An Evaluative Study of Vocational Education and Skill Development in India

(With Reference to Policy Framework)

A Thesis Submitted For the Award of the Degree of

Doctor of Philosophy (Ph.D.) in Management

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CERTIFICATE

This is to certify that the thesis entitled **"An Evaluative Study of Vocational Education and Skill Development in India (With Reference to Policy Framework)"** submitted for the award of Ph.D. degree in Management is a bona-fide work of **Miss. Sumedha Tyagi**, carried out under my supervision and guidance.

She has fulfilled the requirements for the degree of Doctor of Philosophy in Management at **Vardhaman Mahaveer Open University, Kota** regarding the nature and prescribed period of work.

The thesis submitted by her incorporates the work done by her and has not been submitted elsewhere for any degree or diploma.

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DECLARATION

This is to certify that the thesis entitled **"*An Evaluative Study of Vocational Education and Skill Development in India (With Reference to Policy Framework)*"** submitted by me for the award of degree of ***Doctor of Philosophy (Ph.D.)*** in Management is a bon-a-fide work of undersigned, carried out under the supervision of Prof. (Dr.) P. K. Sharma, Director, School of Commerce and Management, Vardhaman Mahaveer Open University Kota.

The content of this thesis, in full or parts have not been submitted to any other Institute or University for the award of degree or diploma.

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(SUMEDHATYAGI)

EXECUTIVE SUMMARY

India the land of diversity in culture, tradition, art, craft and education has always given great importance to education, be it in the form of formal or informal education. It has followed the tradition of imparting some form of education to its next generation either in the form of general education or imparting skills related to any vocation. Education has always embraced vocational elements and aims. It has always combined eternal values and cultural objectives achieved by the study of literature, science, history, mathematics, art and music with the need to respond to social, economic and industrial demands of the age. Since the beginning of time occupational knowledge and mental skills have been transmitted from man to man and from generation to generation. This transmitting process, whatever its form of organization, has developed into the process that has now given rise to expansions and developments of what may be termed as vocational education. In a broad sense, vocational education becomes that part of the total experience where by man learns to carry on a gainful occupation proficiently and efficiently. Vocational education is a form of education, whether given in school or elsewhere, the purpose of which is to fit an individual to pursue effectively a recognised profitable employment. It aids young individuals in choosing an occupation, prepares them for it, finds an opening in it and builds up a career of efficiency and success. Skill development is important because of its contribution to enhancing productivity at the individual, industry and also national levels because of the complementariness that exist between physical capital and human capital on the one hand and between technology and human capital on the other.

The level of technology and the concomitant levels of skills directly determine productivity of labour. Improvement of skill enhances labour productivity even with the existing technology. For Indian economy, growing at the rate of 8 to 9%, skill development poses major challenges and also opens up unprecedented doors of opportunity. The magnitude of skill development challenge can be estimated by the fact that only 3% of the existing workforce of India can be called skilled. Though from the ancient times India has promoted vocational education and skill development training, it has been unable to fulfil the shortage of skilled manpower to address the huge need and demand of its economy.

Due to the new and advanced industrialization India has witnessed a rapid growth in the recent past. This has led to an increased purchasing power where in the customers want a higher quality of service. However, there is a severe shortage of skilled manpower in the country. Keeping this thing in mind, it is necessary to skill the young population of India with advanced set of skills so that, it can meet the demand of the economy.

It is important to recognise that with more than 35% of the 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 work force and aged population in developed countries, India with its large young population has the opportunity to position itself as a quality source of skilled man power for the world. The large population can reap rich dividend for the country through a focus on providing quality vocational education and training. 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 area 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.

Lot of efforts have been made by the Government of India right after India's independence, to impart vocational education in order to enhance the skills of the people of India, like the University Education Commission of 1948, The Secondary Education Commission of 1952, The Education Commission/The Kothari Commission 1964-66, Centrally Sponsored Scheme of Vocationalization of Secondary Education, The National Policy on Skill Development in 2009, National Vocational Education Qualification Framework (NVEQF) in 2012, the National Skills Qualification Framework (NSQF) in 2013, and the National Policy on Skill Development and Entrepreneurship in 2015. But still, the condition and situation of vocational education and skills training hasn't improved to a great extent.

This study was undertaken to gain an in-depth insight into the various policy frameworks of vocational education and skill development, and to be able to provide suggestions to the Government of India which could be incorporated in the future policy framework and, help in improving the status and condition of vocational education and skill development so that India can take full advantage of the 'Demographic Dividend'.

This study investigated the present mechanism of vocational education training and skill development, the infrastructural facilities and human

resources of the vocational education training and skill development institutes, the practices of the these institutes and the problems faced in vocational education training and skill development.

Drawing upon quantitative techniques, this study aimed to offer fruitful insight into vocational education training and skill development scenario in India. This topic was found highly justified in the present day scenario as with 700 million people below the age of 35 years and the 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 work force and aged population in developed countries, India with its large young population has the opportunity to position itself as a quality source of skilled man power for the world. The large population can reap rich dividend for the country through a focus on providing quality vocational education and training.

This research was undertaken as a descriptive study in Delhi (the national capital of India). The government owned Industrial Training Institutes and Polytechnics were selected for the study. Four questionnaires were developed by the researcher as data collection tools from the stakeholders of the study. The four stakeholders of the study were students of the ITI's and Polytechnics, teachers of the ITI's and Polytechnics, principals of the ITI's and Polytechnics and the industry people who employ the ITI and Polytechnic pass outs. Various quantitative data analysis tools and tests were used to analyse the collected data like, frequency distribution, percentage analysis, reliability testing, mean, standard deviation and variance.

This research tried to gain an in-depth understanding of the various aspects of vocational education training and skill development through evaluating the detailed questionnaires, which were filled by the various stakeholders of the study. It also tried to gain an in-depth insight into the various policy frameworks of vocational education and skill development, and to be able to provide suggestions to the Government of India which could be incorporated in the future policy framework, and help in improving the status and condition of vocational education and skill development in India so that, India can take full advantage of the 'Demographic Dividend'.

List of Research Publications and Paper Presentations

Papers Presented:

1. Attended International Conference on "Emerging Trends in Technical and Vocational Education and Training: Vision 2025", organized by PSS Central Institute of Vocational Education, NCERT, Shymala Hills, Bhopal, in collaboration with Madhya Pradesh Council of Science & Technology, Govt. of M.P., from 18th to 20th February, 2015, and presented a paper titled **"An Overview of the TVET Scenario and Challenges of the SAARC Nations With a Reality Check of the Indian Situation"**
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Chapter Published in an International Book & Paper Published in UGC Approved Journal:

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

India the land of diversity in culture, tradition, art, craft and education has always given great importance to education, be it in the form of formal or informal education. It has followed the tradition of imparting some form of education to its next generation either in the form of general education or imparting skills related to any vocation. A religious preacher/guru taught his children the skills related to performing religious rituals, a blacksmith taught his children skills related to his vocation, a cobbler imparted skills related to his vocation to his children but, the basic motive was to link education to some skill or the other in order to enable the next generation to be gainfully employed.

According to Kumar (2001) education has always embraced vocational elements and aims. It has always combined eternal values and cultural objectives achieved by the study of literature, science, history, mathematics, art and music with the need to respond to social, economic and industrial demands of the age. Since the beginning of time occupational knowledge and mental skills have been transmitted from man to man and from generation to generation. This transmitting process, whatever its form of organization, has developed into the process that has now given rise to expansions and developments of what may be termed as vocational education. (Kumar. 2001) **[1]**

Kumar (2001) also states that in a broad sense, vocational education becomes that part of the total experience where by man learns to carry on a gainful occupation proficiently and efficiently. The term vocational education as used in this broad sense is meant to cover both unorganized and organized methods of transmitting knowledge, skills and competencies. In a strictly utilitarian sense, vocational education or training implies a series of organized and controlled learning experiences used to educate or train any person or persons for a given employment. (Kumar. 2001) **[1]**

Tula Ram (2005) stated that the basic aim behind education is to foster growth and integration in an individual so that he may discriminate between good and bad aspects of a phenomenon or thing. Through education senses are vitalised upon which consciousness, intelligence, judgement and perspective skills of individual attains growth. Effective methods of education provide a sequence of experiences and thoughts enabling the individual to acquire as rapidly as possible, manual skills and directives in the various operations of the activity, trade or industrial pursuit for which he

is preparing. It results in enhanced ability to think and work intelligently. (Tula Ram. 2005) **[2]**

Tula Ram (2005) also stated that Vocational education is a form of education, whether given in school or elsewhere, the purpose of which is to fit an individual to pursue effectively a recognised profitable employment. It aids young individuals in choosing an occupation, prepares them for it, finds an opening in it and builds up a career of efficiency and success. Thus, an individual who has decided his future line of action as career can get all that he needs in preparing himself for that career, through vocational education. (Tula Ram. 2005) **[2]**

Pandya (2011) stated that Skill development is important because of its contribution to enhancing productivity at the individual, industry and also national levels because of the complementariness that exist between physical capital and human capital on the one hand and between technology and human capital on the other. The level of technology and the concomitant levels of skills directly determine productivity of labour. Improvement of skill enhances labour productivity even with the existing technology. (Pandya.2011) **[3]**

According to Pandya (2011), For Indian economy, growing at the rate of 8 to 9%, skill development poses major challenges and also opens up unprecedented doors of opportunity. The magnitude of skill development challenge can be estimated by the fact that only 3% of the existing workforce of India can be called skilled (Pandya.2011) **[3]**

Pandya (2011) also stated that, though from the ancient times India has promoted vocational education and skill development training it has been unable to fulfil the shortage of skilled manpower to address the huge need and demand of its economy. Due to the new and advanced industrialization India has witnessed a rapid growth in the recent past. This has led to an increased purchasing power where in the customers want a higher quality of service. However, there is a severe shortage of skilled manpower in the country. Keeping this thing in mind, it is necessary to skill the young population of India with advanced set of skills so that, it can meet the demand of the economy (Pandya.2011). **[3]**

According to the definition by UNESCO and the International Labour Organization (ILO), Technical and Vocational Education and Training (TVET) refers to “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life" (UNESCO and ILO, 2001). **[4]**

According to Majumdar (2012) it is important to recognise that with more than 35% of the 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 work force and aged population in developed countries, India with its large young population has the opportunity to position itself as a quality source of skilled man power for the world. The large population can reap rich dividend for the country through a focus on providing quality vocational education and training. (Majumdar. 2012) **[5]**

Majumdar (2012) states that in the changing global scenario, employment opportunities 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 as 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 area 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 (Majumdar 2012). **[5]**

According to Majumdar (2012) 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. (Majumdar 2012) **[5]**

Majumdar (2012) also states that 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 (Majumdar. 2012). **[5]**

1.2 EDUCATION COMMISSIONS AND COMMITTEES IN RETROSPECT

'The era of educational reconstruction inevitably followed in the wake of social and economic reconstruction initiated by the National Government after 1947, education being the chief instrument for reconstruction and transformation of society. The first steps taken in the direction of educational reconstruction were the appointment of a series of commissions to survey, study, review, and recommend improvements in the different sectors of education.' **(http://www.indg.inprimary-educationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]**

1.2.1 THE UNIVERSITY EDUCATION COMMISSION OF 1948

'To look into the problems of university education, the University Education Commission was appointed by the Government of India in 1948 under the chairmanship of Dr.S.Radhakrishnan in pursuance of the recommendations of the Central Advisory Board of Education and also of the Inter-University Board. The commission made important suggestions for improving the standard of university education in the country.

1. Introduction of 3 year degree course for the first university degree.
2. Greater use of tutorial system of instruction.
3. Emphasis on developing knowledge and critical thinking, rather than mechanical passing of examinations.
4. Establishment of Rural Universities.
5. Introduction of moral education.'**(http://www.indg.inprimary-educationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]**

1.2.2 THE SECONDARY EDUCATION COMMISSION OF 1952

'The Radhakrishnan Commission had surveyed the field of secondary education in a passing manner and had admitted that our secondary education remains the weakest link in our educational machinery and needs urgent reforms. This fact was the reason of an All India Commission of Secondary Education appointed in

1952 under the Chairmanship of Dr.A.L.Mudaliar. The commission offered a number of suggestions.

1. The aim was to train the youth for intermediate leadership and for democratic citizenship.

2. Secondary education was to be a terminal stage for a large majority of the nation's youth, who would take up their places in society after their school education, and provide leadership to the general masses.

3. The commission was equally concerned with qualitative improvement of the schools.

4. To develop individual talent, curricular offerings were extended and diversified.

5. To achieve the new objectives of education, changes in methods of teaching were suggested.

6. New trends in examination, guidance and extra-curricular work were bought into the school programmes.

7. Multi-purpose secondary school was a new concept recommended by the commission.

8. Inclusion of craft, social studies and general science in the curriculum was aimed at orienting students towards an industrial and science centred democratic life.' **(http://www.indg.inprimary-educationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]**

1.2.3 THE KOTHARI COMMISSION OF 1964-66

'The commission was appointed under provision of a resolution of the Government of India, dated 14th July 1964. It was appointed under the Chairmanship of Dr.D.S.Kothari (Chairman of U.G.C). The recommendations of the commission were

1. INCREASE IN PRODUCTIVITY: The commission suggested that education must be related to productivity to increase national income. To be able to do this it suggests the following:-

i.) Science is the basic component of education and culture, so it should be made an integral part of school education.

ii.) To inculcate the value of manual work, the commission recommended the introduction of work experience in school education.

iii.) To meet the increasing needs of technical personnel in industry, agriculture and trade, it recommended the introduction of vocational subjects in school curriculum.

2. PROMOTING SOCIAL AND NATIONAL INTEGRATION:

i.) Common school system of public education should be adopted.

ii.) To bridge the gulf between the educated and uneducated, social and national service should be made an integral part of school education.

3. EDUCATION AND MODERNIZATION: To keep pace with modernization, the I.E.C is of the opinion that, greater emphasis must be placed on vocational subjects, science and research.

4. SOCIAL, MORAL AND SPIRITUAL VALUES: The national system of education should emphasis on the cultivation of social, moral and spiritual values among students.'**(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on 4.03.2014]) [7]**

1.3 VOCATIONAL EDUCATION, TRAINING AND SKILL DEVELOPMENT IN NATIONAL PLANS AND POLICIES

1.3.1 NATIONAL POLICY OF EDUCATION 1968

'The National Policy of Education 1968 is based on the recommendations of the Kothari Commission of 1964.

RESOLUTION ADOPTED BY NATIONAL POLICY OF EDUCATION:-

i.) Free and compulsory education for all children up to the age of 14.

ii.) Status, emoluments and education of teachers.

iii.) Development of languages.

iv.) Equalization of educational opportunities.

v.) Identification of talent.

vi.) Work experience and national service.

vii.) Science education and research.

viii.) Education for agriculture and industry.' **(http://www.kkhsou.in/main/education/edu_commission.html)[7]& (http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf) [8]**

1.3.2 NATIONAL POLICY OF EDUCATION 1986 (MODIFIED IN 1992)

'The government of Prime Minister Rajiv Gandhi introduced a new National Policy of Education in May 1986. The new policy called for "special emphasis on the removal of disparities and to equalize educational opportunity," especially for Indian women, Schedule Tribes and Schedule Caste communities. To achieve such a social integration, the policy called for expanding scholarships, adult education, recruiting more teachers from the SCs, incentives for poor families to send their children to school regularly, development of new institutions and providing housing and services. The NPE called for a "child-centred approach" in primary education, and launched "Operation Blackboard" to improve primary schools nationwide. The policy expanded the open-university system with the Indira Gandhi National Open University, which had been created in 1985. The policy also called for the creation of the "rural university" model, based on the philosophy of Indian leader Mahatma Gandhi, to promote economic and social development at the grassroots level in rural India.' **[9]**

'The 1986 National Policy on Education was modified in 1992 by the P.V. Narasimha Rao government. In 2005, Former Prime Minister Manmohan Singh adopted a new policy based on the "Common Minimum Programme" of his United Progressive Alliance (UPA) government. Programme of Action (PoA), 1992 under the National Policy on Education (NPE), 1986 envisaged conduct of a common entrance examination on all India basis for admission to professional and technical programmes in the country. For admission to Engineering and Architecture/Planning programmes, Government of India vide Resolution dated 18 October 2001 has laid down a Three – Exam Scheme (JEE and AIEEE at the National Level and the State Level Engineering Entrance Examinations (SLEEE) for State Level Institutions – with an option to join AIEEE). This takes care of varying admission standards in these programmes

and helps in maintenance of professional standards. This also solves problems of overlaps and reduces physical, mental and financial burden on students and their parents due to multiplicity of entrance examinations.' **(https://en.wikipedia.org/wiki/National_Policy_on_Education) [9]**

1.3.3 NATIONAL SKILL DEVELOPMENT POLICY 2009

'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:-

i.) Competency based qualifications and certification on the basis of nationally agreed standards and criteria.
ii.) Certification for learning achievement and qualification.
iii.) A range of national qualification levels – based on criteria with respect to responsibility, complexity of activities, and transferability of competencies.
iv.) The avoidance of duplication and overlapping of qualifications while assuring the inclusion of all training needs.
v.) Modular character where achievement can be made in small steps and accumulated for gaining recognizable qualification.
vi.) Quality Assurance regime that would promote the portability of skills and labour market mobility.
vii.) Lifelong learning through an improved skill recognition system; recognition of prior learning whether in formal, non-formal or informal arrangements.
viii.) Open and flexible system which will permit competent individuals to accumulate their knowledge and skill through testing & certification into higher diploma and degree.

ix.) 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

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

xi.) Comparability of general educational and vocational qualifications at appropriate levels

xii.) Nationally agreed framework of affiliation and accreditation of institutions

xiii.) Multiple certification agencies/institutions will be encouraged within NVQF.' **(Majumdar.2012.) [5]**

1.3.4 NATIONAL POLICY ON SKILL DEVELOPMENT AND ENTREPRENEURSHIP 2015

'The objective of the National Policy on Skill Development and Entrepreneurship, 2015 will be to meet the challenge of skilling at scale with speed and standard (quality). It will aim to provide an umbrella framework to all skilling activities being carried out within the country, to align them to common standards and link the skilling with demand centres. In addition to laying down the objectives and expected outcomes, the effort will also be to identify the various institutional frameworks which can act as the vehicle to reach the expected outcomes. The national policy will also provide clarity and coherence on how skill development efforts across the country can be aligned within the existing institutional arrangements. This policy will link skills development to improved employability and productivity.' **(http://www.skilldevelopment.gov.in/National-Policy-2015.html) [10]**

1.4 NEED AND SIGNIFICANCE OF THE STUDY

Lot of efforts have been made by the Government of India right after India's independence, to impart vocational education in order to enhance the skills of the people of India, like the University Education Commission of 1948, The Secondary Education Commission of 1952, The Education Commission/The Kothari Commission 1964-66, Centrally Sponsored Scheme of Vocationalization of Secondary Education, The National Policy on Skill Development in 2009, National Vocational Education Qualification Framework (NVEQF) in 2012, the National Skills Qualification Framework (NSQF) in 2013, and the National Policy on Skill Development and Entrepreneurship in 2015. But still, the condition and situation of vocational education and skills training hasn't improved to a great extent.

It is probably the social stigma and faulty planning, which is responsible for the present status of vocational training and skill development in a country like India, which has the maximum number of young people who can gainfully contribute to the economic development and prosperity of India.

So, in order to evaluate/gain an in-depth/detailed insight into the various policy frameworks of vocational education and skill development, and to be able to provide suggestions to the Government of India which could be incorporated in the future policy framework and, help in improving the status and condition of vocational education and skill development so that India can take full advantage of the 'Demographic Dividend', this particular area has been selected by the researcher for detailed study.

