1.1 INTRODUCTION

Vocational Education, Training and Skill Development (VETSD) means all forms and levels of the educational process involving, in addition to general knowledge and academic skills, the study of technologies and related sciences, the acquisition of practical skills, know-how, attitudes and understanding relating to occupations in the various sectors of economic and social life.

Vocational Education, Training and Skill Development (VETSD) is further understood to be:-

(a) a means of preparing for occupational fields and for effective participation in the world of work;
(b) an aspect of lifelong learning and a preparation for responsible citizenship;
(c) an instrument for promoting environmentally sound sustainable development;

Vocational Education and Training (VET) is an important element of nation’s education initiative. For Vocational Education to play its part effectively in the changing global environment, it is imperative to redefine the objectives of vocational education and training and to make it flexible, contemporary, relevant, inclusive and creative.

It is important to recognize that with more than 35% of citizens aged below 15 years, 700 million young people below 35 years and population growing at 1.8% per annum, India is expected to become the global powerhouse of human resource by 2025. In the emerging era of knowledge-driven society, declining workforce and aging population in developed countries, India with its large young population has the opportunity to position itself as a quality source of skilled manpower for the world. The large population can reap rich dividend for the country through a focus on providing quality vocational education and training.
In the changing global scenario, employment possibilities of graduates and post-graduates of general subjects are becoming increasingly limited. The education imparted at degree level is not oriented to the market needs and neither is it skill based. Due to this changing nature of work and employment, individuals now look for more flexible and multi-skilling learning opportunities for mobility across employment sector and geographic locations. The general education system has not been able to provide these opportunities.

Additionally, the strong linkage between the economy and education was never so clearly visible as now. The functioning of the educational institutions, as well as the educational choice of the youth, has remarkably been influenced by the market economy. Quest for knowledge is no more the only motivating factor for prospective learners; rather, it is the availability of employment in the market that makes the learners choose their areas of study. The lack of employment opportunities to conventional graduates has led to the shifting of focus on the skill based, industry oriented teaching learning pedagogy.

Traditional education which only creates knowledge, although important for basic development of a person, is fast losing its role as a means for human and societal growth. In our country, the growing unemployment amongst the educated youth is posing a serious concern to the value of traditional education in the context of living a better life in a better society. The inability for our youth to apply what they have learnt to improve their daily life or generate gainful employment is causing them to question the very essence of such an education system. It is thus imperative that as a society we must re-look at what should be the objective or outcome of our education system.

In present economy, the objectives of a society have also changed from fulfilling the basic needs of all round development to empowerment. The education system instead of going by text-book teaching needs to be promoted by skill based teaching learning pedagogy. The human resource instead of being unskilled or semi-skilled needs to be knowledgeable, self-empowered and flexibly skilled.
1.2 Changing Objectives of Vocational Education, Training & Skill Development

The immense scientific, technological and socio-economic development has led to a paradigm shift in the basic objectives of imparting education. While factors such as increasing competition, economic slowdown, poverty, illiteracy, population imbalances and political instability are adding pressures on the policy makers as well as common citizens, the importance of education and especially ‘relevant education’ is gaining significance as a viable solution to combat these issues in our society.

In this present era, Vocational Education, Training & Skill Development thus has to become an integral part of our general education system.

There is also a necessity for establishing new relationships between educations, the world of work and the community as a whole. In this context, Vocational Education, Training & Skill Development should exist as part of a system of lifelong learning adapted to the needs of the local community and to worldwide technological development.

Vocational Education, Training & Skill Development should begin with a broad base which facilitates horizontal and vertical articulation within the education system and between school and the world of work, thus contributing to the elimination of all forms of discrimination. The integration of Vocational Education, Training and Skill Development into the academic sector is essential for the VETSD model to succeed.

