Mathematics Education and their attitude towards Teaching Profession. Review of related literature reveals that no much studies have been carried combining these three selected variables. Hence present study entitled ‘A Study of Attitude Towards Mathematics Education, Attitude Towards Teaching Profession and Academic Achievement in Mathematics Education among the DTE Trainees of Bharathidasan University Jurisdiction’ was carried out.

1.15 STATEMENT OF THE PROBLEM

The problem of the present study is stated as “A Study on Attitude Towards Teaching Profession, Mathematics Education and Academic Achievement in Mathematics Education among the DTE Trainees of DIETS of Bharathidasan University Jurisdiction”.

1.16 DEFINITION OF KEY TERMS

1.16.1 Attitude

Thurstone (1949) defines, “An attitude is the degree of positive or negative aspect associated with psychological object. An individual with positive aspect or feeling with some psychological object is said to like that object or to have a favourable attitude towards the objects and vice versa.

1.16.2 Mathematics Education

Mathematics Education is defined as a course of study having both Mathematics content and methodology meant for Elementary Teacher Education.


1.16.3 Teaching Profession

Teaching profession refers to the one who is cultivating the children physically, mentally, socially and spiritually in a formal school system.

1.16.4 Academic Achievement

It refers to the test scores, scored by the DTE Trainees in Mathematics Education conducted by the investigated through achievement test in Mathematics Education.

1.16.5 DTE Trainees

Those who are undergoing Diploma in Teacher Education in District Institute of Education & Training locate in the Jurisdiction of Bharathidasan University, Tiruchirappalli, Tamil Nadu.

1.16.6 DIET

It is an institution meant for importing quality Pre Service Teacher Education to the prospective secondary Grade Teacher’s and importing quality in-service training to the teachers of the district concerned.

1.17 METHODOLOGY

Survey method is adopted for the present study.

1.17.1 SAMPLE FOR THE PRESENT STUDY

437 Trainees of second year of DTE of 7 DIETs in the jurisdiction of Bharathidasan University those who have attended, the class on the day of Data collection of each DIET, has been taken as the sample.
1.17.2 CLASSIFICATION OF VARIABLE TAKEN FOR THE STUDY

It can be classified into two categories namely:

1. Institutional variables

2. Individual variables

DIETs, Type of Management of school and Type of School, can be taken as Institutional variables Group of study of the pupils at +2 level, community, Annual Income of parents, locality of the living place, and their reason for joining the DTE course can be taken as the individual variables.

1.18 TOOLS USED

To study the problems, four tools were administered to the sample. They are:

1. A proforma for collecting Bio-Data of DTE Trainees.

2. A scale to measure attitude towards Mathematics Education developed by the investigator.

3. Teacher attitude Inventory developed and validated by Ahluwalia.

4. Achievement test in Mathematics Education for 2nd year DTE trainees, developed by the investigator.

1.19 STATISTICAL TECHNIQUES USED

Mean, Standard Deviation, t test and F test were used to analysis the data.
1.20 ORGANISATION OF FURTHER CHAPTERS

In Chapter I Conceptual frame work of the study was done.

In Chapter II, a Review of Related Literature, to the present investigation, carried out was given.

Chapter III - the construction of tools, the validity and reliability of the tools, the sample, the administration of the tools, scoring and classification of data were described.

Chapter IV - deals with the analysis of data and interpretation of the data.

Chapter V - consists of a summary of procedures, results of the study, discussion of the results, important recommendations and topics for further studies.

1.21 CONCLUSION

In the first chapter, the salient features of the topic has been discussed in brief. The organization of further chapters gives a clear idea of the procedure adopted in the study.