1.5 STATEMENT OF THE PROBLEM

"An Evaluative Study of Vocational Education and Skill Development in India (With Reference to the Policy Framework)"

CHAPTER TWO

REVIEW OF LITERATURE

2.1 According to Goel (2011), India has one of the largest technical manpower in the world. However, compared to its population it is not significant and here and there is a tremendous scope of improvement in this area. In India, the emphasis has been on general education, with vocational education at the receiving end. This has resulted in large number of educated people remaining unemployed. This phenomenon has now been recognized by the planners and hence there is a greater thrust on vocationalization of education. Another shortcoming in the area of technical and vocational education is that till now, the number of engineers graduating is more than the diploma holders. This is creating an imbalance, as more workforces are required at the lower level. Hence more Polytechnics and Institute for Industrial Training (ITIs) are being opened now. Besides, various ministries are trying to impart vocational courses through innovative institutions, specially launched for the purpose. In doing so, the government is trying to maintain quality of these courses. Under the XIth Plan, vocationalization of education has received a boost with more funds being allocated for the purpose. **(Goel. 2011) [11]**

India lags far behind in imparting skill training as compared to other countries. Only 10% of the total workforce in the country receives some kind of skill training (2% with formal training and 8% with informal training). Further, 80% of the entrants into the workforce do not have the opportunity for skill training **(Canada India Business Council 2013).** [**12]**

Table 1: Percentage of workforce receiving skill training (2008)

Korea	96%
Japan	80%
Germany	75%
UK	68%
India	10%

Source: Planning Commission Report (2008)

According to Knowledge Commission (2009), in India, skill acquisition takes place through two basic structural streams-a small formal one and a large informal one. In the National Sample Surveys 61st round, among persons of age 15-29 years, only about 2% reported to received formal training and another 8% reported to have received non-formal vocational training. The proportion of persons 15-29 years who received formal vocational training was

the highest among the unemployed. The proportion was around 3% for the employed, 11% for the unemployed and 2% for the persons not in the labour force **(Knowledge Commission 2009**). **[13]**

'The training provided in the vocational education and training (VET) institutions in India is not aligned to the demand for skills from the labour market. Evidence for this mismatch exists in the projected skill shortages for different sectors of the economy on the one hand, and the high unemployment level of VET graduates on the other. Industry surveys such as the 'Survey on emerging skill shortages in the Indian Industry (2007)' conducted by FICCI show that significant skill gaps exist in key sectors like food processing, retail, health, pharmaceuticals, education, textiles, mining, and automotive (FICCI, 2007, Pg 3-12). A study by KPMG on skill gaps in the automotive industry showed that employers point to the lack of right skill sets, especially at the supervisor and technician level as a key issue in their manpower planning (KPMG, 2008, Pg 8).The National Skill Development Corporation of India in its assessment of skill requirements of the organized retail sector projects that in the retail sector alone, there will be a requirement of an additional 17 million people by 2022. Of this 17 million about 70% of the requirement will be for Level I and Level II skills which are typically provided through short-term vocational courses. (NSDC, 2012, Pg 44-46)
While national level tracer studies tracking graduates of VET are not readily available, an efficiency study of training institutes in 3 large Indian states of Orissa, Maharashtra, and Andhra Pradesh done by the International Labour Organization (ILO) revealed that in Andhra Pradesh 33% of graduates from public training institutions and over 70% of the graduates from private institutions were unemployed (ILO, 2003, Pg XV). Unemployment among VET graduates in Maharashtra was between 23-27% (ILO, 2003, Pg XV).' **(M. Kumari). [14]**

According to a study by R. Hajela (2011), as a country endowed with labour, India's situation is at best ironic. On the one hand, domestic economic growth has created huge employment demand and job opportunities, while on the other a shortage of skills is making more people unemployable. What adds to the irony is that there are 17 central government ministries that offer skill development initiatives through school education, institutes of higher learning and specialised vocational training institutes. The large size of the population alone cannot be India's problem since China, with a similar scale of population and training structure, has better labour productivity (indicating higher skills). This paper argues that India lacks sufficient skilled workers as its existing vocational training system does not target the casual or informal workforce, which constitutes over 90 per cent of India's working population **(Hajela 2011). [15]**

'There has been a tremendous focus on vocational education in the five year plans. It has off late caught the fancy of the academicians, policy makers, etc. The Twelfth Five Year Plan has specially laid its emphasis on skill education in its Approach paper.
However, the reality check is that, given a choice between the two options for education: general education and vocational education, the tilt has been more towards general education than vocational and compared to the western countries the participation rate of students in the vocational courses are very less. Due to globalization and the growth of knowledge economy, there is a tough competition everywhere and therefore the only mantra to success is knowledge, skill and training. The focus is more on working skills and expertise in a particular field of one's own. Hence vocational education and training can prove to be double edged weapon to be used against unemployment problem and also producing skilled technicians and workers for the global market **(Lama 2012).' [16]**

'As compared to western economies where there is a burden of an ageing population, India has a unique 20–25 years window of opportunity called the "demographic dividend." This "demographic dividend" means that as compared to other large developing and developed countries, India has a higher proportion of working age population vis-à-vis its entire population." The result is low dependency ratio, which can provide a comparative cost advantage and competitiveness to the economy. The following table provides a glimpse of the demographic dividend that India would be able to achieve.

Table 2: Population in 15-59years age-group by 2022

Country Name	Population in 15-59 years age-group	Proportion of country's 15-59 years age-group population to world's 15-59 years age-group population
India	861,235,123	18.0%
China	904,481,837	18.9%
Australia	14,420,441	0.3%
Brazil	139,520,976	2.9%
France	37,332,831	0.8%
Germany	44,408,764	0.9%
Japan	64,950,362	1.4%
US	195,489,469	4.1%
UK	38,133,894	0.8%

Source: FICCI 2012 Report

Further, it is expected that the ageing economy phenomenon will globally create a skilled manpower shortage of about 56.7 million by 2020. With the rising trend of outsourcing work globally, India has the opportunity to become a global reservoir of skilled manpower, accounting for 28% of the graduate talent pool among 28 of the world's lowest cost economies.' **(Planning Commission 11th Plan) [17]**

Among all the countries, India is privileged in the sense that, not only can it fulfil its own demand of skilled manpower, but also supply skilled manpower the world over.

'India has the youngest population in the world; its median age in 2000 was less than 24 compared 38 for Europe and 41 for Japan. Even China had a median age of 30. It means that India has a unique opportunity to complement what an ageing rest of the world needs most. The demographic structure of India, in comparison with that of the competing nations, would work to the advantage to the extent our youth can acquire skills and seize the global employment opportunities in the future **(Planning Commission 11th Plan).' [17]**

2.2 EDUCATION COMMISSIONS AND COMMITTEES IN RETROSPECT

'The era of educational reconstruction inevitably followed in the wake of social and economic reconstruction initiated by the National Government after 1947, education being the chief instrument for reconstruction and transformation of society. The first steps taken in

the direction of educational reconstruction were the appointment of a series of commissions to survey, study, review, and recommend improvements in the different sectors of education.'

(http://www.indg.inprimaryeducationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]

2.2.1THE UNIVERSITY EDUCATION COMMISSION OF 1948

'To look into the problems of University education, the University Education Commission was appointed by the Government of India in 1948 under the Chairmanship of Dr.S.Radhakrishnan, in pursuance of the recommendations of the Central Advisory Board of Education and also of the Inter-University Board. The commission made important suggestions for improving the standard of University education in the country.

1. Introduction of three year degree course for the first University degree.
2. Greater use of tutorial system of instruction.
3. Formulation of new aims.
4. Emphasis on developing knowledge and critical thinking, rather than mechanical passing of examinations.
5. Introduction of moral education, were its salient recommendations.

The Commission, however, thought it unfortunate that neither the public nor the Government had realized the importance of Intermediate Colleges in the Indian educational systems. To co-ordinate University Education in the country, the establishment of the University Grants Commission was also recommended. The Commission came into being immediately there after.' **(http://www.indg.inprimary-educationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]**

2.2.2 THE SECONDARY EDUCATION COMMISSION OF 1952

'The Radhakrishnan Commission had surveyed the field of secondary education in a passing manner, and had admitted that our secondary education remains the weakest link in our educational machinery and needs urgent reforms. This fact was the reason of an All India Commission of Secondary Education appointed under the Chairmanship of Dr.A.L.Mudaliar. The commission offered a number of suggestions.

1. The aim was to train the youth for intermediate leadership and for democratic citizenship.
2. Secondary education was to be a terminal stage for a large majority of the nation's youth, who would take up their places in society after their school education, and provide leadership to the general masses.
3. The commission was equally concerned with qualitative improvement of the schools.
4. To develop individual talent, curricular offerings were extended and diversified.
5. To achieve the new objectives of education, changes in methods of teaching were suggested.
6. New trends in examination, guidance and extra-curricular work were bought into the school programmes.
7. Multi-purpose secondary school was a new concept recommended by the commission.

   Inclusion of craft, social studies and general science in the curriculum was aimed at orienting students towards an industrial and science centred democratic life.' **(http://www.indg.inprimary-educationpoliciesandschemeseducation_commissions_and_committees_in_retrospect.pdf.pdf [Accessed on 4.03.2014]) [6]**

2.2.3 KOTHARI COMMISSION OF 1964-66

'The commission was appointed under provision of a resolution of the Government of India, dated 14th July 1964. It was appointed under the Chairmanship of Dr.D.S.Kothari (Chairman of University Grants Commission). It had 17 members in total out of which, 5 were educationists from England, America, France, Japan and Russia.' **(http://www.kkhsou.in/main/education/edu_commission.html [Accessed on4.03.2014]) [7]**

2.2.3.1 UNIQUE FEATURES OF THE COMMISSION

1. 'All the earlier commissions did not deal with education as a whole, but focussed on different levels of education. But this commission was not to limit its enquiry to specific sectors or aspects of education, but to have a comprehensive review of the entire education system.

2. Another unique feature of the Commission was its conviction that, education is the most powerful instrument of national development. The crucial role of education in national development appears in all its vividness on every page of the report.

3. The international composition of the Commission is also significant. Education in India must necessarily emerge from Indian experience, through culture and local conditions. But, as education remains the common quest of mankind, it was found profitable to draw upon the experience and thinking of educationists and scientists from other countries and to take advantage of the latest developments in the educationally advanced countries.' **(http://www.kkhsou.in/main/education/edu_commission.html [Accessed on4.03.2014]) [7]**

2.2.3.2 RECOMMENDATIONS OF THE COMMISSION

EDUCATION AND NATIONAL OBJECTIVES: 'Education has a very extensive role to play in changing the society. It has to be entirely reformed and related to life, needs and aspirations of the people so that it may serve as a powerful tool of social, economic and cultural transformation. In order to relate education it recommended the following objectives:-

1. INCREASE IN PRODUCTIVITY: The Commission suggested that education must be related to productivity to increase national income. To be able to do this it suggested the following:-

i.) Science is the basic component of education and culture, so it should be made an integral part of school education.

ii.) To inculcate the value of manual work, the Commission recommended the introduction of work experience in school education.

iii.) To meet the increasing needs of technical personnel in industry, agriculture and trade it recommended the introduction of vocational subjects in school curriculum. It also opined that the vocationalization will bring education into closer relationship with productivity.' **[7]**

2. PROMOTING SOCIAL AND NATIONAL INTEGRATION

i.) 'Common school system of public education should be adopted.

ii.) To bridge the gulf between the educated and un-educated, social and national service should be made an integral part of school education.

iii.) Language is a firm adhesive for social and national integration. Suitable provisions should be made for teaching mother tongue, Hindi amd other modern Indian languages in schools.' **[7]**

3. EDUCATION AND MODERNIZATION: 'An education system which does not renovate itself continuously becomes out dated and puts hindarance to progress. To keep pace with modernization, the I.E.C is of the opinion that greater emphasis must be placed on vocational subjects, science and research.' **[7]**

4. SOCIAL, MORAL AND SPIRITUAL VALUES: 'The national system of education should emphasis on the cultivation of social, moral and spiritual values among students.'

(http://www.kkhsou.in/main/education/edu_commission.html[Accessedon4.03.2014]) [7]

2.2.3.3 EDUCATION STRUCTURE: 'The Indian Education Commission (I.E.C) recommended a new structural pattern of education. It should be as follows:

i.) 1-3 years of pre-school education.

ii.) A primary stage of 7 to 8 years divided into a lower primary stage of 4 or 5 years and a higher primary stage of 2 or 3 years

iii.) A lower secondary stage of 2 or 3 years of general education or 1 to 3 years of vocational education.

iv.) A higher secondary stage of 2 years of general education or 1 to 3 years of vocational education, 50% of the total would be under vocational education.

v.) A higher education stage of 3 years or more for the first degree course, followed by courses of varying durations for the second or research degrees.

The structured pattern thus recommended by the Commission is commonly known as 10+2+3.'**(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on4.03.2014]) [7]**

2.2.4 NATIONAL POLICY OF EDUCATION 1968

The National Policy of Education 1968 is based on the recommendations of the Kothari Commission of 1964-66.

2.2.4.1 RESOLUTION ADOPTED ON NATIONAL POLICY OF EDUCATION

i.) 'Free and compulsory education: Strenuous efforts should be made for early fulfilment of the Directive Principle under Article 45 of the constitution, seeking to provide free and compulsory education for all children up to the age of 14.

ii.) Status, emoluments and education of teachers.

iii.) Development of languages:

a) Regional languages

b) Three language formula

c) Hindi

d) Sanskrit

e) International Languages

iv.) Equalization of educational opportunities.

v.) Identification of talent.

vi.) Work experience and national service.

vii.) Science, education and research.

viii.) Education for agriculture and Industry: Special emphasis should be placed on the development of education for agriculture and industry. There should be at least one Agricultural University in every state. These should be Single Campus Universities and they may have constituent college on different campuses. In technical education, practical training in industry should form an integral part of such education. Technical Education and Research should be related closely to industry. There should be continuous co-operation between the two.

ix.) Production of books.

x.) Examinations.'
(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on4.03.2014]) [7] & (http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf [Accessed on 4.03.2014]) [8]

2.2.4.2 SECONDARY EDUCATION: 'There is a need to increase facilities for technical and vocational education at this stage. Provision of facilities for secondary and vocational education should conform broadly to the requirements of the developing economy and real employment opportunities. Facilities for technical and vocational education should be suitably diversified to cover a large number of fields, such as agriculture, industry, trade and commerce, medicine and public health, home management, arts and craft, secretarial training,

etc.' **(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on4.03.2014]) [7] & (http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf [Accessed on 4.03.2014]) [8]**

2.2.4.3. UNIVERSITY EDUCATION: 'The number of regular students must be admitted to a college or university, taking into account the capacity of the laboratory, library and other facilities and the strength of the staff. Considerable care is needed in establishing new universities. They should be started only after an adequate provision of funds and due care should be taken to ensure proper standards. Special attention should be given to the organization of post-graduate courses and to the improvement of standards of training and research at this level.'
(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on4.03.2014]) [7] & (http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf [Accessed on 4.03.2014]) [8]

2.2.4.4. THE EDUCATIONAL STRUCTURE: 'It will be advantageous to have a broadly uniform educational structure in all parts of the country. The ultimate objective should be to adopt the 10+2+3 pattern.'
(http://www.kkhsou.in/main/education/edu_commission.html[Accessed on4.03.2014]) [7] & (http://mhrd.gov.in/sites/upload_files/mhrd/files/document-reports/NPE-1968.pdf [Accessed on 4.03.2014]) [8]

2.2.5. NATIONAL POLICY OF EDUCATION 1986 (WITH 1992 MODIFICATIONS)
'The National Policy of Education of 1986 was the result of reviews which was discussed and adopted during the budget session of 1985, when Rajiv Gandhi was the Prime Minister of India. Again a committee was set up under the Chairmanship of Acharya Ram Murti in 1990, to review the National Policy of Education and to make recommendations for its modifications. The Central Advisory Board of Education, a committee set up in July 1991 under the Chairmanship of Shri. N. Janardhan Reddy, Chief Minister of Andhra Pradesh, considered some modifications in National Policy of Education. The committee submitted its report in January 1992, which is known as the National Programme of Action of 1992.'
(https://en.wikipedia.org/wiki/National_Policy_on_Education[Accessed on 4.03.2014]) [9]

2.2.5.1. OBJECTIVES OF NATIONAL POLICY OF EDUCATION 1986 AND PROGRAMME OF ACTION 1992

The main objective of the National Policy of Education 1986 and Programme of Action 1992 was to establish a National System of Education. It implies that all students, irrespective of caste, creed, sex and religion should have access to education of a comparable quality. Its objectives are divided into several aspects.

1. OBJECTIVES IN RELATION TO ELEMENTARY EDUCATION

i.) 'Universal access and enrolment

ii.) Universal retention of children up to 14 years

iii.) A suitable improvement in the quality of education to enable all children to achieve essential levels of learning.' **[9]**

2. OBJECTIVES REGARDING SECONDARY EDUCATION

'Improve quality of secondary education. Efforts to be made to provide computer literacy in as many secondary level institutions to make the students equipped with necessary computer skills.' **[9]**

3. OBJECTIVES REGARDING HIGHER EDUCATION

'Higher education should provide to the people with an opportunity to reflect on the critical social, economic, moral, cultural and spiritual issues.' **[9]**
(https://en.wikipedia.org/wiki/National_Policy_on_Education[Accessed on 4.03.2014]) [9]

2.2.5.2. BASIC OBJECTIVES OF NATIONAL POLICY OF EDUCATION 1986 AND PROGRAMME OF ACTION 1992

1. 'Education must play a positive and interventional role in correcting social and regional imbalance, empowering women, and in securing rightful place for the disadvantaged and the minorities.

2. It also emphasized on enhancing the vocationalization of education, adult education, education for the mentally and physically challenged persons, non-formal education, Open Universities, distance learning, Rural University, Early Childhood Care and Education. Delinking degrees from jobs was also one of the Basic Objectives of National Policy of Education 1986. 'Education is a unique investment in the present and the future.''
This cardinal principle is the key to National Policy of Education.' **[9]**
(https://en.wikipedia.org/wiki/National_Policy_on_Education[Accessed on 4.03.2014]) [9]

2.2.5.3. RECOMMENDATIONS OF NATIONALPOLICY OF EDUCATION 1986 AND PROGRAMME OF ACTION 1992

'After going through the basic objectives, the recommendations of the National Policy of Education 1986 and Programme of Action 1992 are:-

1. Early Childhood Care and Education

2. Elementary Education, Non-Formal Education and Operation Blackboard: In context of Operation Blackboard, the policy envisaged the following facilities that should be kept for implementing the Operation Blackboard:-

i.) Two reasonably large rooms that are usable in all weather.

ii.) Necessary toys and games material.

iii.) Black board.

iv.) Charts

v.) Other learning materials

3. Secondary education and Navodaya Vidyalayas.' **[9]**
(https://en.wikipedia.org/wiki/National_Policy_on_Education [Accessed on 4.03.2014])
[9]

4. Vocationalization of Education:-

i.) '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 enhance individual employability, to reduce the mismatch between demand and supply of skilled manpower, and to provide an alternative for those pursuing higher education without particular interest of purpose.

ii.) Vocational Education will be a distinct stream, intended to prepare students for identified occupations spanning several areas of activity. These courses will ordinarily be provided after the secondary stage, but keeping the scheme flexible, they may also be made available after class VIII. In the interests of integrating vocational education better with their facilities the ITIs will also conform to larger vocational pattern.

iii.) Health Planning and Health Service Management should optimally interlock with the education and training of appropriate categories of health manpower through health related vocational courses. Health education at the primary and middle levels will ensure the commitment of the individual to family and community health, and lead to health related vocational courses at the plus two (+2) stage of higher secondary education. Efforts will be made to devise similar vocational courses based on Agriculture, Marketing, Social Services,

etc. An emphasis on vocational education will also be on development of attitudes, knowledge and skills for entrepreneurship and self-employment.

iv.) The establishment of vocational courses or institutions will be the responsibility of the government as well as employees in the public and private sectors, the government will however take special steps to cater to the needs of women, rural and tribal students and the deprived sections of society. Appropriate programmes will also be started for the handicapped.

v.) 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 appropriate bridge courses.

vi.) Non-formal, flexible and need based vocational programmes will be made available to neo-literates, youth who have completed primary education, school drop outs, persons engaged in work and unemployed or partially employed persons. Special attention in this regard will be given to women.

vii.) Tertiary level courses will be organized for the young who graduate from the higher secondary courses of academic streams and may also require vocational courses.

viii.) It is proposed that vocational courses cover 1% of higher secondary students by 1990 and 25% by 1995. Steps will be taken to see that a substantial majority of the products of vocational courses are employed or become self-employed. Review of courses offered would be regularly undertaken. Government will also review its recruitment policy to encourage diversification at the secondary level.' **[9]**
(https://en.wikipedia.org/wiki/National_Policy_on_Education [Accessed on 4.03.2014]) [9]

5. Higher Education: 'The National Policy of Education 1986 and Programme of Action 1992 had laid importance on higher education particularly on graduate, post graduate and research work. It suggested that autonomous colleges should be established according to UGC directives. Technical institutes like Medical, Engineering, Agriculture Universities etc. should be set up and development of vocational skill was to be stressed upon.' **[9]**
(https://en.wikipedia.org/wiki/National_Policy_on_Education [Accessed on 4.03.2014]) [9]

6. 'Opening of Open Universities and Distance education

7. Opening of more Rural Universities and Institutes

8. Stress on Technical and Management Education

9. De-linking of degrees from jobs and manpower planning

10. Stress on research and development

11. Great emphasis on women education

12. Education of schedule castes, schedule tribes and backward classes

13. Education of the minorities

14. Emphasis on education of the handicapped

15. Stress on adult education

16. Development of languages

17. Emphasis on cultural development

18. Media and educational technology

19. Stress on teachers and their training.' [9]
(https://en.wikipedia.org/wiki/National_Policy_on_Education [Accessed on 4.03.2014]) [9]

2.2.6 NATIONAL SKILL DEVELOPMENT POLICY 2009

MISSION OF THE POLICY: 'The policy envisions the establishment of a National Skill Development Initiative with the mission that, it will empower all individuals through improved skills, knowledge, nationally and internationally recognized qualifications, to gain access to decent employment and ensure India's competitiveness in the global market.' **[18] (http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]**

2.2.6.1. AIMS OF THE POLICY: 'The aim of skill development in the country is to support achieving rapid and inclusive growth through:

a.) Enhancing individual's employability and ability to adapt to changing technologies and labour market demands.

b.) Improving productivity and living standards of the people.

c.) Strengthening competitiveness of the country.

d.) Attracting investment in skill development.' **[18]**
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.2. OBJECTIVES OF THE POLICY: 'The objectives of the National Skill Development Policy 2009 were as follows:-

a.) Create opportunities for all to acquire skills throughout life, and especially for youth, women and disadvantaged groups.

b.) Promote commitment by all stakeholders to own skill development initiatives.

c.) Develop a high quality skilled workforce relevant to current and emerging employment market needs.

d.) Enable the establishment of flexible delivery mechanisms that respond to the characteristics of a wide range of needs of stakeholders.

e.) Enable effective co-ordination between different ministries, the centre and states and public and private providers.' **[18]**
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.3. SCOPE OF THE POLICY: 'The coverage of the policy includes the following:

a.) Institution based skill development including it is/ITCs/Vocational Schools/Technical Schools/Polytechnics/Professional Colleges, etc.