1.3 Vocational Education, Training and Skill Development in National Plans and Policies

Attempts to restructure the Indian education have been made over a period of time. However, the vocational education system has remained terminal in nature. The students pursuing courses in the vocational streams do not have an option of vertical mobility into degree programs in their chosen Vocational sector.
This coupled with other reasons of quality, standardization, recognition and fragmentation have led to the failure of various vocational schemes introduced at both National and State level.

Vocational Education, Training and Skill Development has been emphasized upon in various National plans and policies at the national level. The details of various plans and policies are given in subsequent paragraphs.

1.3.1 The National Policy on Education (NPE), 1986 (modified in 1992)

The policy states that “The introduction of systematic, well planned and rigorously implemented programmes of vocational education is crucial in the proposed educational reorganization.” These elements are meant to develop a healthy attitude amongst students towards work and life, to enhance individual employability, to reduce the mis-match between demand and supply and to provide an alternative for those intending to pursue higher education without particular purpose or interest.”

The policy also states that graduates of vocational courses will be given opportunities, under predetermined conditions, for professional growth, career improvement and lateral entry into courses of general, technical and professional education through bridge courses. The Kothari Commission Report had also emphasized on full-fledged vocational education in vocational institutions and schools after VIII+ and X+ as well as at higher secondary levels.

1.3.2 Vocational Education in National Five Year Plans

Vocationalisation of education was identified as a priority area in the Eighth Five Year Plan. The revised policy formulations which set forth the modifications to the NPE, however, retained the policy framework laid down by NPE. The target coverage was however, revised to divert 10 percent of the higher secondary students by 1995 and 25 percent by the year 2000.

The focus in the Ninth Plan was on reducing disparities, renewal of curricula with emphasis on Vocationalization and employment oriented courses, expansion and diversification of the open learning system, reorganization of teacher training and the greater use of information and communication technology.

In the Tenth Five Year Plan, vocational education and training has been identified as an important thrust area. Special focus has been laid on vocational education in order
to ensure that there is consistency between the demand for and supply of skills. Additional allocation of Rs 650 crores has been done for the Vocational Education Mission in the Tenth Plan.

Keeping in view the growing problem of unemployment, the Planning Commission constituted a separate Working Group on Vocational Education for the Tenth Plan in 2000. In line with the recommendations of the working group, the centrally sponsored scheme was proposed to be recast in the Tenth Plan with the following features:

- The vocational courses in schools should be competency-based and in modular form with a credit transfer system and provisions for multi-point entry/exit.
- There is a need to establish linkage between vocational courses at the +2 level and courses at the university level. The present admission criterion for entry to vocational courses at the graduation level also needs to be changed.
- The existing scheme should be strengthened by involving industries through Memorandums of Understanding, in designing of the course, development of the curriculum, training of faculty/students and certification of the courses.
- In order to sustain the scheme, schools may consider charging fees and the courses may be designed on a self financing basis.
- The apprenticeship training facility needs to be utilized fully and made compulsory.
- To achieve this, the placement of those who have completed vocational studies for apprenticeship and training should be decided by the Board of Apprenticeship Training immediately after the results of the +2 examinations are declared.
- Before vocational courses are started in schools, local business and industry should be closely involved in studying the need and for conducting district vocational surveys.
- Facilities for running vocational courses should become mandatory for the Kendriya Vidyalaya and Navodaya Vidyalaya school systems.
- Persons with disabilities should be given special treatment while designing vocational courses and their needs and integration into courses should receive appropriate attention.
- Financial assistance may be provided under the scheme for creating testing and certification systems in states in co-operation with user bodies and professional associations.
- The All India Council for Technical Education’s (AICTE) vocational education board needs to be reactivated for providing technical support to the school system and for establishing linkages with other technical institutions.

The Steering Committee on Secondary, Higher and Technical Education set up for the Tenth Five-Year Plan recommended that the vocational education at the secondary school level, polytechnic education and Industrial Training Institutes (ITIs) should come under one department of the state government for better networking, linkages, focused targeting and optimal utilization of resources. An outlay of Rs. 350 crore has been allocated for the Centrally-sponsored scheme of Vocationalisation of Secondary Education in the Tenth Plan. The Tenth Plan also focuses on evolving new policies for the Vocational Education sector. The absence of vertical mobility has also been addressed in the Plan. The Plan recommends that future policies on vocational courses must revolve around the following issues:

- There is a need to sensitize state governments and Union Territory Administrations on the importance of skill training/vocational education in the context of the problem of unemployment.
- There is an urgent need to cater to the Class VIII pass-outs whose numbers will swell with success of the Universalisation of Elementary Education and the Sarva Shiksha Abhiyan initiatives.
- There is need for careful assessment of the stage at which the trades of Fitter, Turner, Blacksmith, as also courses like Accountancy, Typing, Book-keeping and Secretarial practices are to be introduced.
- The duration of various vocational courses also needs to be carefully assessed.
- There is also a need for vertical mobility in the vocational stream. Students who complete +2 in a particular stream should be able to specialize and obtain diplomas.
and degree certificates so as to get value added jobs and better employment opportunities.

- The vocational courses should be demand and need-based, keeping in mind the constantly changing requirements of technologies/industries. Vocational courses must have an in-built flexibility to allow students to switch courses with changes in demand patterns.

- The existing scheme should be strengthened by involving industries through MoUs in the designing and certification of courses and training of students and faculty.

- At present, most of the vocational courses are in the manufacturing sector. Given the slow growth in this sector and the exploding opportunities in the services sector, vocational courses should concentrate more on the latter.

- There should be focus on convergence of schemes like the Sarva Shiksha Abhiyan, Adult Education, and Vocational Education Programme at schools, ITIs, polytechnics, community colleges etc.

- There is a need to have a re-look at the vocational education scheme given the fact that a number of districts in Uttar Pradesh, Bihar, Haryana, Rajasthan and Madhya Pradesh have a poor industrial base.

- The syllabi of vocational subjects should be updated on a regular basis to keep pace with changes in technology. This is especially relevant in trades like food processing, dairy technology, leather and tanning technology, etc.

- Vocational institutes should also be networked with professional institutes like the Central Food and Technology Research Institute (CFTRI), Mysore, Central Leather Research Institute (CLRI), Chennai etc. to keep abreast with technological developments.

- The vocational education scheme should focus on the capacity of the local industry to absorb students of a particular trade. Excess supply of students of a particular trade needs to be avoided. In this context, there is need for diversification even within a trade.

- Urgent attention needs to be given to training vocational education teachers.

- There should be regular exchange of ideas/skills among vocational education teachers, master craftsmen and trainees.

- The apex industry associations like the Federation of Indian Chambers of Commerce and Industry (FICCI), Associated Chambers of Commerce and Industry
(ASSOCHAM) and Confederation of Indian Industry (CII) need to be involved to a greater extent in the implementation of vocational education programmes and imparting of skills.

Despite strong recommendations in the Tenth Five Year Plan, the recommendations were not implemented in the sector of Vocational Education, Training and Skill development as envisaged.

The Government of India at the national level is also in the process of establishing a “National Vocational Education Qualifications Framework”. As a part of its Eleventh Plan Policy, Central Advisory Board of Education (CABE) had set up an inter-ministerial group which includes representatives of State Governments to develop guidelines for such a National Framework.

The unified system of national qualification will cover schools, vocational education and training institutions and higher education sector. NVEQF will be based on nationally recognized occupational standards which details listing of all major activities that a worker must perform in the occupation or competency standards – a detailed listing of the knowledge, skills and attitude that a worker should possess to perform a task written by the particular employment-led sector skills council.