b.) Learning initiatives of sectoral skill development organized by different ministries/departments.

c.) Formal and Informal apprenticeships and other types of training by enterprises.

d.) Training for self-employment.

e.) Adult learning, retaining of retried or retiring employees and lifelong learning.

f.) Non-formal training including training by civil society organizations.

g.) E-Learning, web based learning and distance learning.' **[18]**
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.4. INSTITUTIONAL ARRANGEMENTS:

1. PRIME MINISTER'S NATIONAL COUNCIL ON SKILL DEVELOPMENT: 'It has been setup under the Chairmanship of the Prime Minister as an apex institution for policy direction and review. The Ministers for Human Resource Development (HRD), Finance, Industries, Rural Development, Housing and Urban Poverty Alleviation, Labour and Employment and Micro, Small and Medium Enterprises are members. Deputy Chairman Planning Commission, Chairperson of the National Manufacturing Competitiveness Council, Chairperson of the National Skill Development Corporation (NSDC) and 6 experts in the area of skill development are other members. Principal Secretary to the Prime Minister is the Member Secretary to the council.' **[18]**
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2. NATIONAL SKILL DEVELOPMENT CO-ORDINATION BOARD: 'It has been setup under the Chairmanship of Deputy Chairman Planning Commission. Secretaries of Ministries of HRD, Labour and Employment, Rural Development, Housing and Urban Poverty Alleviation and Finance are members. Chairperson of NSDC, Secretaries of 4 States by rotation, for a period of 2 years and 3 distinguished academicians are other members. Secretary, Planning Commission is Member Secretary of the Board.' **[18]**
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

3. NATIONAL SKILL DEVELOPMENT CORPORATION (NSDC): 'It is a non-profit company under the Companies Act 1956, with an appropriate governance structure. The head f the Corporation is a person of eminence/reputed professional in the field of skill development. The Corporation would constitute Sector Skills Councils with following functions:-

a.) Identification of skill development needs including, preparing a catalogue of types of skills, range and depth of skills to facilitate individuals to choose from them.

b.) Development of a sector skill development plan and maintain skill inventory.

c.) Determining skills/competency standards and qualifications.

d.) Standardization of affiliation, accreditation process.

e.) Participation in affiliation, accreditation, examination and certification.

f.) Plan and execute training of trainers.

g.) Promotion of academies of excellence.

h.) Establishment of a well-structured sector specific Labour Market Information System (LMIS), to assist planning and delivery of training.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

4. NATIONAL COUNCIL OF VOCATIONAL TRAINING (NCVT): 'NCVT will be strengthened and re-engineered with a broader mandate and representation. The main functions include:-

a.) Design, development and maintenance of National Vocational Qualification Framework (NVQF), which inter alia includes:-

i.) Setting up a framework for competency standards, structure of courses, credit structure, accumulation and certification.

ii.) Setting up a framework for affiliation and accreditation of institutions.

iii.) Quality Control mechanism.

b.) LMIS and dissemination of information at the national level.

c.) Monitoring and evaluation on the effectiveness and efficiency of national skill development efforts through appropriate reporting and communication mechanism.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.5. SOCIAL PARTNES IN SKILL DEVELOPMENT

Partnerships will be consciously promoted between Government, Industry, Trade Unions, Local Government, Civil Society, Institutions and all skill providers. It will also include training providers, professional societies, Self Help Groups (SHGs), cooperatives and NGOs.
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.6. ROLES AND RESPONSIBILITIES OF STAKEHOLDERS:

1. 'ROLES AND RESPONSIBILITIES OF CENTRAL/STATE/LOCAL GOVERNMENTS:

a.) Setting up priority and policy planning statistics gathering.

b.) Providing regulatory framework and enabling environment for stakeholders.

c.) Devising financing mechanism, reward and promotional framework.

d.) Capacity building of social partners.

e.) Setting up of monitoring, evaluation and dissemination of information.

f.) Facilitating International co-operation.

g.) Setting up a qualification framework and quality assurance mechanism.

h.) Preparation of work plans to meet sector specific skill sets.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2. ROLES AND RESPONSIBILITIES OF EMPLOYERS/INDUSTRIES:

a.) 'Owning skill development activities.

b.) Identification of competencies and setting up of competency standards.

c.) Skill demand analysis and curriculum development.

d.) Facilitating training of trainers.

e.) Delivery of training, monitoring and evaluation.

f.) Participation in affiliation and accreditation process.

g.) Participation in examination and certification.

h.) Sharing of work place experience, machinery and equipment.

i.) Support by way of physical, financial and human resources.

j.) Facilitating employment of trained graduates.

k.) Supporting skill development initiatives of other public and private agencies.

l.) Implementing apprenticeship schemes.

m.) Investing in skill development activities.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

3. ROLES AND RESPONSIBILITES OF TRADE UNIONS

a.) 'Assist in developing competency standards.

b.) Assist in course designing, examination and certification.

c.) Raising awareness about the benefits of training, skill development plans and activities among workers.

d.) Promote skill upgardation and lifelong learning among the workers.

e.) Running special skill development institutes for skill development of workers.

f.) Promoting investment on skill development among employers.

g.) Facilitate improving the status of vocational education trained graduates.'(**http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]**

4. ROLES AND RESPONSIBILITIES OF CIVIL SOCIETY ORGANIZATIONS

a.) 'Raising awareness about skill development plans and activities among the public.

b.) Facilitate improving the status of vocational education trained graduates.

c.) Implementing skill development programmes of the Government.

d.) Assist in developing competency standards.

e.) Assist in course designing, examination and certification.

f.) Promote lifelong learning among the public.

g.) Promote dignity of labour among the public.

h.) Sharing experience of learning with others.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.7. EXPANSION OF OUTREACH OF THE POLICY

a.) 'Innovative approaches will be adopted to raise the capacity of the system extensively over a limited period.

b.) Incentive mechanisms will be developed to encourage the private sector to participate in skill development.

c.) The expansion of public training institutions will be promoted, particularly in rural, border, hilly and difficult areas where the private sector may find it difficult to invest.

d.) Innovative delivery modes such as decentralized delivery, mobile training, distance learning, e-learning and web based learning will be used.

e.) Skill development centres at villages and block levels will be promoted to provide skill development opportunity as well as to act as one-stop kiosks.

f.) Panchayats, municipalities and other local bodies will be involved in skill development and employment generation at the local level, in collaboration with Self Help Groups (SHGs), co-operatives and NGOs.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.8. EQUITY AND ACCESS:

a.) 'Equal access to skill development is essential for all social groups; particularly women and disadvantaged section of the society to help them in securing decent employment and moving out of poverty.

b.) Entry barriers such as educational qualification, transportation, loss of wages, language, etc. will be addressed.

c.) In addition to vocational skills, the provision of Soft (or Life) Skills-including basic literacy, numeracy occupational safety and health, hygiene, basic labour rights, team work and confidence building will be made an integral component of the curricula.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.9. VOCATIONAL TRAINING FOR WOMEN:

a.) 'A policy of non-discrimination will be pursued vigorously to provide equal access for women to skill development and employment.

b.) This policy will aim to raise women's participation to at least 30% by the end of the 11^{th} five year plan.

c.) Provision of women's hostels, scholarships, transport, training materials and loans.

d.) In order to promote skills and employability of women, the sectors which employ a large number of women will be identified.

e.) Gender stereotyping in vocational courses will be eliminated to encourage women's participation in non-traditional occupations.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.10. DISADVATAGED GROUPS: SCHEDULE CASTES, SCHEDULE TRIBES AND OTHER BACKWARD COMMUNITIES:

a.) 'The reservations applicable to these groups will be enforced with appropriate gender composition.

b.) Existing schemes for benefiting these groups will be reviewed, strengthened and made more effective.

c.) Efforts will be made to mobilize capabilities and expertise of Civil Society Organizations.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.6.11. PERSONS WITH DISABILITIES:

a.) 'The current level of participation of persons with disabilities in skill programmes is very low, despite guidelines of reserving 3% of the seats for them. The guidelines apply only to the government sector.

b.) People with varying degree of physical and mental disabilities will be provided with appropriate adjustment training and skills training to bring them in the economic mainstream and make them productive citizens.

c.) This policy aims to expand the facilities for people with disabilities and to provide reasonable accommodation that enables them to access the facilities through suitable transport and building designs.

d.) The number of vocational rehabilitation centres will be doubled in the 11^{th} Plan and expanded further in subsequent Plans.

e.) Training will be integrated with efforts to secure appropriate employment opportunities.

The National Policy on Skill Development (2009) aims to enhance India's competitiveness in the global market by empowering people through improved skills, qualification and access to employment.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.2014]) [18]

2.2.7. GOVERNANCE OF THE POLICY:

1. 'Prime Minister's National Council on Skill Development, under the Chairmanship of the Prime Minister has been setup as the apex institution for policy direction and review.

2. Planning Commission, National Manufacturing Competitiveness Council, National Skills Development Council, 7 Ministeries and 6 Skill Experts are members of the Council.'
(http://labour.nic.in/upload/uploadfiles/files/Policies/NationalSkillDevelopmentPolicyMar09.pdf [Accessed on 2.01.201]) [18]

2.2.8. TARGET OF THE POLICY:

'National Skill Development Corporation (NSDC), Ministry of Labour and Employment (MoLE) and Ministry of Human Resource Development (MHRD) have a target of providing vocational training to 300 million people out of the total target of 500 million.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

Table 3: Target of the Policy

Ministry/Department/Organization	Present Training Capacity Per Annum(million people)	Target By 2022
1. NSDC	-	150Mn
2. MoLE	1.2	100Mn
3. Ministry of Tribal Affairs	0.006	30Mn
4. Ministry of Rural Development and IL and FS	0.548	20Mn
5. MHRD	3.36	50Mn
6. Construction Industry Development Council (Under Planning Commission)	0.464	20Mn

Total	9.95	500Mn

Source: MoLE, Synovate Interviews and Analysis [19]

2.3. KEY GOVERNMENT SCHEMES OF SKILL DEVELOPMENT

There are two flagship schemes of the DGE&T (Under MoLE0 that train about 2.2Mn people annually and receive support from Government as well as industry. They are:-

2.3.1 1. SKILL DEVELOPMENT INITIATIVE SCHEME (SDIS): It aims to provide vocational education to one million people annually by 2012.

2.3.1.2. GOVERNANCE OF SDIS:

1. 'Apex committee at the national level is chaired by the Scretary of Labour and Employment.

2. Ministry of Social Justice and Empowerment, Ministry of Housing and Urban Poverty Alleviation, Ministry of Finance, Planning Commission, Trade Unions, Industry Chambers and representatives of two State Governments are the other members of the committee.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.3.1.3. TARGET GROUPS OF SDIS:

1. 'Workers seeking certification of their skills acquired informally.

2. Workers and ITI graduates seeking skill upgradation.

3. Early school drop outs and unemployed.

4. Former child labourers and their families.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.3.1.4. APPROACH OF SDIS:

1. 'Provide demand driven short term training courses based on Modular Employable Skills (MES), identified and decided in consultation with the industry.

2. Total cost of the scheme is INR 5.50 Million, and is fully funded by the Central Government.' **(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]**

Table 4: COURSE STRUCTURE AND TRAINING FEES

Module Duration	Training Fees
Up to 90 Hours	INR 500
From 91-180 Hours	INR 1,000
From 181-270 Hours	INR 1,500
More than 270 Hours	INR 2,000

Source: MoLE, Synovate Interviews & Analysis [19]

2.3.2.1. 2. CRAFTSMEN TRAINING SCHEME (CTS): 'It is one of the successful schemes of the Central Government, which has attracted the attention of and investment from World Bank, International Labour Organization (ILO) and the Private Sector.' **(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.201]) [19]**

2.3.2.2. INTRODUCTION OF CTS: 'The DGE&T in the MoLE initiated CTS with the following objectives;-

1. Providing semi-skilled workers to industry by systematic training to school leavers.

2. Reducing unemployment by providing youth with suitable skills for industrial employment.' **(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]**

2.3.2.3. GOVERNANCE OF CTS:

1. 'It is function under the administrative control of the respective State Governments/Union Territories (UTs)/Private Organizations.

2. The ITI's are affiliated to National Council of Vocational Training (NCVT), which prescribes syllabi and conducts All India Trade Tests (AITT).

3. Training in Government ITIs is provided free of cost or nominal fee is charged.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.3.2.4 APPROACH OF CTS:

1. 'ITIs would provide training in various courses and after completion of training, trainees would be required to appear for AITTs conducted under the ageis of NCVT.

2. Successful trainees would be awarded National Trade Certificate which is recognized by Government of India (GOI) for recruitment to subordinate posts and services under the Central Government.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

Table 5: FACTS AND FIGURES OF CTS

1, Number of Trades	116
2. Number of Government and Private ITIs	8800 (2217 Government & 6583 Private)
3. Seating Capacity	1.22 Million annually
4. Entry Qualification	8^{th} to 12^{th} Standard
5. Minimum Age	14 Years

Source: MoLE & Synovate Interviews & analysis [19]

2.4. OVERVIEW OF NATIONAL VOCATIONAL QUALIFICATION FRAMEWORK (NVQF): The objective of developing a NVQF is to strengthen the skills framework to provide diploma and degrees in addition to certificates.

2.4.1. OBJECTIVES OF NVQF: The objectives of the NVQF are

1. 'Facilitate vertical and horizontal mobility of students and provide them options of multiple entry and exit through schools, colleges and institutes of vocational education.

2. Facilitate International Recognition of National Standards and that of Indian Qualifications from Secondary to Doctorate levels of education.

3. The framework will be competency based modular approach with provisions of credit accumulation and transfer.

4. There will be collaboration with Sector Skill Councils and industry for development of quality standards, model curriculum assessment and testing procedures.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.5. OVERVIEW OF NATIONAL VOCATIONAL EDUCATION QUALIFICATION FRAMEWORK (NVEQF): The NVEQF is expected to bring school level vocational education and polytechnics under its purview.

2.5.1. OBJECTIVES OF NVEQF: The objectives of the NVEQF are as follows:-

1. 'Facilitate vertical and horizontal mobility of students and provide them options of multiple level entry and exit through schools, colleges and institutions of vocational education.

2. Facilitate International Recognition of National Standards and that of Indian Qualifications from Secondary to Doctorate level of education.

3. The framework will be competency based modular approach with provisions of credit accumulation and transfer.

4. There will be collaboration with Sector Skill Councils and industry for development of quality standards, model curriculum assessment and testing procedures.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.5.2. NEED FOR NVEQF: The NVEQF was developed because:-

1. 'Indian workforce largely in informal employment in unorganized sector, with low levels of literacy and numeracy and no mechanism available for them to enter formal education system.

2. Hence desirable to focus on educational component to build a sound TVET system.

3. Also need to build a general education element into VE, and vice versa, to ensure a holistic approach to human resource development.'
(http://www.slideshare.net/4th_Global_Skills_Summit/gss-session-v-mr-santosh-mehrotra-nveqf-structure-and-highlights [Accessed on 1.12.2013]) [20]

2.5.3. AIMS OF NVEQF:

1. 'Lack of uniformity in quality across institutions.

2. Lack of clear and recognized pathways of learning.

3. Lack of credibility among stakeholders.

4. Lack of horizontal and vertical mobility.

5. No formal recognition of informal prior learning (RPL).

6. Input based traditional education system that promotes rote learning.'
(http://www.slideshare.net/4th_Global_Skills_Summit/gss-session-v-mr-santosh-mehrotra-nveqf-structure-and-highlights [Accessed on 1.12.2013]) [20]

2.5.4. PROBLEMS FACED IN VOCATIONAL EDUCATION AND REFORMS THROUGH NVEQF:

PROBLEM 1: 'General school education, vis-à-vis, TVET. Both vertical and horizontal mobility is a problem.

REFORM 1: Both, vertical and horizontal mobility made possible with multi-level entry and exit, both from general education to vocational education and vice-versa. Shift from annual to semester (credit based) exam system.

PROBLEM 2: Limited involvement of industry in vocational education.

REFORM 2: Shift from government as major player to industry and employers as major players in TVET.

PROBLEM 3: No recognition of prior learning, even though unorganized sector employs 93% of the workforce.

REFORM 3: Shift from lack of provision of prior learning to Recognition of Prior Learning (RPL), in testing and certification of knowledge and skills that an individual has acquired in previous training and through work experience.

PROBLEM 4: Standardization is a problem. Large variations in course providers, course content, duration, delivery and competency neither examined, nor certified.

REFORM 4: Shift from restricted opportunities for mobility to clear cut pathways for mobility of students between programs and institutions. Shift from fragmented to unified TVET governance, through registered and accredited TVET courses under one umbrella, i.e. Indian Qualifications Authority.'
(http://www.slideshare.net/4th_Global_Skills_Summit/gss-session-v-mr-santosh-mehrotra-nveqf-structure-and-highlights[Accessed on 1.12.2013]) [20]

2.5.5. PRINCIPLES ADOPTED BY NVEQF:

1. 'Localized approach.

2. Maximum impact skills and sectors selected.

3. Subsidized fee structure to provide accessibility.

4. Skills for women.

5. Centrally administered 'Train the Trainer'.

6. Placement assistance connecting candidates to jobs.

7. Building pathway for International Progression.

8. Recognition of prior learning.' **(https://www.aicte-india.org/downloads/NVEQF_180611.pdf [Accessed on 20.01.2014]) [21]**

2.5.6. FEATURES OF NVEQF:

1. 'Across sectors and across the country.

2. Short duration, focused and modular programs.

3. Practical hands on focus.

4. Delivery in the local language.

5. Full day, half day or weekend programs.

6. A network of centres.

7. Full mobility between formal, vocational streams of education and the job market with multi point entry and exit.' **(https://www.aicte-india.org/downloads/NVEQF_180611.pdf [Accessed on 20.01.2014]) [21]**

2.5.7. RECOMMENDATIONS OF NVEQF:

1.' Based on nationally recognized occupational standards.

2. Demand/Supply Analysis; Skill Mapping.

3. Vertical/Horizontal integration with mainstream.

4. Labour Market Information System (LMIS).

5. Multi-Point entry and exit.' **(https://www.aicte-india.org/downloads/NVEQF_180611.pdf [Accessed on 20.01.2014]) [21]**

2.5.8. STAGES OF SKILL CERTIFICATION LEVELS OF NVEQF: Each level is at the rate of 800 to 1000 Hours/Year.

1. 'SKILL CERTIFICATION: STAGE I

Skill Certificates awarded for specific skills by the nodal Certifying Registered Agencies with AICTE (Knowledge Partners) or the body set up by AICTE for this purpose. NSDC and SSCs can also do this.

CERTIFICATION LEVELS, STAGE II

Certification level I, II also equivalent to Standard IX and X, shall be done by CBSE, State Boards.

CERTIFICATION LEVELS, STAGE III A

Certification level III, IV also equivalent to Standard XI, XII shall be done by CBSE, State Boards and State Boards of Technical Education.

CERTIFICATION LEVELS, STAGE III B

Certification level V, VI, VII, also equivalent to formal I, II, III Year of polytechnic, leading to a Diploma, State Boards of Technical Education.

CERTIFICATION LEVELS, STAGE III C

Certification level VI and VII also equivalent to formal I, II year of polytechnic leading to an Advanced Diploma, State Boards of Technical Education.

CERTIFICATION LEVELS, STAGE III D

Certification level V, VI and VII also equivalent to formal I, II and II year of formal bachelor's program (Universities).'

(https://www.aicte-india.org/downloads/NVEQF_180611.pdf [Accessed on 20.01.2014]) [21]

Table 6: Credits Per Year in a Typical Vocational Framework

Certification Level	Vocational in Hours	Formal
I	200	800
II	200	800
III	350	650
IV	350	650
V	400	600
VI	450	550
VII	700	300
1000/1200Hours/Year, 500/600Hours/Semester	Flexibility Available + 100 on Each	Flexibility Available + 100 on Each

Source: Dr. S.S.Mantha [21]

2.5.9. WHAT EACH CERTIFICATION LEVEL CAN DO:

1. 'The certificate will ratify the performance of the candidate and the competency acquired.

2. The certification would be a benchmark in itself and would imply that the holder of such certification is a competent practitioner in the respective skill at the level stated.

3. It would also ratify the highest standards of skill that the incumbent has acquired at the respective level.

4. With UID implementation, the certification could also be clubbed with the same ID and data pertinent to the individual could be included in it.' **(https://www.aicte-india.org/downloads/NVEQF_180611.pdf [Accessed on 20.01.2014]) [21]**

2.6. GOVERNMENT ENTITIES IN VOCATIONAL EDUCATION IN INDIA

2.6.1.1. 1. MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD): MHRD has structure for imparting vocational education at all levels.

2.6.1.2. OVERVIEW OF MHRD:

i.) 'The MHRD is responsible for provision of education and apprenticeship. It has two departments:

a.) Department of School Education and Literacy: It is responsible for elementary education, secondary education and adult education. It is also responsible for academic and vocational education at school level.

b.) Department of Higher Education: It is responsible for university and technical education. It is also responsible for academic, technical and vocational education after class XII.

ii.) MHRD administers apprenticeship training through its four boards of Apprenticeship Training.

iii.) MHRD is also responsible for the development of NVEQF.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.6.1.3. SPECIFIC INITIATIVES OF MHRD:

i.) 'The Department of School Education and Literacy has the National Council of Education Research and Training (NCERT), which is responsible for curriculum design for school level education.

a.) Pandit Sundar Lal Sharma Central Institute for Vocational Education (PSSCIVE) designs curriculum specifically for vocational courses at school level.

b.) Vocational Education at school level is imparted through open schools, which are under NIOS and are focused at providing general and vocational education to marginalize students.

ii.) The Department of Higher Education has All India Council for Technical Education (AICTE).

a.) Education for vocational courses is imparted through polytechnics affiliated to AICTE.

b.) For Polytechnics, State Boards of Technical Education lay down curricula, conduct exams and award diplomas.' **(Source: Synovate Interviews & Analysis) (http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]**

2.6.2.1 2. DIRECTORATE GENERAL OF EMPLOYMENT AND TRAIING (DGE&T): DGE&T trains more than 2.5 Million people annually in vocational courses. **[19]**

2.6.2.2. OVERVIEW OF DGE&T:

i.) 'The DGE&T in Ministry of Labour and Employment (MoLE) is the apex organization for development and co-ordination at national level for the programs relating to vocational training and employment services.

ii.) DGE&T particularly works in the following areas for ITIs:

a.) Policies and procedures

b.) Training of instructors

c.) Trade testing

d.) Standardization and certification

iii.) Day to day administration of employment exchanges and ITIs rests with State Governments/Union-Territories.'
(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.6.2.3. SPECIFIC INITIATIVES OF DGE&T:

i.) 'National Policy on Skill Development: DGE&T has a target of providing skills to 100 Million people by 2022, under the policy.

ii.) NVQF: NCVT (under DGE&T) to facilitate NVQF which will lay down National Standards for training and certification.

iii.) CTS: Train almost 1.2 Million people annually at ITIs.

iv.) ATS: Train 300,000 instructors annually.

v.) SDIS: Train 1 Million people annually with effect from 2012 Skill Development Centres (SDCs).

vi.) Up gradation of 1,900 ITIs and setting up of 1,500 ITIs and 5000 SDCs.'

(Source: DGE&T, Synovate Interviews & Analysis)

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.7. IDUSTRY ASSOCIATIONS IN VOCATIONAL EDUCATION

2.7.1. 1. FEDERATION OF INDIAN CHAMBERS OF COMMERCE & INDUSTRY (FICCI): 'FICCI is a non-government, not for profit organization which works closely with the Government on policy issues, enhancing competitiveness, expanding business opportunities and building global linkages. FICCI in association with Film & TV Producers Guild and Indian Broadcasting Association has set up the SSC for Media and Entertainment. It conducts various seminars, workshops and studies in skill development. FICCI has launched a Skill Development Forum, which aims to examine skill development, interact with NSDC and put forward views of the private sector and Vocational Training Partners (VTPs). The Forum has an eight point agenda, which is to build awareness, mobilize funds, create infrastructure, create standards, vocational training framework, generate employment, career progression and non-linear growth enabled through technology.' **(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]**

2.7.2. 2. CONFEDERATION OF INDIAN INDUSTRY (CII): 'CII is a non-government, not for profit, industry led and industry managed organization. It has developed a Skills Development Trust, which prepares reports, facilitated dialogues, organizes events, solicits funds and undertakes projects in areas of skill development. It is supporting the up gradation of 1396 ITIs project, by taking responsibility of 237 ITIs by deploying 138 industry members. It has partnered with British Council to attract investment from European Union for providing vocational education to two marginalized groups-Sirsa (Haryana) and Sitapur

(Uttar-Pradesh).'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.7.3. 3. ASSOCIATED CHAMBER OF COMMERCE (ASSOCHAM): 'ASSOCHAM is an apex chamber of corporate India. It has imparted various skills up gradation training under various Government schemes, covering 10,000 persons. It conducts skill assessment in19 sectors and issues certification to successful trainees. It has representation on the board of NSDC. It has proposed a methodology to assist the Government in implementing of SDIS by:

a.) Collecting information on VTPs and candidates.

b.) Preparing end to end assessment plan.

c.) Sorting and preparing trade list.

d.) Creating teams and delegating responsibilities and day to day reporting.' **(Source: ASSOCHM, Synovate Interviews & Analysis)**

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.8. INTERNATIONAL BODIES INVOLVED IN VOCATINAL EDUCATION AND SKILL DEVELOPMENT IN INDIA:

2.8.1. 1. INTERNATIONAL LABOUR ORGANIZATION (ILO): 'The ILO is an international organization responsible for drawing up and overseeing International Labour Standards. Its main focus is on enhancing employable skills in the informal sector. It is collaborating with the MoLE, workers and employers at both policy and systems level. ILOs program on Child Labour, are training adolescent un-organized workers by obtaining insights into labour market forecasts at local levels and by provision of demand driven training and post training support.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.8.2. 2. EUROPEAN UNION (EU): 'The EU is a unique economic and political partnership between 27 European countries. It provides technical assistance, linkages and know-how transfer, apart from financial aid. The EU is supporting the SDIS by providing a grant of 6.5 Million Euros, over a period of 69 months, starting from second half of 2011. The purpose of the EU support is to increase the capacity of DGE&T, NCVT and NSDC to efficiently implement the NPSD agenda.' **(Source: European Union, Synovate Interviews & Analysis)**

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.8.3. 3. WORLD BANK: 'The World Bank is a source of financial and technical assistance to developing countries around the world. It provides low interest loans, interest free credits and grants to developing countries, for a wide array of purposes. As an International organization, World Bank has provided maximum funds for skills development. It has provided funds worth 11.27 Billion, which is more than 70% of a total of 15.81 Billion, for Vocational Training Improvement Project (VTIP)'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.9. PUBLIC PRIVATE PARTNERSHIP IN VOCATIONAL EDUCATION IN INDIA

2.9.1. 1. NATIONAL SKILL DEVELOPMENT CORPORATION (NSDC): 'NSDC was set up under the Prime Minister's National Council for Skill Development in 2009. It is the first Public-Private Partnership (PPP) in the social sector that facilitates skill development. NSDC is a non-profit company, set up by the Ministry of Finance. It has an equity base of INR 100 Million, of which the Government of India holds 49%, while the private sector holds 51%. NSDC is mandated to provide skills training to 150 Million people by 2022. It has identified 21 high growth sectors and is encouraging private sector investments and initiatives in skill development in these sectors. It has funded 30 training projects so far. It is mandated to set up Sector Skill Councils, which bring together all stakeholders-industry, labour and academia.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.9.2. 2. INDIA SKILLS: 'India Skills is one of the leading initiatives in the private sector, with an investment of INR 2 Billion. It is a joint venture between Manipal Education and City & Guild of United Kingdom. It was founded in in 2009. It provides industry relevant certifications and job assistance through its industry partners. Two key bodies involved in it are:-

a.) MANIPAL EDUCATION: One of India's foremost education service providers. It has 4 Universities and 20 institutions in India and abroad.

b.) CITY & GUILDS: Global leader in skills training and certification, and one of the biggest names in United Kingdom's Vocational Education.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.9.3. 3. INDIACAN: 'It is an initiative by India's largest education company Educomp and the world's largest education provider-Pearson Education. It has an aim of training over 500,000 people annually by 2012. It is a pioneering initiative with a view to bridge the gap between employment opportunities, skills and knowledge base of the unemployed youth. The two key bodies involved in it are:

a.) EDUCOMP: It is a leading education company involved in various stages of education including pre-school, school, higher education and online learning.

b.) PEARSON EDUCATION: Global education service provider with expertise in developing best quality content and effective training methodologies.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.9.4. 4. CENTUM LEARNING: 'It is a Bharti associate company, which provides end-to-end learning and skill building solutions. It has more than 170 learning centres in 150 cities across India. It has launched Centum U, which offers workforce degrees in association with globally acclaimed Universities and institutes. It works with the Bharti Group of Companies like Bharti Airtel, Bharti AXA life Insurance, Bharti Wlamart and Bharti Infratel. It has also partnered with NSDC, to establish Centum Work Skills India Limited, which has a target to skill 12 Million people by 2022.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.9.5. 5. IL & FS CLUSTER DEVELOPMENT INITIATIVE: 'IL & FS has established a business unit called the Cluster Development Initiative, to address the infrastructure, market access, technology and finance requirements of Small & Medium Enterprises (SMEs). The total project cost is INR 2.16 Billion, with a target to train 1.95 Million people in 10 years. Il 7 FS is one of India's leading infrastructure development and finance companies, which would be providing a broad range of turnkey services under this initiative. It is also working with various industry associations and State Governments, to develop the curriculum and framework for the identified sectors.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.10. FOREIGN COLLABORATIONS IN VOCATIONAL EDUCATION IN INDIA:

2.10.1. 1. AUSTRALIA: 'All Australia-India Engagement initiatives are following a structured approach with defined objectives.

a.) AUSTRALIA-INDIA EDUCATION COUNCIL (AIEC): It is a critical forum for leaders representing government, training organizations and industry to identify strategic goals of mutual benefits to both nations, in strengthening the bilateral education, training and research relationship. The Councils current priority areas of work are:

i.) The Skills Agenda

ii.) Collaboration in higher education

iii.) Student mobility

iv.) Mutual recognition of quality assurance

v.) Research collaboration'

b.) BUREAU OF VOCATIONAL EDUCATION AND TRAINING COLLABORATION (BVETC): The BVETC facilitates Vocational Education and Training (VET) partnerships between institutions, industry and Governments.

c.) AUSTRALIA-INDIA HIGHER EDUCATION EXCHANGE: It facilitates higher education partnerships between institutions, industry and governments. The Exchange and BVETC meet regularly to consider collaboration proposals from the sector and provide advice on the best ways to achieve successful partnerships in the industry.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.10.2. 2. UNITED KINGDOM: 'United Kingdom is working actively in the Vocational Education (VE) sector through organizations like British Council, UKIERI and UK-India Business Council.

a.) BRITISH COUNCIL: It is working in a joint project with CII and City & Guilds to:

i.) Facilitate creation of SSCs.

ii.) Deliver skills training across the manufacturing, agro-processing and tourism sectors and providing linkages to employment.

iii.) Deliver English Language skills for employability.

b) THE UK-INDIA EDUCATION AND RESEARCH INITIATIVE (UKIERI): UKIREI started in April 2006, with the aim of enhancing educational links between India and UK. It aims to work with a range of different skills and training bodies to enable participation and facilitation of skill development needs in the two countries.

c) THE UK-INDIA BUSINESS COUNCIL (UKIBC): The UK-India Business Council formed the UK-India Skills Forum (UKISF) as a collective umbrella for UK Skills and VTP. The UKISF offers UK based skills providers a single entity, through which they can collectively seek opportunities in this area and engage with Indian entities, to provide vocational training skills. UKISF offers Indian companies-both public and private- a single platform through which they can access the broadest range of skills provision.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.10.3. 3. GERMANY: 'German Ministries and Chambers of Industries are collaborating in both-Government and Private Initiatives in the Indian VE sector.

a.) iMOVE: It is the initiative of Federal Ministry of Education and Research Germany, to promote international collaborations in vocational training. An MOU was signed between NSDC and iMove, to co-operate in skills development, with the specific objectives of knowledge transfer, institutional collaborations and fostering private initiatives.

b.) HANWERKSKAMMER-RHINE-MAIN: The Rhine-Main Chamber of Skilled Crafts is one of Germany's largest Chambers comprising around 30,000 skilled crafts enterprises. IL&FS cluster Development Initiatives Limited and Rhine-Main Chambers of Skilled Crafts signed an MOU, to support 100 Multi-Skilled Schools, through identification of skills and competencies, preparation of course curriculum, testing and certification and train the trainee programs.

c.) GIZ: The Government of Karnataka has entered into technical collaboration with German Technical Co-operation GIZ, which is the world leader in providing technical support and consultancy in the areas of course design, course implementation and quality assurance. GIZ will assist the Karnataka Government to establish model Multi-Skills Development Centres, offering advance technology training courses.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.10.4. 4. SWITZERLAND:

a.) SWISS-INDIAN CHAMBER OF COMMERCE (SICC): 'It is a bi-national, private sector, non-profit association with 400 Swiss and Indian members. SICC launched the Swiss-Indian VET Initiative partnership, with the Swiss Federal Office for Professional Education and Technology, Swiss Federal Institute for VET and the Swiss Mechanical and Electrical Engineering Industries. The initiative aims to introduce the Swiss Dual-Track Vocational system to India, in order to address the shortfall of skilled factory leader. Select Industrial Training Institutes from Karnataka, Maharashtra, as well as four Swiss Companies- Bobst India, Burekhardt Compressions India, Buhler India and Rieter India are participating in the pilot project.

b.) Economiesuisse: An MOU was signed between FICCI and Economiesuisse, Swiss Business Federation in 2011. It is aimed to foster entrepreneurial initiative, intensify bilateral trade and investment, increase innovations, and strengthen the competitiveness of firms of

both countries. Collaboration is expected in areas of Research & Development, Finance, Tourism, Engineering, VE, Logistics, Transport, Power Generation and Construction.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.10.5. 5. CANADA:

a.) CANADA-INDIA EDUCATION COUNCIL (CIEC): 'CIEC is an independent, not for profit, membership based, event driven organization established, to enhance ties and create opportunities for academic institutions and learners from India and Canada. Various educational tie-ups have been formed to provide skills training in Graphic Design, Nursing, Hotel Management and Information Technology.

b.) CANADA-INDIA BUSINESS COUNCIL (CIBC): CIBC is Canada's private sector, member driven, not for profit, national business association that has been working for promotion of bilateral trade and investment growth between Canada and India. CIBC has been lobbying along with Canadian Universities to open campuses in India and offer Dual Training Courses in VE Sector.'

(http://www.australiaindiaeducation.com/files/Revised_VET_Report%20-%2016092011.pdf [Accessed on 1.12.2013]) [19]

2.11. VARIOUS SKILL DEVELOPMENT SCHEMES: The various Skill Development Schemes offered by the Government are as follows:

2.11.1. 1) STAR SCHEME: 'The Finance Minister in his Budget Speech of 2013 proposed a scheme to encourage skill development for youth, by providing monetary rewards for successful completion of approved training programs. This scheme titled 'The National Skill Certification and Monetary Reward Scheme'', also known as the STAR Scheme (Standard Training and Assessment Reward), rewards candidates undergoing skill training by authorized institutions at an average monetary of INR 10,000 per candidate. The scheme targets to benefit 10 Lakh youth at an approximate cost of INR 1,000 Crores.' **[22]**

'The National Skill Certification and Monetary Reward Scheme, popularly branded as STAR (Standards Training Assessment and Reward) was announced in the Union Budget 2013-14.

The objective of this Scheme is to encourage skill development for youth by providing monetary rewards for successful completion of approved training programs. Specifically, the Scheme aims to:

- Encourage standardization in the certification process and initiate a process of creating a registry of skills
- Increase productivity of the existing workforce and align the training and certification to the needs of the country
- Provide Monetary Awards for Skill Certification to boost employability and productivity of youth by incentivizing them for skill trainings
- Reward candidates undergoing skill training by authorized institutions at an average monetary reward of Rs. 10,000 (Rupees Ten Thousand) per candidate
- Benefit 10 lakh youth at an approximate total cost of Rs. 1,000 Crores.'**[22]**

'The Hon'ble Prime Minister during his 2013 Independence Day speech announced that the scheme would benefit 10 lakh young men and women in the next 12 months. NSDC is the designated implementing agency of the scheme and is working through various Sector Skill Councils, Training Providers and Assessment Agencies.

The STAR Scheme is promoting a paradigm shift from content-based to outcome-based courses that are aligned to industry formulated national occupational standards. The scheme is targeting to skill 80% of the entry-level workforce required in various sectors to fill the prevailing skills gap, and will initially cover limited number of high-market-demand job roles from Levels 1 to 4 in the NSQF.

The STAR Scheme envisages Recognition of Prior Learning (RPL) by providing an opportunity for furthering and enhancing skills and knowledge of currently employed youth. It is expected that the industry will proactively nominate their employees to undertake courses aligned to the national occupational standards to increase productivity of the existing workforce.'

(http://nsdcindia.org/sites/default/files/files/mediakit/STAR%20Scheme.docx [Accessed on 19.09.2014]) [22]

2.11.2. 2) HIMAYAT: 'In 2011, two flagship schemes-Himayat and Udaan-were launched to promote skill development in Jammu & Kashmir. Himayat, under the Ministry of Rural Development (MoRD) is a training-cum-placement program, for unemployed youth in Jammu & Kashmir. Youth will be provided short-term training for at least three months, in a range of skills for which there is a good market demand. At the end of the training, the youth are assured of a job and there is one year post-placement tracking to see how they are faring.

2.11.2.1. KEY FEATURES OF HIMAYAT:

a.) Himayat will be implemented in partnership with private agencies or NGOs who are into placement linked skill training for youth.

b.) The scheme aims to train 100,000 youth in five years and provide at least 75% of them with jobs.

c.) Training centres will be developed in each block, catering to the specific needs of the rural youth.

d.) Support will be available for the trainees after and during training as well.'
(http://himayat.org/[Accessed on 19.09.2014]) [23]

2.11.3. 3) UDAAN: 'It is a scheme funded by the Ministry of Home Affairs (MoHA), launched in 2011. Udaan also termed as Special Industry for Jammu & Kashmir, is envisaged as an industry led program, wherein corporates will tap into the large pool of educated youth of the State and provide them a few months of on-the-job training to make them employment ready. 40,000 graduates, post-graduates and professional degree holders are envisioned to benefit from the scheme. It is one of the premier program in the country, that focuses on the skilling of graduates and also the only program that lays such a huge emphasis on the role of the corporates in training and does not restrict their role to only placement.' **(https://www.msde.gov.in/udaan.html[Accessed on19.09.2014]) [24]**

2.11.4. 4) NATIONAL URBAN LIVELIHOOD MISSION/SWARNA JAYANTI SHAHARI ROZGAR YJANA (SJSRY): 'It is a scheme aimed at providing gainful employment to the unemployed or under-employed urban poor, by encouraging skill development and self-employment. This scheme benefits about 2 Lakh urban poor under skill development and 50,000 under self-employment annually.'

(www.skilldevelopment.gov.in/sites/default/files/resources/QA_NSDA_Upload.pdf [Accessed on13.02.2014]) [25]

2.11.5. 5) NATIONAL RURAL LIVELIHOOD MISSION: 'This scheme was earlier known as Swarna Jayanti Grameen Swarozgar Yojna. It is a scheme aimed at reducing poverty by enabling poor households to access gainful self-employment and skilled wage employment opportunities. Ajeevike focuses on organizing rural Below Poverty Line households into Self Help Groups (SHGs) and providing them training to set up their own micro-enterprises. 20% of NRLM funds are available for placement linked skill development. Aajevika-National Rural Livelihoods Mission (NRLM) was launched by the Ministry of Rural Development (MoRD), Government of India in June 2011. Aided in part through investment support by the World Bank, the Mission aims at creating effective and efficient institutional platforms of the rural poor, enabling them to increase household income through sustainable livelihood enhancements and improved access to financial services.

NRLM set out with an agenda to cover 7 Crore rural poor households, across 600 districts, 6000 blocks, 25 Lakh Gram Panchayats and 6 Lakh villages in the country through self-managed Self-Help groups (SHGs) and federated institutions and support them for livelihoods collectives in a period of 8-10 years.

In addition, the poor would be facilitated to achieve increased access to rights, entitlements and public services, diversified risk and better social indicators of empowerment. It believes in harnessing the innate capabilities of the poor and complements them with capacities (information, knowledge, skills, tools, finance and collectivization) to participate in the growing economy of the country.

In November 2015, the program was renamed Deendayal Antayodaya Yojna (DAY-NRLM).'
(aajeevika.gov.in [Accessed on 01.12.2015]) [26]

2.11.6. 6) MODUALR EMPLOYABLE SKILLS SCHEME (MES): This scheme is under the aegis of Ministry of Labour & Employment (MoLE). It aims to provide vocational training using demand-driven short term training courses, created in consultation with the industry.

2.11.6.1. OBJECTIVES OF MES:

a.) 'To provide vocational training to school leavers, existing workers, ITI graduates etc. to improve their employability, by optimally utilizing the infrastructure available in Government, private institutions and the industry. Existing skills of the person can also be tested and certified under this scheme.

b.) To build capacity in the area of development of competency standards, course curricula, learning material and assessment standards in the country.'

2.11.6.2. KEY FEATURES OF MES:

a.) 'Demand-Driven, short term training courses based on MES, decided in consultation with the industry. MES is the 'Minimum Skills Set' which is sufficient for gainful employment.

b.) Central Government will facilitate and promote training while industry, private sector and State Government will train the persons.

c.) Optimum utilization of existing infrastructure to make training cost effective.

d.) Flexible delivery mechanism to suit needs of various target groups.

e.) Different levels of program (foundation as well as skill up gradation) to meet demands of various target groups.

f.) The services of existing or retired faculty or guest faculty to be utilized.

g.) Courses would also be available for persons having completed 5^{th} Standard.

h.) Testing and certification of skills acquired informally.

i.) Testing of skills of trainees by independent assessing bodies, which would not be involved in training delivery, to ensure that it is done impartially.

j.) The essence of the scheme is in the certification that will be nationally and internationally recognized.