1.3.3 Central Advisory Board for Education (CABE) Committee Recommendation

Central Advisory Board for Education (CABE) Committee report on Universalization of Secondary Education, 2005 has also proposed the following reforms:-

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

b) Ensuring private sector participation in management of institutions and curriculum design to ensure a direct connection to the labor market for graduates, and an effective medium for bringing about organizational and productive innovations.

c) Strengthening the general education component of these programs for providing basic knowledge in humanities and sciences, preparing students to work in various
occupations, teaching them to solve problems and encouraging them to continue learning.

d) Funding and budget allocations - moving from a system which is exclusively financed by the government to a system which is increasingly financed by the private sector and by students paying user fees. The private sector would be willing to contribute only if they see that the system is producing relevant graduates. Students are likely to contribute if they see accrual of labor market benefits from vocational education.

1.3.4 The National Skill Development Policy, 2009 (NSD)

The National Skill Development Policy has an ambitious plan to skill about 12-15 million youth each year. As part of this policy and to ensure execution, the Government of India has setup the National Skill Development Mission (under the aegis of the Hon.ble Prime minister of India), the Coordination Committee and the National Skill Development Corporation. The Policy amongst other things proposes to establish a National Vocational Education Qualification Framework.

The framework proposes the following features:-

a) Competency based qualifications and certification on the basis of nationally agreed standards and criteria

b) Certification for learning achievement and qualification

c) A range of national qualification levels – based on criteria with respect to responsibility, complexity of activities, and transferability of competencies.

d) The avoidance of duplication and overlapping of qualifications while assuring the inclusion of all training needs.

e) Modular character where achievement can be made in small steps and accumulated for gaining recognizable qualification.

f) Quality Assurance regime that would promote the portability of skills and labour market mobility.

g) Lifelong learning through an improved skill recognition system; recognition of prior learning whether in formal, non-formal or informal arrangements.

h) Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing & certification into higher diploma and degree
i) Different learning pathways – academic and vocational – that integrate formal and non-formal learning, notably learning in the workplace, and that offer vertical mobility from vocational to academic learning

j) Guidance for individuals in their choice of training and career planning

k) Comparability of general educational and vocational qualifications at appropriate levels

l) Nationally agreed framework of affiliation and accreditation of institutions

m) Multiple certification agencies/institutions will be encouraged within NVQF.

1.4 The Present Scenario

In the present scenario, only 2% of our manpower in the age group of 15-29 is formally skilled. However, statistics show that 90% of the employment opportunities require vocational skills which are not being imparted in our schools and colleges. India’s transition to a knowledge-based economy requires a new generation of multi-skilled youth. Its competitive edge will be determined by its people’s ability to create, share, and use knowledge effectively. A knowledge economy requires India to develop workers – knowledge workers and knowledge technologists - who are flexible and analytical and who can be the driving force for innovation and growth.

To achieve this, India needs a flexible education system: basic education to provide the foundation for learning; secondary and tertiary education to develop core capabilities and core hands - on skills and further means of achieving lifelong learning. The education system must be attuned to the new global environment by promoting creativity and improving the quality of education and training at all levels.

1.5 Presentation in this research thesis

The Research thesis comprises seven chapters. The first chapter gives an introduction about the present scenario of education system, vocational education, historical perspective etc. The second chapter states the aims and the objectives of the thesis. The third chapter reviews the literature on which the research study is based. The literature review explains about the Indian and International perspective of the Vocational Education, Training.
It also portrays the present system of vocational education and skill development, benefits of the existing systems and the problems related to Vocational Education, Training and Skill Development Sector in India and in particular to the State of Maharashtra.

Chapter four mentions the hypotheses and the research methodology used for the collection of the primary and secondary data. Chapter five deals with data analysis of the primary data collected based on a sample of the vocational (ITI & VJC) students and faculty. Chapter six explains the findings made through the research, conclusions drawn and recommendations suggested. The recommendations also highlight the changes required in the present system as well as the importance and need of the establishment of the proposed Vocational University. Chapter seven explains the scope and the limitations of this research.