The duration of the MES courses can be as low as 90 hours. Training fees of candidates who successfully complete the training is refunded by the Government. This scheme is also known as the Skills Development Initiative Scheme (SDIS). '

(www.skilldevelopment.gov.in/sites/default/files/resources/QA_NSDA_Upload.pdf [Accessed on 13.02.2014]) [25] & (https://www.dvet.gov.in/Schemes/MES.aspx [Accessed on 19.09.2014]) [27]

2.11.7. 7) JAN SHIKSHAN SANSTHAN (JSS): 'The JSS was initially launched in 1967 as the Shramik Vidyapeeth, and renamed Jan Shikshan Sansthan in April 2000. The Jan Shikshan Sansthan is a unique scheme crafted by the Government of India under the National Literacy Mission. JSSs are institutions of Peoples Education focusing on the poor, the illiterates, the neo-literates, the under-privileged and the un-reached. The JSSs are unique in that they do not provide just skill development, but link literacy with vocational skills and provide large doses of Life Enrichment Education (LEE) to the people. They do not work in isolation, but aim for convergence with other stakeholders in society. The JSS are unique also because, they offer quality vocational skills and technical knowledge at a very low cost, provide need based and literacy-linked vocational training in most courses, without insisting on age limit or prior educational qualifications. The JSS offers a large number of vocational training programs (371) from candle making to computer courses.'

(http://www.nlm.nic.in/jss_nlm.htm [Accessed on 19.09.2014]) [28]

2.12. NATIONAL SKILLS QUALIFICATION FRAMEWORK: 'In pursuance of the decision of the Cabinet Committee on Skill Development in its meeting held on 19th December 2013, Ministry of Finance vide notification number 8/6/2013-Invt. Dated 27th December 2013 notified the NSQF. As per the notification all other framework, including NVEQF would cease to exist and will be superseded by NSQF.

In view of the new notification by the Ministry of Finance, the Council decided to run the existing programmes approved under NVEQF by AICTE after aligning them as per the provisions of NSQF.'

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 3.02.2014]) [29]

'National Skills Qualifications Framework (NSQF) is a quality assurance framework which organizes qualifications according to a series of levels of knowledge, skills and aptitude. These levels are defined in terms of learning outcomes which the learner must possess regardless of whether they were acquired through formal, non-formal or informal learning.

The NSQF would also help shift emphasis to outcome based learning - both in the general and vocational space. Today, there is lack of uniformity in the outcomes associated with different qualifications across institutions, each with its own duration, curriculum, entry requirements as well as title. This often leads to problems in establishing equivalence of certificates/diplomas/degrees in different parts of the World, which in turn impacts the employability and mobility of students. By shifting the focus from inputs to learning outcomes, the NSQF would aim to tackle this challenge.

NSQF will also facilitate Recognition of Prior Learning (RPL) that is largely lacking in the present education and training scenario. Additionally, it would help alignment of Indian qualifications to international qualifications.

The credit accumulation and transfer system that will be integrated in the NSQF will allow people to move between education, vocational training and work at different stages in their lives according to their needs and convenience.

The framework would be anchored and operationalized by the National Skill Development Agency (NSDA), an autonomous body attached to the Ministry of Finance, mandated to coordinate and harmonize skill development efforts of the Government of India and the private sector.

The NSQF is a nationally integrated education and competency based skill framework that will provide for multiple pathways, horizontal as well as vertical, both within vocational education and vocational training and among vocational education, vocational training, general education and technical education, thus linking one level of learning to another higher level. This will enable a person to acquire desired competency levels, transit to the job market and, at an opportune time, return for acquiring additional skills to further upgrade competencies, as well as, find opportunities to work not only in India but also abroad.'
(http://www.anuna.in/nsqf [Accessed on 03.02.2014]) [30]

2.12.1. OBSERVATIONS:

i.) 80% of the new entrants to the workforce have no opportunity for skill training.

ii.) Against approximately 15 Million new entrants to the workforce per annum, the existing training capacity is approximately 3 Million per annum only.

iii.) Additionally a large number, close to 200 Million at IX, X, XI, XII dropout who need vocational and skills to be employable. This number is likely to be 500 Million by 2020.

iv.) Mere skill building is not widely accepted within the society.

v.) Mere acquired degrees or diplomas do not guarantee jobs. Hence a new paradigm is required to build skills and education together, for multiple pathways and multi-point entry-exit opportunities.

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 03.02.2014])

[29]

2.12.2. CURRENT SCENARIO:

i.) Water tight educational entry and exit levels.

ii.) Increasing drop-outs.

iii.) Social non-acceptance to VE as an alternate to higher education.

iv.) Loss of productive youth.

v.) Over qualified youth and non-availability of appropriate jobs.

vi.) Mismatch between qualifications and industry needs.

vii.) Need to provide seamless integration between VE and Regular Higher Education.

viii.) Enhancement in Gross Enrolment Ratio (GER).

ix.) Need to enhance employability potential.

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 03.02.2014])

[29]

2.12.3. OBJECTIVES OF NSQF:

i.) Bridge skill gap and provide trained manpower to various emerging service sectors in India.

ii.) Strive towards development of skilled manpower for diversified sectors, through short term, structured job oriented courses.

iii.) Prepare the youth for a vocation of their choice.

iv.) Build a formidable workforce of international quality for demand not only in India, but also in all other countries.

v.) Reduce unemployment by supplying world class skilled people.

vi.) Reduce cost and improve productivity of services and manufacturing, by providing skilled manpower of international standards.

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 03.02.2014])

[29]

2.12.4. PRINCIPLES ADOPTED BY NSQF:

i.) Localized approach.

ii.) Maximum impact skills and sectors selected.

iii.) Subsidized fee structure to provide accessibility.

iv.) Skills for women.

v.) Centrally administered 'Train the Trainer'.

vi.) Placement assistance connecting candidates to jobs.

vii.) Building pathways for international progression.

viii.) Recognition of Prior Learning (RPL).

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 3.02.2014])
[29]

2.12.5. FEATURES OF NSQF:

i.) Across sectors and across the country.

ii.) Short duration, focused and modular programs.

iii.) Practical hands on focus.

iv.) Delivery in the local language.

v.) Full day, half day or weekend programs.

vi.) A network of centres.

vii.) Full mobility between formal, vocational streams of education and the job market, with multi-point entry and exit.

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 03.02.2014] [29]

2.12.6. OPERATIONAL METHODOLOGY OF NSQF-INTEGRATING VOCATIONAL EDUCATION WITH CONVENTIONAL EDUCATION:

i.)' Skill-Knowledge Partner (SKP) to be registered by AICTE or other authorized bodies for imparting specific skills.

ii.) A student registers with an AICTE approved Technical Institute or any other college for a Vocational Diploma or a Vocational Degree or registers with any other institute affiliated to any Technical Board or a University.

iii.) The student completes the skill modules as required at various certification levels, one level at a time, acquires the necessary credits from the SKP, and gives them on the Institute where he is registered for a Diploma, Post-Diploma or a Degree.

iv.) These credits are transferred to the Technical Board or the University, as the case may be, which compiles the Vocational Credits and the Formal Education Credits.

v.) Certification levels as required will entail the student for the award of a Vocational Degree, Diploma or Post-Diploma.

vi.) The candidate may enter the job market after each certification level, or may continue to acquire additional credits in part time/full time mode.

vii.) In all 7 Certification Levels of 'Knowledge & Skill' have been identified. First 2 levels refer to Standard ix & x at school level.

viii.) Each level requires 1000 Hours of education and training per annum. For the vocational stream leading to a Degree or a Diploma or a Post-Diploma, these hours shall have both vocational and academic component. The vocational component will go on increasing as the level of certification increases. The skill modules or vocational content at a certification level could be a single skill or a group of skills of the number of hours prescribed.

ix.) A candidate shall have freedom to choose either a vocational stream or a conventional stream to reach graduation level. In addition a candidate shall have freedom to move from vocational stream to current formal higher education stream or vice-versa at various stages. This multi-level entry and exit system shall allow the candidate to seek employment after any level and re-join the education as and when feasible to up-grade qualifications/skill competency.

x.) A student entering a vocational stream from general stream can enter at a certain level, provided the skills required at that level are acquired from a registered SKP.

xi.) A student who has acquired the skills through work experience can also enter the vocational stream at an appropriate level, provided he is assessed for the skills acquired from a registered SKP.'

(https://www.aicte-india.org/downloads/Annexure%20II.pdf [Accessed on 03.02.2014]) [29]

Table 7: Duration & Entry Level Qualifications Under The Framework

		CASE I	CASE I	CASE II	CASE II
Certification In Level	Normal Qualification	Vocational Qualification	Certifying Body	Vocational Qualification	Certifying Body
1	Secondary School Grade IX	Grade IX Vocational	School	Grade IX Vocational	School
2	Secondary School Grade X	Grade X Vocational	School	Grade X Vocational	School
3	Higher Secondary School Grade XI	Diploma Vocational	Board of Technical Education	Grade XI Vocational	School

4	Higher Secondary School Grade XII	Diploma Vocational	Board of Technical Education	Grade XII Vocational	School
5	1st Year Bachelors	Diploma Vocational	Board of Technical Education	Degree Vocational	University
6	2nd Year Bachelors	Advanced Diploma Vocational	Board of Technical Education	Degree Vocational	University
7	3rd Year Bachelors	Advanced Diploma Vocational	Board of Technical Education	Degree Vocational	University

Source: NSQF (AICTE) [29]

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter provides the details of the research methodology adopted for conducting the study. It starts with the statement of the research problem. It is followed by the objectives of the research. It then explains the research design and research model adopted. A description of the design of the research survey questionnaire and its validity and reliability follows with an explanation of the sampling and data collection procedures adopted. The chapter ends with indication of the means used for analysis and reporting the research findings.

3.1 DEFINITION OF RESEARCH PROBLEM AND STATEMENT

Lot of efforts have been made by the Government of India right after India's independence, to impart vocational education in order to enhance the skills of the people of India, like the University Education Commission of 1948, The Secondary Education Commission of 1952, The Education Commission/The Kothari Commission 1964-66, Centrally Sponsored Scheme of Vocationalization of Secondary Education, The National Policy on Skill Development in 2009, National Vocational Education Qualification Framework (NVEQF) in 2012, the National Skills Qualification Framework (NSQF) in 2013, and the National Policy on Skill Development and Entrepreneurship in 2015. But still, the condition and situation of vocational education and skills training hasn't improved to a great extent.

It is probably the social stigma and faulty planning, which is responsible for the present status of vocational training and skill development in a country like India, which has the maximum number of young people who can gainfully contribute to the economic development and prosperity of India.

So, in order to evaluate the various policy frameworks of vocational education and skill development, and to be able to provide suggestions to the Government of India, which could be incorporated in the future policy framework, and help in improving the status and condition of vocational education and skill development, so that India can take full advantage of the 'Demographic Dividend', this particular area has been selected by the researcher for detailed study.

"An Evaluative Study of Vocational Education and Skill Development in India (With Reference to policy Framework)''

3.2 RESEARCH QUESTIONS: There was one major research question of the study and four minor research questions of the study.

i) MAJOR RESEARCH QUESTION: The overarching research question addressed in the research study was:

a) What is the present mechanism of Vocational Education and Skill Development?

ii) MINOR RESEARCH QUESTIONS: The following were the minor research questions:

a) What are the infrastructural facilities and human resources of the Vocational Education and Skill Development Institutes?

b) What are the practices of Vocational Education and skill Development?

c) What are the problems of Vocational Training and Skill Development?

d) What improvements can be made in the Vocational Education Training and Skill Development Framework?

3.3 RESEARCH OBJECTIVES: The study was undertaken with the following major and minor objectives-

i) MAJOR OBJECTIVE: the major objective of the research was-

a) To assess the present mechanism of Vocational Education and Skill Development.

ii) MINOR OBJECTIVES: The minor objectives of the research were-

a) To evaluate the infrastructural facilities and human resources of the Vocational Education Training and Skill Development institutes.

b) To identify the practices of Vocational Education training and Skill Development.

c) To identify the problems of Vocational Education Training and Skill Development.

d) To suggest improvements in the Vocational Education Training and Skill Development Framework.

3.4 RESEARCH DESIGN

Research design is defined as a framework of methods and techniques chosen by a researcher to combine various components of research in a reasonably logical manner so that the research problem is efficiently handled. It provides insights about 'how' to conduct research using a particular methodology. Every researcher has a list of research questions which need to be assessed – this can be done with research design.

https://www.questionpro.com/blog/research-design/ **[31]**

3.4.1 Characteristics of Research Design: There are four main characteristics of a research design.

1. Neutrality

2. Reliability

3. Validity

4. Generalization

3.4.2 TYPES OF RESEARCH DESIGN: Research Design can be divided into five types, they are as follows:

1. **Descriptive Research Design:** Descriptive research is defined as a research method that describes the characteristics of the population or phenomenon that is being studied. This methodology focuses more on the "what" of the research subject rather than the "why" of the research subject. In other words, descriptive research primarily focuses on describing the nature of a demographic segment, without focusing on "why" a certain phenomenon occurs. In other words, it "describes" the subject of the research, without covering "why" it happens.

https://www.questionpro.com/blog/descriptive-research/ **[31]**

2. **Experimental Research Design:** Experimental research design is used to establish a relationship between the cause and effect of a situation. It is a causal research design where the effect caused by the independent variable on the dependent variable is observed. For example, the effect of an independent variable such as price on a dependent variable such as customer satisfaction or brand loyalty is monitored. It is a highly practical research design method as it contributes towards solving a problem at hand. The independent variables are manipulated to monitor the change it has on the dependent variable. **[30]**

3. **Correlational Research Design:** Correlational research is a non-experimental research design technique which helps researchers to establish a relationship between two closely connected variables. Two different groups are required to conduct this research design method. There is no assumption while evaluating a relationship between two different variables and statistical analysis techniques are used to calculate the relationship between them. Correlation between two variables is concluded using a correlation coefficient, whose value ranges between -1 and +1. If the correlation coefficient is towards +1, it indicates a positive relationship between the variables and -1 indicates a negative relationship between the two variables. **[30]**

4. **Diagnostic Research Design:** In the diagnostic research design, a researcher is inclined towards evaluating the root cause of a specific topic. Elements that contribute towards a troublesome situation are evaluated in this research design method. **[30]**

Keeping in mind the expansive nature of the research topic, a descriptive study was adopted as the research design. Quantitative analytical methods were adopted as the research methodology of the study.

3.5 STAKEHOLDERS OF THE STUDY: There were four stakeholders of the study -

1. Students of the Industrial Training Institutes (ITIs) and Polytechnics.

2. Teachers of the Industrial Training Institutes (ITIs) and Polytechnics.

3. Principals of the Industrial Training Institutes (ITIs) and Polytechnics.

4. Employers of Industrial Training Institutes (ITIs) and Polytechnic pass outs.

3.6 METHODS OF DATA COLLECTION

Survey method was used to collect primary data by the researcher. Survey method is a technique in which the researcher gathers data by asking questions from people whom they think to have desired information.

Four different questionnaires were developed by the researcher to collect data from the various stakeholders of the study.

3.6.1 TYPES OF DATA COLLECTED: Two types of data were collected for the topic under study-

1) Primary Data: It was collected through pre-prepared questionnaires from the different stakeholders of the study.

2) Secondary Data: It was collected from various sources like the internet, journals, books and government reports.

3.7 SAMPLING

The sample was drawn from all parts of Delhi, though it was limited to the government owned Industrial Training Institutes (ITI's) and Polytechnics. Out of the 16 government owned ITIs and 10 Polytechnics, 4 ITIs and 2 Polytechnics denied permission for data collection. So the sample was collected from 12 ITIs and 8 Polytechnics.

3.7.1 TYPES OF SAMPLING: Simple random sampling and convenience sampling methods were used to collect the primary data. The tools for data collection were self-developed questionnaires with multiple choice questions.

3.7.2 PILOTING THE QUESTIONNAIRE: A pilot study was done on a sample of 100 students, 10 teachers and 5 principals of the various ITI's and Polytechnics and also on 5 industry owners/employers. The motives of the pilot study were:

1) To pre-test the items in the questionnaires.

2) To assess the feasibility of data collection.

3) To check the ease of comprehension of the questionnaires.

4) To understand if the desired responses were as per the objectives of the study.

5) The feedback of the pilot study was used to improve the questionnaire design.

3.7.3 VALIDITY OF THE QUESTIONNAIRES: Validity expresses the degree to which a measurement measures what it purports to measure. Several varieties have been described, including face validity, construct validity, content validity and criterion validity (which could be concurrent and predictive validity).

(http://www.npmj.org/text.asp?2015/22/4/195/173959 [accessed on 20.01.2016]) [33]

1) Face Validity: Face validity was adjudged by the comprehensive coverage of the questions relevant to the objectives of the study and also by discussing the questionnaires with the targeted respondents who were not included in the final data collection process.

2) Content Validity: Content validity was established by sending the self-developed questionnaires to 5 subject matter experts for review, and also by incorporating the suggestions given by them.

3) Pilot Testing of Questionnaires: A pilot study was also done to check the validity of the different self-developed questionnaires.

3.7.4 RELIABILITY OF THE QUESTIONNAIRES: Reliability refers to the degree to which an instrument yields consistent results. The common measures of reliability include:

1) Internal Consistency: It looks at the consistency of the score of individual items on an instrument, with the scores of a set of items, or subscale, which typically consists of several items to measure a single construct. Cronbach's alpha is one of the most common methods for checking internal consistency reliability.

2) Test-Retest Reliability: It measures the correlation between scores from one administration of an instrument to another, usually within an interval of 2 to 3 weeks. Unlike pre and post-tests, no treatment occurs between the first and second administrations of the instrument, in order to test-retest reliability.

3) Inter-Rater Reliability: It checks the degree of agreement among raters (i.e., those completing items on an instrument). Common situations where more than one rater is involved may occur when more than one person conducts classroom observations, uses an observation protocol or scores an open-ended test, using a rubric or other standard protocol. Kappa statistics, correlation coefficients, and intra-class correlation (ICC) coefficient are some of the commonly reported measures of inter-rater reliability.

(https://blogs.miamioh.edu/discovery-center/2016/11/how-to-determine-the-validity-and-reliability-of-an-instrument/[accessed on 05.12.2016]) [34]

3.7.5 CHRONBACH'S ALPHA: Reliability testing for the self-developed questionnaires was done by calculating the Chronbach's Alpha values for the same. Cronbach's alpha is a measure used to assess the reliability, or internal consistency, of a set of scale or test items. In other words, the reliability of any given measurement refers to the extent to which it is a consistent measure of a concept, and Cronbach's alpha is one way of measuring the strength of that consistency.

Cronbach's alpha is computed by correlating the score for each scale item with the total score for each observation (usually individual survey respondents or test takers), and then comparing that to the variance for all individual item scores:

Cronbach's α is defined as

$$\alpha = \frac{N}{N-1}\left(1 - \frac{\sum_{i=1}^{N}\sigma_{Y_i}^2}{\sigma_X^2}\right)$$

Where *N* is the number of components (items or testets), $\sigma_X^2$is the variance of the observed total test scores, and $\sigma_{Y_i}^2$is the variance of component *i*.

Alternatively, the standardized Cronbach's α can also be defined as

$$\alpha = \frac{N \cdot \bar{c}}{(\bar{v} + (N-1) \cdot \bar{c})}$$

Where N is the number of components (items or testets), $\bar{v}$equals the average variance and $\bar{c}$is the average of all covariances between the components.

Cronbach's alpha is thus a function of the number of items in a test, the average covariance between pairs of items, and the variance of the total score.

(https://data.library.virginia.edu/using-and-interpreting-cronbachs-alpha/[accessed on10.01.2016]) [35]

Table 8: Chronbach's Alfa Values & Their Interpretation

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: https://www.statisticshowto.datasciencecentral.com/cronbachs-alpha-spss/ [36]

Table 9: Reliability Analysis (Students Questionnaire)

Scale Reliability Statistics

	McDonald's ω	Cronbach's α
Scale	-30.79	0.797

Note: Of the observations 14 were used, 0 were excluded list wise and, 14 were provided

Table 10: Item Reliability Statistics

	Chronbach's
Very Good	0.681
Good	0.685
Average	0.883
Poor	0.716
Very Poor	0.779

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the students of the ITI's and Polytechnics was 0.797, which is more than 0.70 and is considered as good. This means that the questionnaire related to the students was found to be reliable.

Table 11: Reliability Analysis (Teachers Questionnaire)

Scale Reliability Statistics

	95% Confidence Interval

	McDonald's ω	Cronbach's α	Lower	Upper
Scale	-24.35	0.825	0.647	0.928

Note: Of the observations, 17 were used, 0 were excluded list wise and, 17 were provided

Table 12: Item Reliability Statistics

	Mean	Standard Deviation	Cronbach's α
Very Good	20.29	11.406	0.748
Good	24.88	10.948	0.745
Average	27.24	9.250	0.913
Poor	17.35	12.440	0.738
Very Poor	10.24	12.265	0.740

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the teachers of the ITI's and Polytechnics was equal to 0.825, which is more than 0.7 and considered as good, It means that the questionnaire related to the teachers of the institutes was reliable.

Table 13: Reliability Analysis (Principals Questionnaire)

Scale Reliability Statistics

	Mean	Standard Deviation	McDonald's ω	Chronbach's α	Average Inter Item Crrelation
Scale	4	3.488	-2.700	0.777	0.137

Note: Of the observation, 18 were used, 0 were excluded list wise, and 18 were provided

Table 14: Item Reliability Statistics

	Chronbach's
Very Good	0.631
Good	0.747
Average	0.390
Poor	0.386
Very Poor	0.352

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the principals of the institutes was equal to 0.77, which is more than 0.7 and is considered as good. It means that the questionnaire related to the principals of the institutes was reliable.

Table 15: Reliability Analysis (Employers Questionnaire)
Scale Reliability Statistics

			95% Confidence Interval	
	McDonald's ω	Cronbach's α	Lower	Upper
Scale	0.998	0.963	0.737	0.995

Note: Of the observations, 6 were used, 0 were excluded list wise, and 6 were provided

The Chronbach's Alpha value for the questionnaire related to the employers was 0.737, which is more than 0.70 and is considered as good. This means that the questionnaire related to the employers was found to be reliable.

Table 16: Reliability analysis for group of variables

Serial Number	Description	Reliability Factor
1	Descriptive Results for Students	0.797
2	Descriptive Results for Teachers	0.928
3	Descriptive Results for Principals	0.777
4	Descriptive Results for Employers	0.995

The Croanbach- Alpha values for all the four groups were above 0.7, which shows that the variables taken up for the study and the grouping of variables are reliable in nature.

3.7 MEANS OF ANALYSIS AND REPORTING

The questionnaire data obtained through the process of sampling and data collection was entered into Excel Spread Sheets. Full care was taken that data for different stakeholders were entered in separate spread sheets. Thus, 4 data sets were created for the ease of analysis.

SPSS (Statistical Package for the Social Sciences) was chosen as the analytical software for data analysis. The SPSS software package was created for the management and statistical analysis of social science data. It was originally launched in 1968 by SPSS Inc., and was later acquired by IBM in 2009. **(https://www.surveygizmo.com/resources/blog/what-is-spss/[accessed on 12.03.2017]) [37]**

The data collected for each stakeholder was entered into a SPSS data sheet and appropriate analytical techniques were then applied to analyse the data.

The research study uses descriptive statistics like frequency distribution, percentage analysis, reliability testing, mean, standard deviation and variance.

Reporting of analysis follows the APA (American Psychological Association) style of reporting as far as possible. The data analysis, interpretation and implications are presented in chapter 4. Chapter 5 deals with the findings, conclusions and recommendations.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND IMPLICATIONS

This chapter presents the statistical analysis of the data and the findings derived from the research study. The data analysis and the findings are organized into four sections. The first section deals with the students of the ITI's and Polytechnics, the second deals with the teachers of the ITI's and Polytechnics, the third deals with the principals of the ITI's and Polytechnics and, the fourth section deals with the employers of various industries.

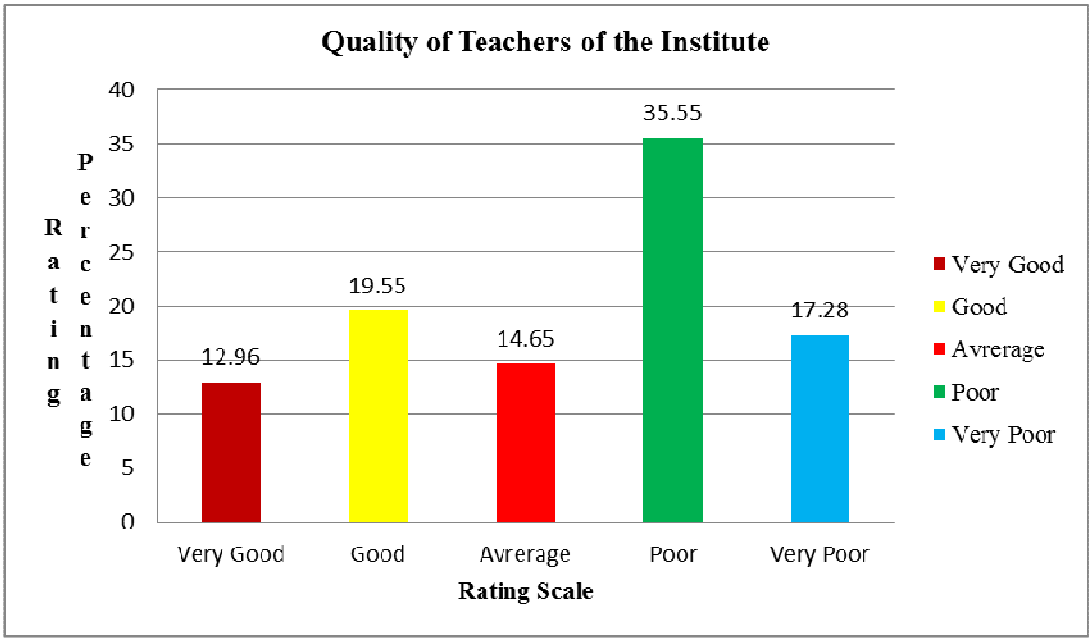
4.1. SECTION A: QUESTIONNAIRE FOR STUDENTS

Table 17: Quality of Teachers of the Institute

Quality of Teachers	Percentage %	Frequency
Very Good	12.9667	778
Good	19.55	1173
Average	14.65	879
Poor	35.55	2133
Very Poor	17.2833	1037
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 1: Quality of Teachers of the Institute



INTERPRETATION: From the data analysis regarding quality of teachers in the institute, it was found that as per the students of the various ITI's and Polytechnics, 12.96% teachers were very good where as 17.28% were very poor. Majority of the students i.e. 35.55% considered the quality of teachers of their institutes as poor.

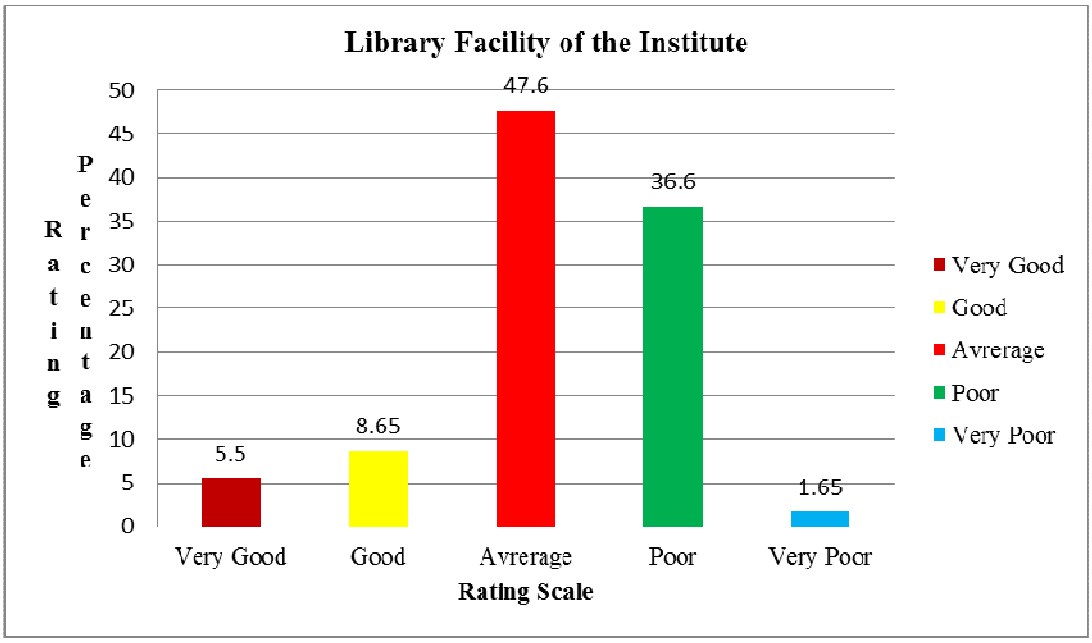
IMPLICATIONS: The data analysis shows that more than 50% students of the ITI's and Polytechnics consider that the teachers of their institutes are of poor quality. This would hamper the quality of training that they receive, which in turn would badly affect their employability.

Table 18: Library Facility of the Institute

Library Facility	Percentage %	Frequency
Very Good	5.5	330
Good	8.65	519
Average	47.6	2856
Poor	36.6	2196
Very Poor	1.65	99
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 2: Library Facility of the Institute



INTERPRETATION: From the data analysis about the Library facility of the institute, it was found that 5.5% students found it very good, were as 1.65% students found it very poor. Majority of the students i.e. 47.6% found the Library facility as average.

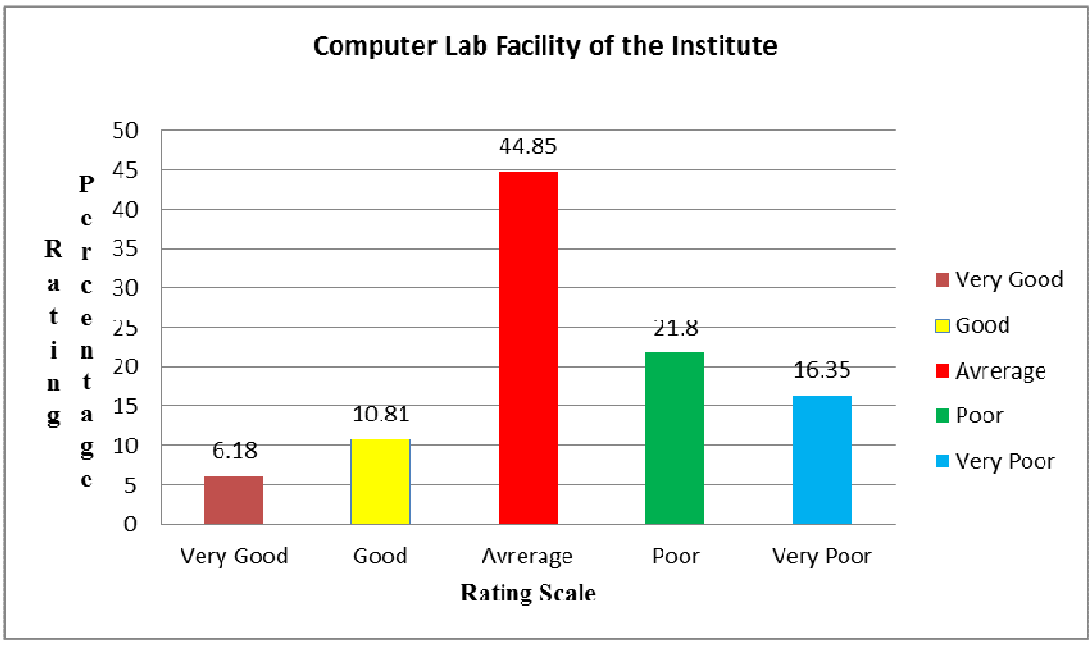
IMPLICATIONS: The data analysis shows that about 48% students find the library facility of their institutes as average and about 38% students find the library facility as poor. This will act as an obstacle for the students to improve their subject knowledge.

Table 19: Computer Lab Facility of the Institute

Computer Lab Facility	Percentage %	Frequency
Very Good	6.18333	371
Good	10.8167	649
Average	44.85	2691
Poor	21.8	1308
Very Poor	16.35	981
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 3: Computer Lab Facility of the Institute



INTERPRETATION: From the data analysis regarding Computer Lab facility of the institute it was found that as per the students, 6.18% considered it as very good, where as 16.35% students considered it as very poor. Majority of the students i.e. 44.8% considered the Computer Lab facility provided by their institute as average.

IMPLICATIONS: The data analysis shows that about 45% students consider the computer lab facility of their institutes as average and about 38% students consider the computer lab

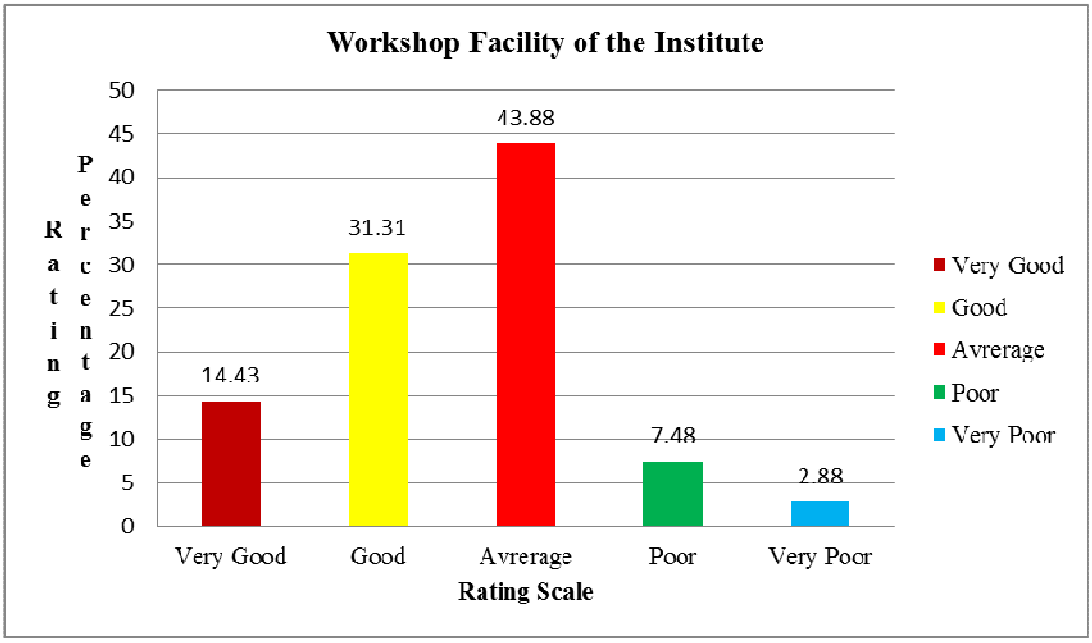
facility as poor. This would act as an obstacle for the growth of the students. The students would not be able to get adequate opportunities to use computers for their work and also to explore more about the latest trends in their respective field of training. This in turn would impact their knowledge and employability.

Table 20: Workshop Facility of the Institute

Workshop Facility	Percentage %	Frequency
Very Good	14.4333	866
Good	31.3167	1879
Average	43.8833	2633
Poor	7.48333	449
Very Poor	2.8833	173
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 4: Workshop Facility of the Institute



INTERPRETATION: From the data analysis it was found that 14.43% students considered the Workshop facility of their institute to very good where as 31.31% students considered it as good. Majority of the students i.e. 43.88% considered the workshop facility provided by their institute as average.

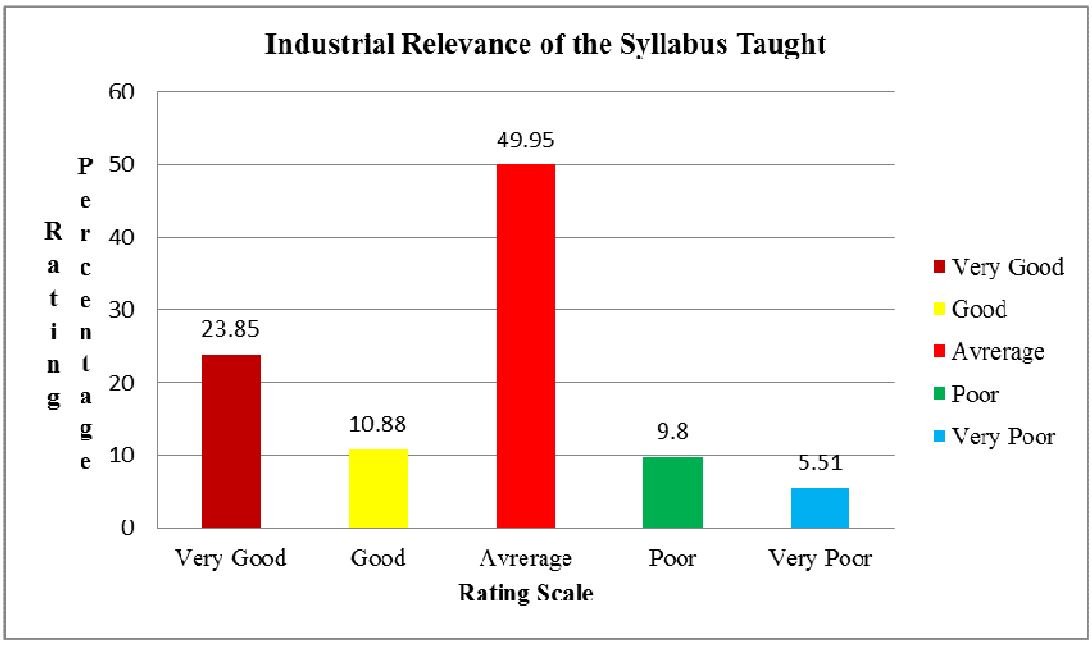
IMPLICATIONS: The data analysis shows that majority of the students i.e. almost 44% consider the workshop facility of their institutes as average. This would hamper the learning ability and in turn the employability of the students of the ITI's and Polytechnics.

Table 21: Industrial Relevance of the Syllabus Taught

Relevance of Syllabus	Percentage %	Frequency
Very Good	23.85	1431
Good	10.8833	653
Average	49.95	2997
Poor	9.8	588
Very Poor	5.51667	331
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 5: Industrial Relevance of the Syllabus Taught



INTERPRETATION: From the data analysis it was found that 23.85% students considered the industrial relevance of the syllabus taught by their institutes as very good, whereas 10.83% students considered it as good. Majority of the students i.e. 49.95% considered the industrial relevance of the syllabus taught by their institutes as average.

IMPLICATIONS: The data analysis shows that almost 50% of the students of ITI's and Polytechnics consider the industrial relevance of the syllabus taught by their institutes as

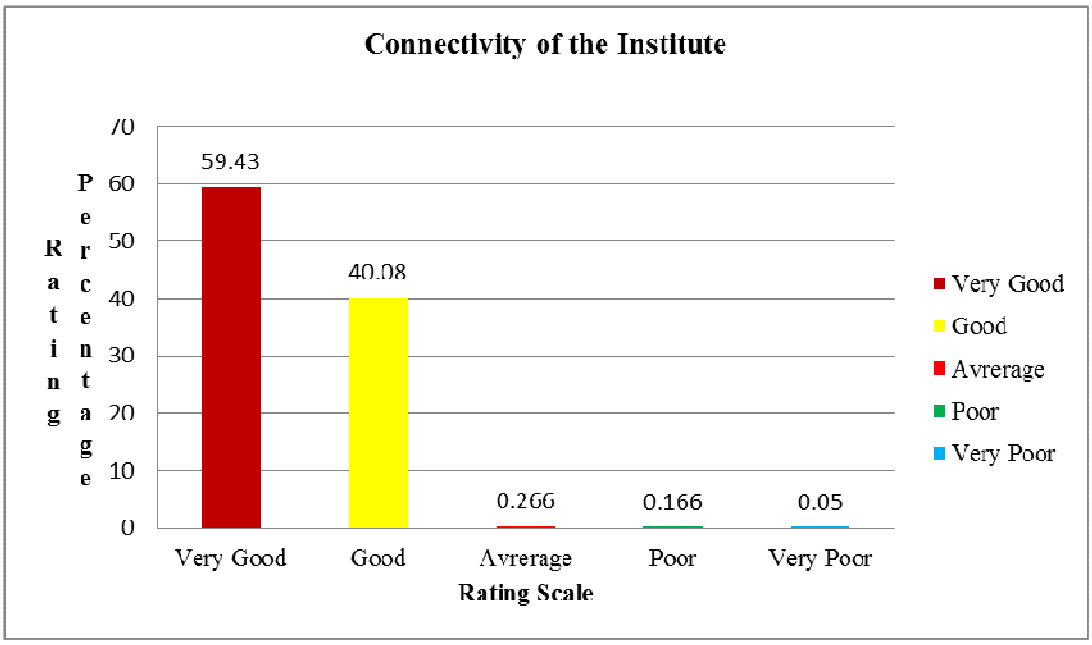
average. If the syllabus is not industry relevant, to begin with, it will negatively impact the employability of the students and once employed, it will also impact their performance at work.

Table 22: Connectivity of the Institute

Connectivity of Institute	Percentage %	Frequency
Very Good	59.4333	3566
Good	40.0833	2405
Average	0.26667	16
Poor	0.16667	10
Very Poor	0.05	3
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 6: Connectivity of the Institute



INTERPRETATION: From the data analysis regarding Connectivity of the institute it was found that 59.43% students considered that the connectivity of their institutes was very good, 40.08% considered it to be good. Only 0.05% students considered that the connectivity of their institute was very poor.

IMPLICATIONS: The data analysis shows that almost all of the students from whom data was collected, considered the connectivity of their institutes as very good or good. This will

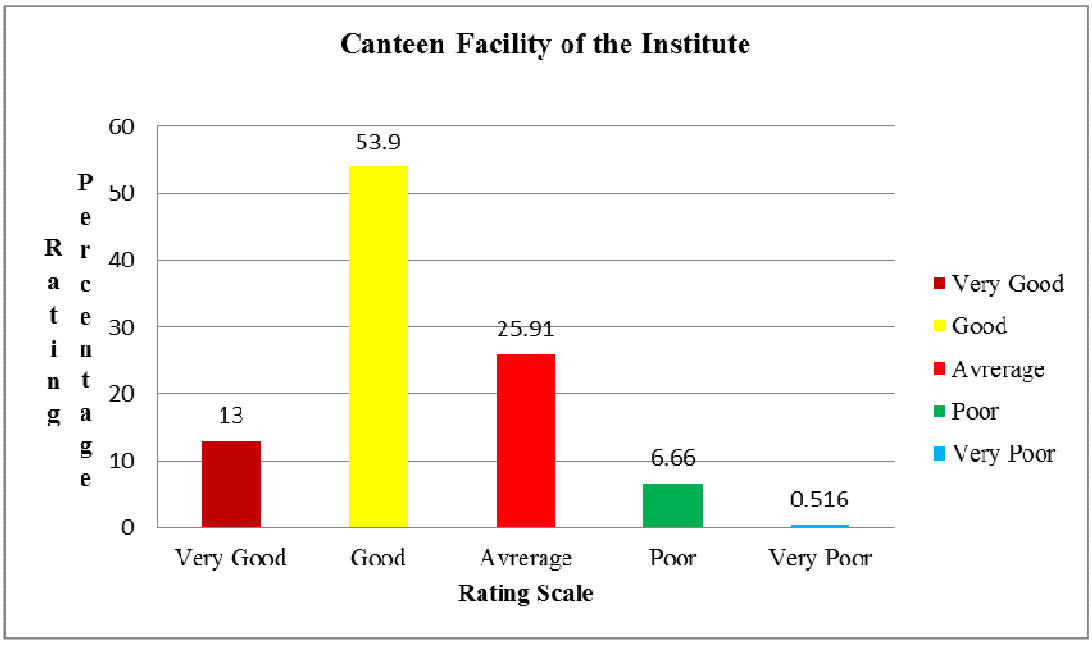
have a positive impact on the institute, as students will not shy away from taking admission in the ITI's and Polytechnics.

Table 23: Canteen Facility of the Institute

Canteen Facility	Percentage %	Frequency
Very Good	13	780
Good	53.9	3234
Average	25.9167	1555
Poor	6.66667	400
Very Poor	0.51667	31
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 7: Canteen Facility of the Institute



INTERPRETATION: From the data analysis regarding Canteen facility of the institute it was found that 13% students considered the canteen facility of their institute as very good, where as 53.9% students considered it to be good. Only 0.51% students considered the canteen facility of their institute to be very poor.

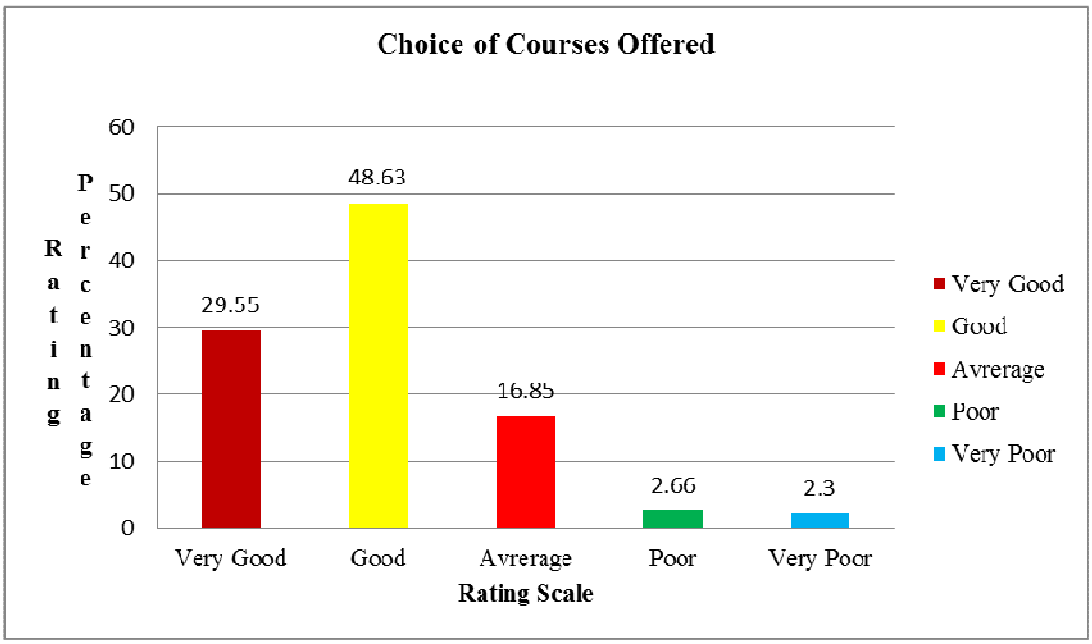
IMPLICATIONS: The data analysis shows that more than 60% students considered the canteen facility of their institutes as good. This aspect will have a positive impact on the admissions, attendance and mental health of the students.

Table 24: Choice of Courses Offered

Choice of Courses Offered	Percentage %	Frequency
Very Good	29.55	1773
Good	48.6333	2918
Average	16.85	1011
Poor	2.66667	160
Very Poor	2.3	138
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 8: Choice of Courses Offered



INTERPRETATION: From the data analysis regarding Choice of courses offered by the institute it was found that 29.55% students considered it to be very good, where as 16.85% considered it to be average. Majority of the students i.e. 48.63% considered the Choice of courses offered by their institute as good.

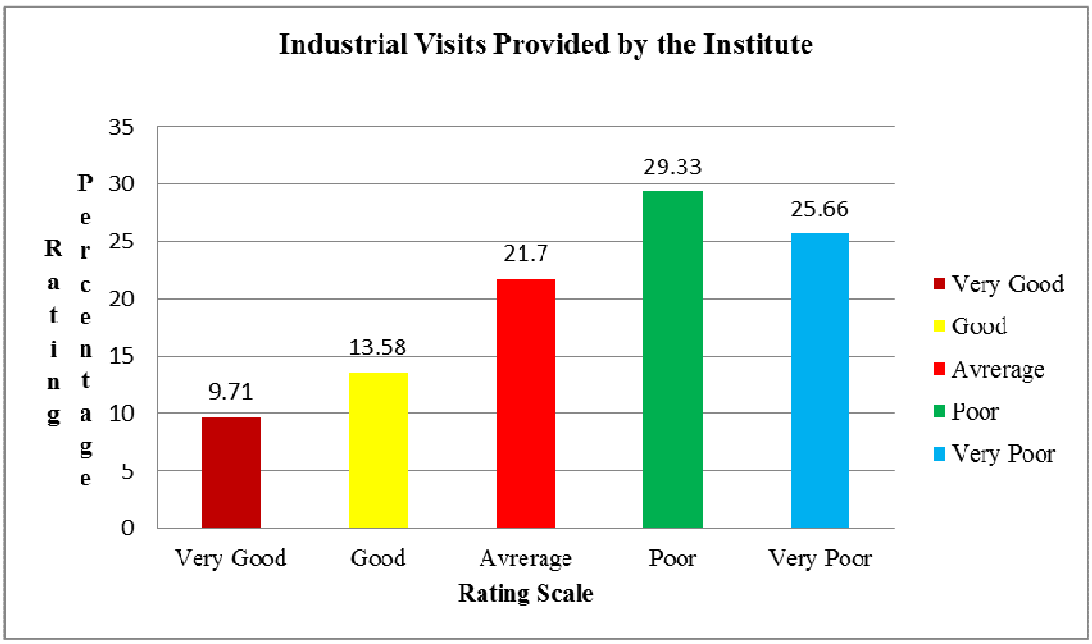
IMPLICATIONS: The data analysis shows that more than 77% students considered the choice of courses offered by their institutes as good. This aspect will have a positive impact on the students as it helps them to find a better fit according to their aptitude. It is likely to lead to better learning, performance and employability.

Table 25: Industrial Visits Provided by the Institute

Industrial Visits Provided	Percentage %	Frequency
Very Good	9.71667	583
Good	13.5833	815
Average	21.7	1302
Poor	29.3333	1760
Very Poor	25.6667	1540
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 9: Industrial Visits Provided by the Institute



INTERPRETATION: From the data analysis regarding Industrial visits provided by the institute it was found that 9.71% students considered it to be very good, where as 25.6% students considered it to be very poor. Majority of the students i.e. 29.33% considered the Industrial visits provided by their institute as poor.

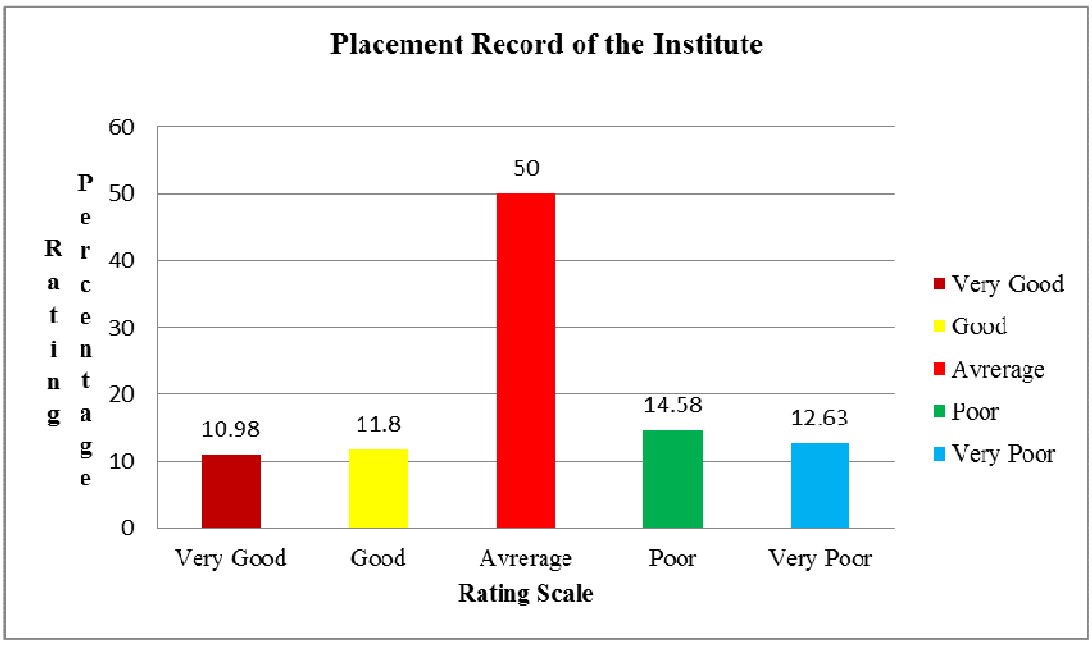
IMPLICATIONS: The data analysis shows that more than 54% students of ITI''s and Polytechnics considered the industrial visits provided by their institutes as poor. This would act as an obstacle for the growth of the students as they would not be industry ready, which would ultimately lead to low employability for them.

Table 26: Placement Record of the Institute

Placement Record	Percentage %	Frequency
Very Good	10.9833	659
Good	11.8	708
Average	50	3000
Poor	14.5833	875
Very Poor	12.6333	758
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 10: Placement Record of the Institute



INTERPRETATION: From the data analysis regarding Placement record of the students of the institute it was found that 10.98% students considered it to be very good where as 11.8% students considered it to be good. Majority of the students i.e. 50% considered the Placement record of the students of the institute as average.

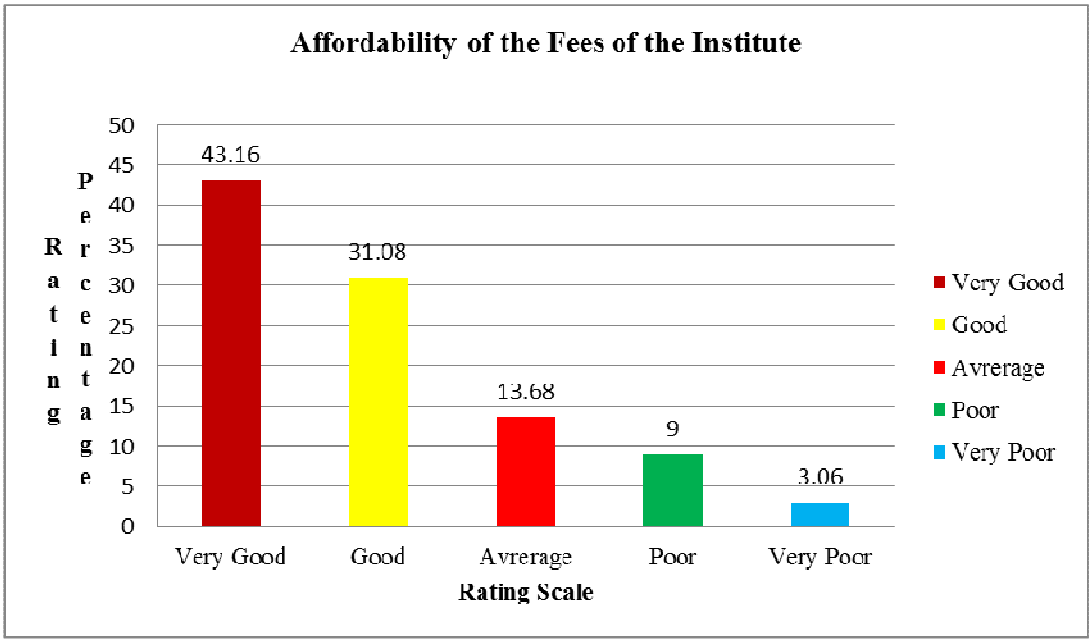
IMPLICATIONS: The data analysis shows that 50% students considered that the placement record of their institutes was average. This aspect will have a negative effect on the institutes due to bad word of mouth through the students. It will also lead to discontent among the students.

Table 27: Fees Affordability

Fees Affordability	Percentage %	Frequency
Very Good	43.1667	2590
Good	31.0833	1865
Average	13.6833	821
Poor	9	540
Very Poor	3.06667	184
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 11: Fees Affordability



INTERPRETATION: From the data analysis regarding Affordability of the fees of the institute, it was found that 43.16% of the students considered it as very good, 31.08% students considered it as good, where as 3.06% of the students considered it very poor.

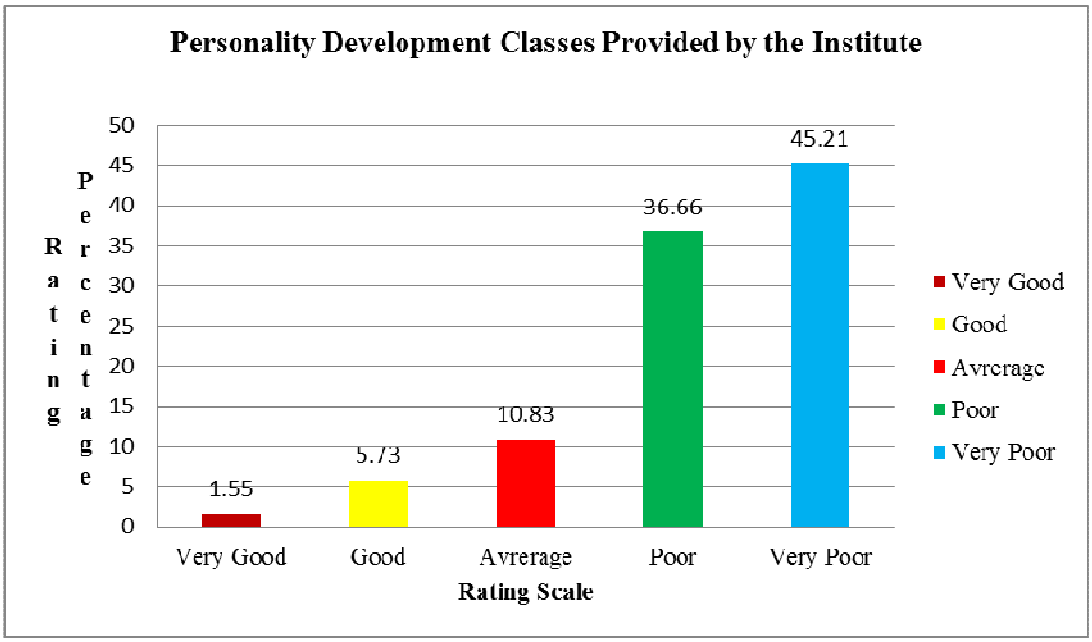
IMPLICATIONS: The data analysis shows that more than 74% students of the ITI's and Polytechnics considered the affordability of the fees of their institutes as good. This aspect will have a positive impact on the institutes as the institutes are likely to get more admissions.

Table 28: Personality Development Classes Provided

Personality Dev. Classes	Percentage %	Frequency
Very Good	1.55	93
Good	5.73333	344
Average	10.8333	650
Poor	36.6667	2200
Very Poor	45.2167	2713
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 12: Personality Development Classes Provided



INTERPRETATION: From the data analysis regarding Personality Development classes provided by the institute, it was found that majority of the students i.e. 45.21% considered them to be very poor, 36.66% students considered them to be poor, whereas only 1.55% students found the personality development classes to be very good.

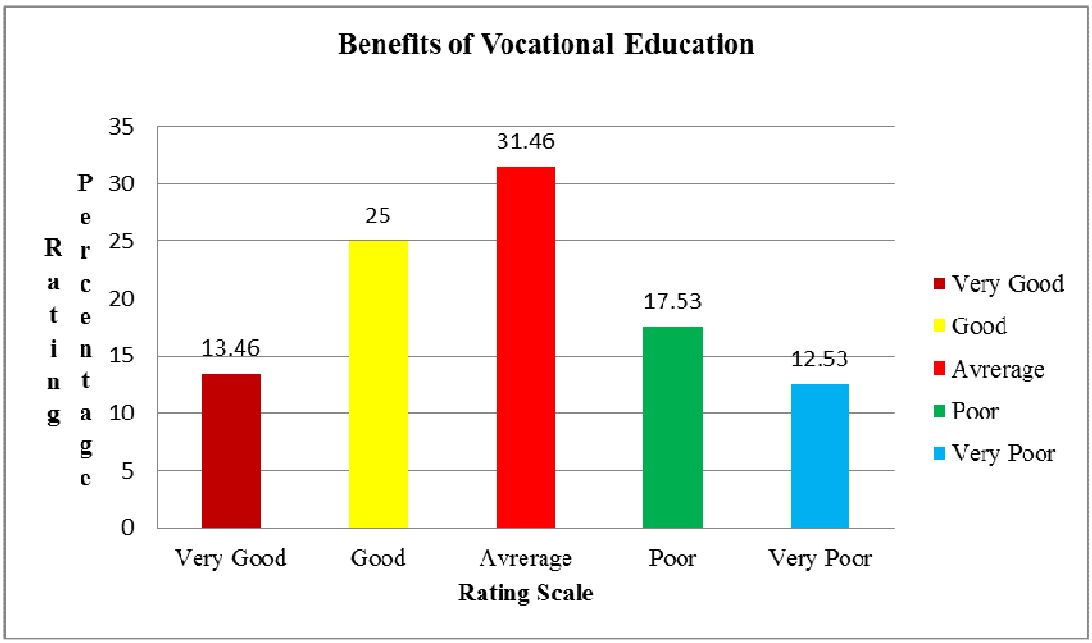
IMPLICATIONS: The data analysis shows that more than 81% students found the personality development classes provided by their institutes as poor. This will have a highly negative effect on the general self-confidence and presentation skills of the students. It will also have a negative impact on the employability and performance at work of these students. In today's competitive world the students will not have any edge at all.

Table 29: Benefits of Vocational Education

Benefits of VE	Percentage %	Frequency
Very Good	13.4667	808
Good	25	1500
Average	31.4667	1888
Poor	17.5333	1052
Very Poor	12.5333	752
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 13: Benefits of Vocational Education



INTERPRETATION: From the data analysis regarding the benefits of vocational education from the view point of the students, it was found that 13.46% students found the benefits of vocational education to be very good, where as 12.53% students found the benefits of vocational education to be very poor. Majority of the students i.e. 31.46% found the benefits of vocational education to be average.

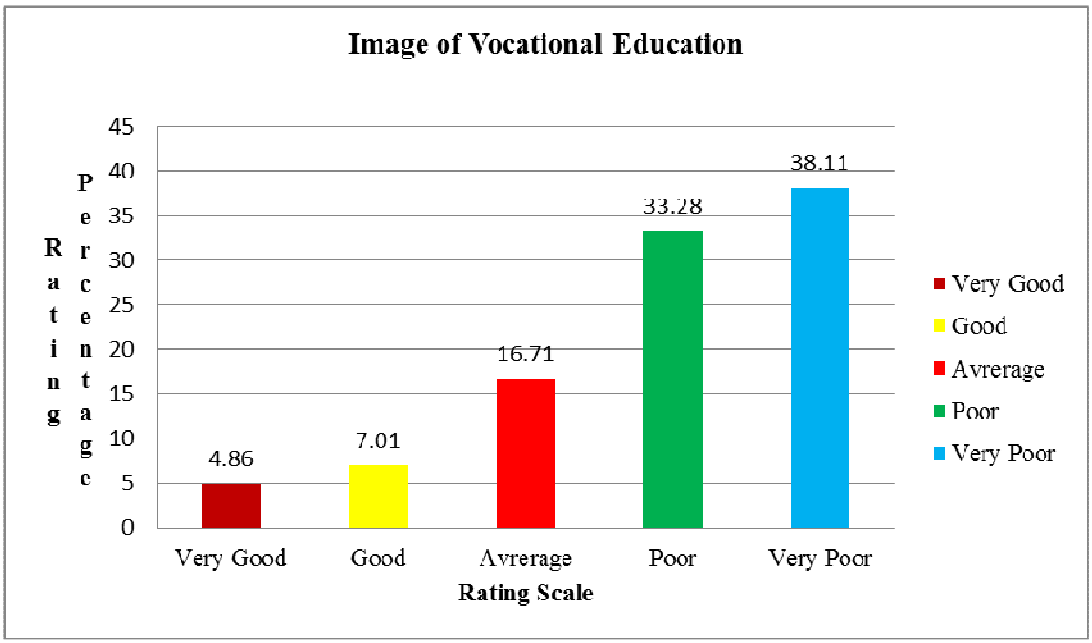
IMPLICATIONS: The data analysis shows that more than 31% students consider the benefits of vocational education and skill training as average, and 30% students consider the benefits as poor. This will have a highly negative impact as no student would want to take up vocational education or skill training. This in turn would lead to the depletion of skilled resources of the country and an alarming increase in the unemployment situation.

Table 30: Image of Vocational Education

Image of VE	Percentage %	Frequency
Very Good	4.86667	292
Good	7.01667	421
Average	16.7167	1003
Poor	33.2833	1997
Very Poor	38.1167	2287
Total	100%	6000(Cumulative Frequency)

Source: Primary Data

Graph 14: Image of Vocational Education



INTERPRETATION: From the data analysis regarding the image of vocational education in the Indian society, it was found that only 4.86% of the students considered it to be very good. Majority of the students i.e. 38.11% considered it to be very poor and 33.28% considered it to be poor.

IMPLICATIONS: The data analysis shows that more than 71% students considered the image of vocational education in the Indian society as poor. This will have a highly negative impact as no student would want to take up vocational education or skill training. This in turn would lead to the depletion of skilled resources of the country and an alarming increase in the unemployment situation. This situation will also lead to major discontent and low self-esteem in the existing skilled workforce, which will impact their overall well-being (physical, emotional and mental).

Table 31: Descriptive Results for Students

Descriptive Statistics	Very Good	Good	Average	Poor	Very Poor
Valid	14	14	14	14	14
Missing	0	0	0	0	0
Mean	1066	1363	1664	1119	787.6
Std. Deviation	978.5	959.1	1004	802.4	861.9
Variance	95745	91995	10086	64395	74295
Range	3473	2890	2984	2190	2710
Minimum	93	344	16	10	3
Maximum	3566	3234	3000	2200	2713

Table 32: Reliability Analysis

Scale Reliability Statistics

	McDonald's ω	Cronbach's α
Scale	-30.79	0.797

Note: Of the observations 14 were used, 0 were excluded list wise and, 14 were provided

Table 33: Item Reliability Statistics

	Chronbach's
Very Good	0.681
Good	0.685
Average	0.883
Poor	0.716
Very Poor	0.779

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the students of the ITI's and Polytechnics was 0.797, which is more than 0.70 and is considered as good. This means that the questionnaire related to the students was found to be reliable.

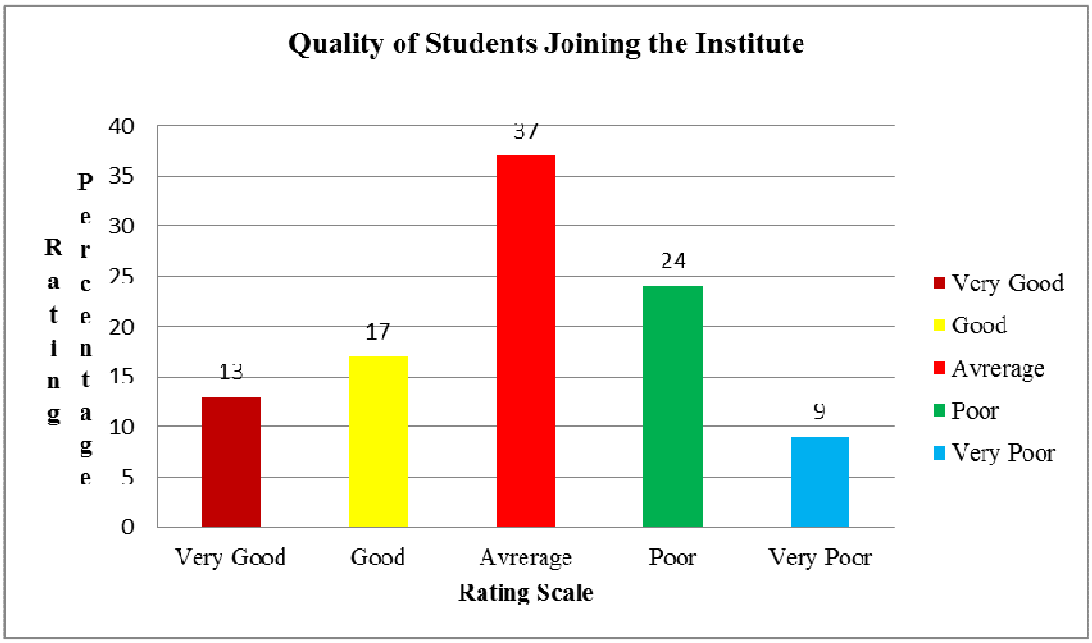
4.2. SECTION B: QUESTIONNARIE FOR THE TEACHERS

Table 34: Quality of Students Joining the Institute

Quality of Students	Percentage %	Frequency
Very Good	13	13
Good	17	17
Average	37	37
Poor	24	24
Very Poor	9	9
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 15: Quality of Students Joining the Institute



INTERPRETATION: From the data analysis regarding the quality of students joining the institute, from the view point of the teachers of the ITI's and Polytechnics, it was found that 13% teachers considered them to be of very good quality, where as 9% considered them to be of very poor quality. Majority of the teachers i.e. 37% considered the quality of the students joining the institute to be as average.

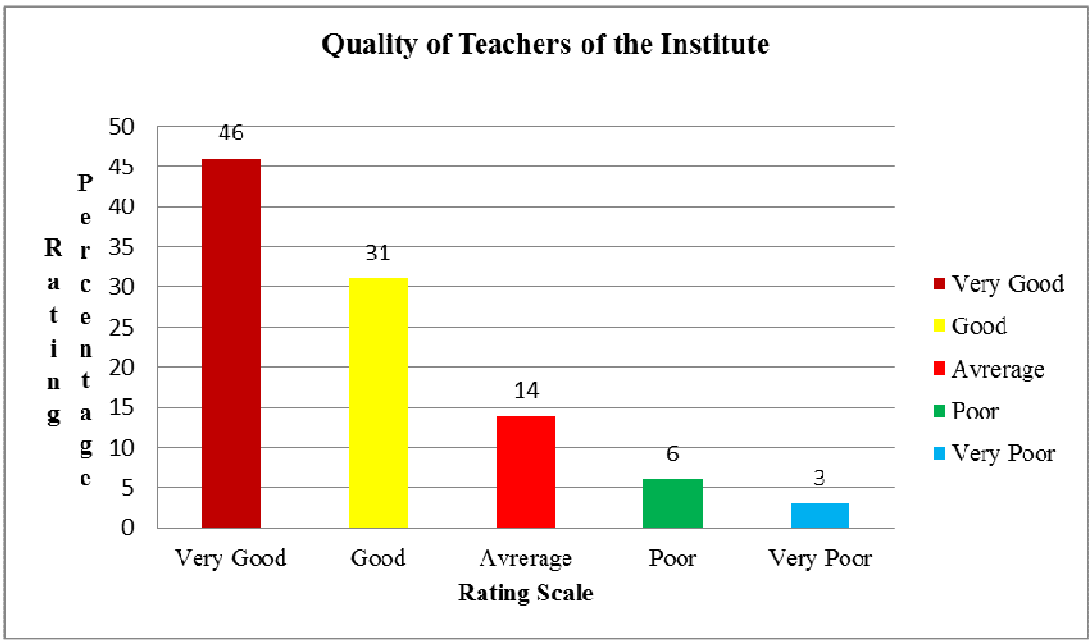
IMPLICATIONS: The data analysis shows that majority of the teachers i.e. 37% considered the quality of students joining the ITI's and Polytechnics as average and 24% considered them as of poor quality. This will have a negative impact as the major stream of employment generation is not even being considered as a career option by the meritorious students.

Table 35: Quality of Teachers of the Institute

Quality of Teachers	Percentage %	Frequency
Very Good	46	46
Good	31	31
Average	14	14
Poor	6	6
Very Poor	3	3
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 16: Quality of Teachers of the Institute



INTERPRETATION: From the data analysis regarding the quality of teachers of the institute, form the view point of the teachers of the institute, it was found that 3% considered the quality to be very poor, whereas 14% considered the quality to be average. Majority of the teachers i.e. 46% considered the quality to be very good.

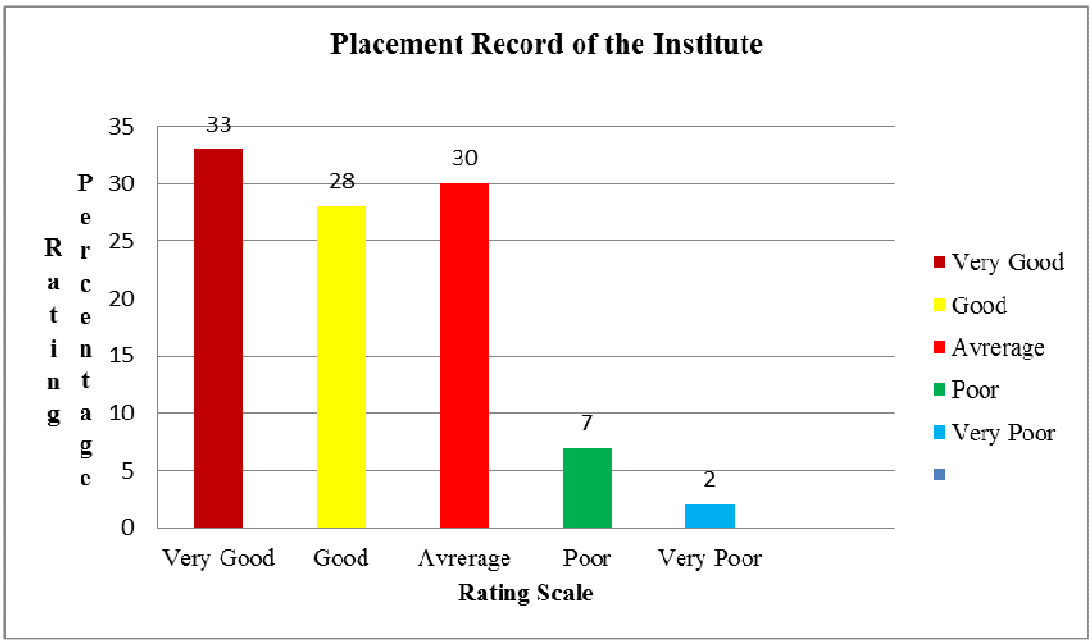
IMPLICATIONS: The data analysis shows that 77% teachers considered the quality of teachers of the ITI's and Polytechnics as good. This should have a positive impact on the learning ability of the students. This should also have a positive impact on the image of the institution and skill training in general.

Table 36: Placement Record of the Institute

Placement Record	Percentage %	Frequency
Very Good	33	33
Good	28	28
Average	30	30
Poor	7	7
Very Poor	2	2
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 17: Placement Record of the Institute



INTERPRETATION: From the data analysis regarding placement of the students of the institute from the view point of the teachers of the institute, it was found that only 2% considered the placement records to be very poor, 30% considered them as average, whereas majority of the teachers i.e. 33% considered the placement records to be very good.

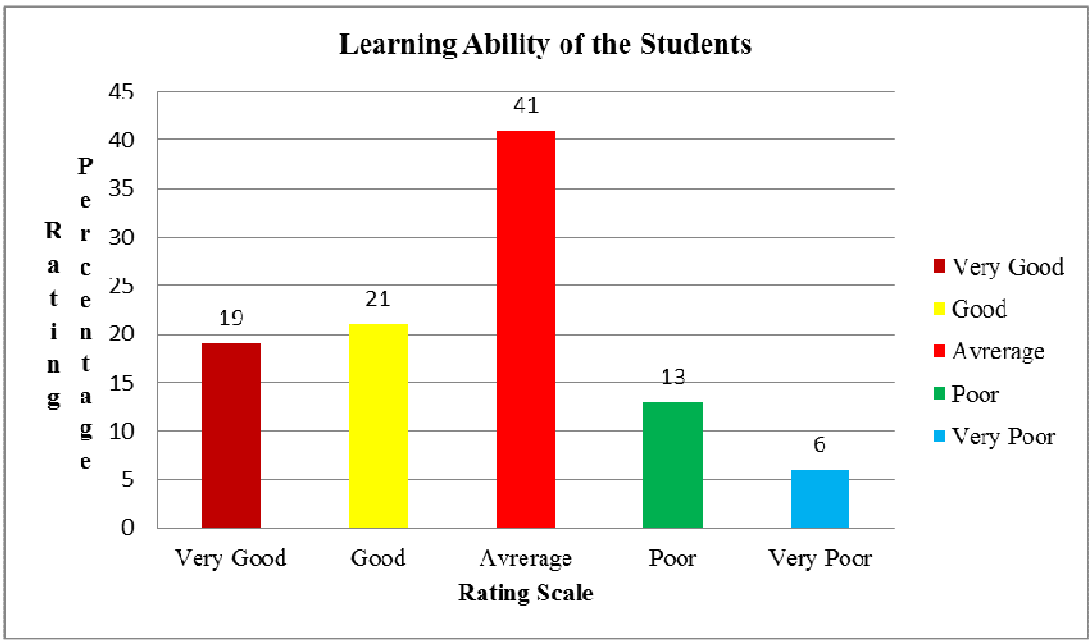
IMPLICATIONS: The data analysis shows that 61% teachers considered the placement record of the ITI's and Polytechnics as good. This should have a positive impact on the image of the institutes and help them get more admissions.

Table 37: Learning Ability of the Students

Learning Ability of Students	Percentage %	Frequency
Very Good	19	19
Good	21	21
Average	41	41
Poor	13	13
Very Poor	6	6
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 18: Learning Ability of the Students



INTERPRETATION: From the data analysis regarding the learning ability of the students of the institute, from the view point of the teachers of the institute, it was found that only 6% considered the learning ability of the students to be very poor, 19% considered it to be very good, whereas majority of the teachers i.e. 41% considered the learning ability of the students to be average.

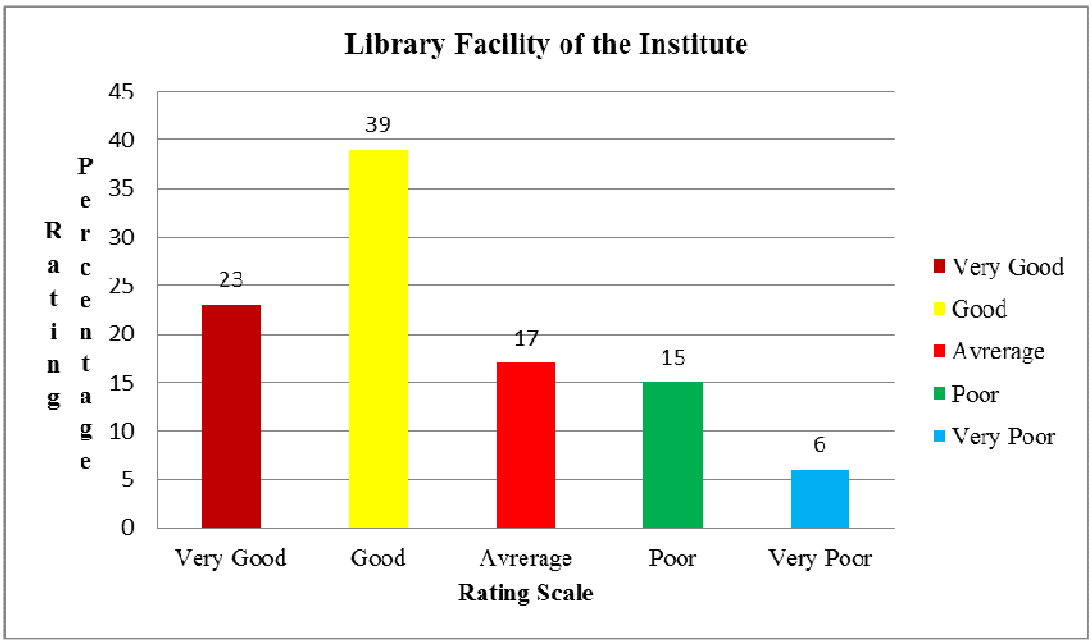
IMPLICATIONS: The data analysis shows that 41% teachers consider the learning ability of the students of the institute as average. This will have a negative impact on employment and performance in the industry. It will also lead to stress for the teachers, as they will be pressurised to give better results.

Table 38: Library Facility of the Institute

Library Facility	Percentage %	Frequency
Very Good	23	23
Good	39	39
Average	17	17
Poor	15	15
Very Poor	6	6
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 19: Library Facility of the Institute



INTERPRETATION: From the data analysis regarding the library facility of the institute, from the view point of the teachers of the institute, it was found that only 6% considered the library facility as very poor, 17% considered it as average, whereas majority of the teachers i.e. 39% considered it to be good.

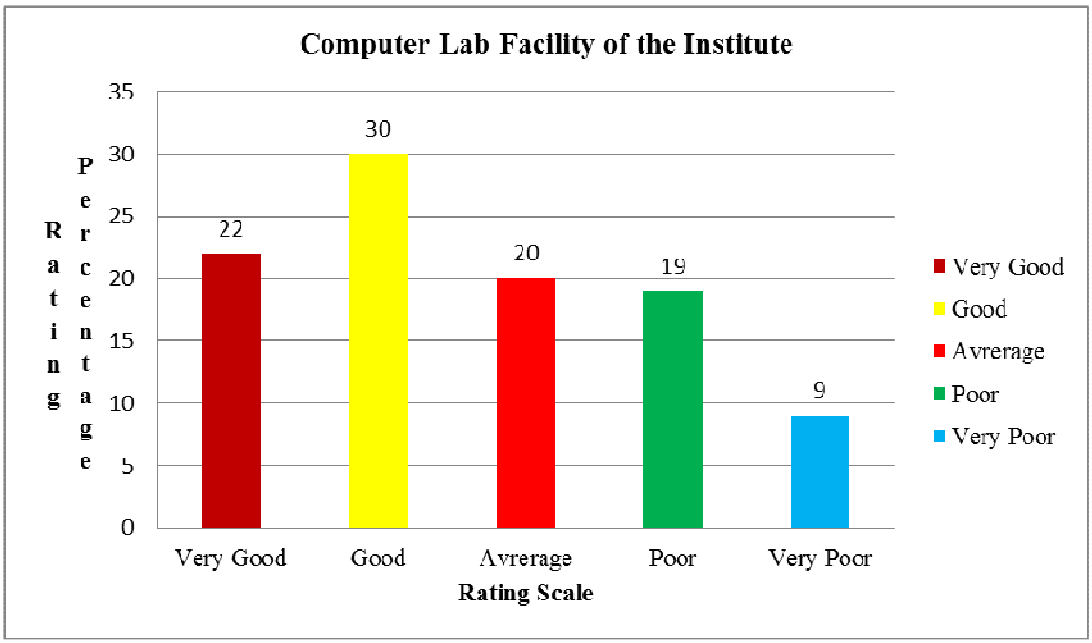
IMPLICATIONS: The data analysis shows that 62% teachers of the institutes consider the library facility of the institutes as good. This will have a very good impact as it will improve the quality of learning and research of the students.

Table 39: Computer Lab Facility of the Institute

Computer Lab Facility	Percentage %	Frequency
Very Good	22	22
Good	30	30
Average	20	20
Poor	19	19
Very Poor	9	9
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 20: Computer Lab Facility of the Institute



INTERPRETATION: From the data analysis regarding the computer lab facility of the institute, from the view point of the teachers of the institute, it was found that 9% considered the facility as very poor, 20% considered it as average, whereas majority of the teachers i.e. 30% considered the facility as good.

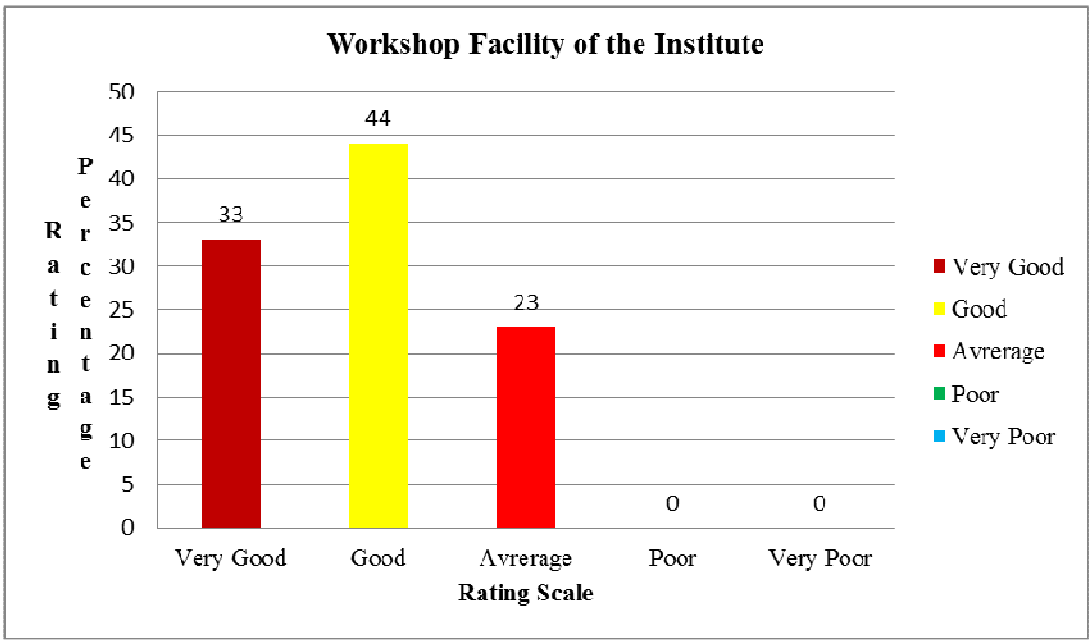
IMPLICATIONS: The data analysis shows that 55% teachers of the ITI's and Polytechnics considered the computer lab facility of their institutes as good. This will have a very good impact as it will improve the quality of learning and research of the students. It will also keep the students updated with the latest trends and requirements of the industry.

Table 40: Workshop Facility of the Institute

Workshop Facility	Percentage %	Frequency
Very Good	33	33
Good	44	44
Average	23	23
Poor	0	0
Very Poor	0	0
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 21: Workshop Facility of the Institute



INTERPRETATION: From the data analysis regarding workshop facility of the institute from the view point of the teachers of the institute it was found that majority of the teachers i.e. 44% considered the workshop facility as good and 33% found it very good.

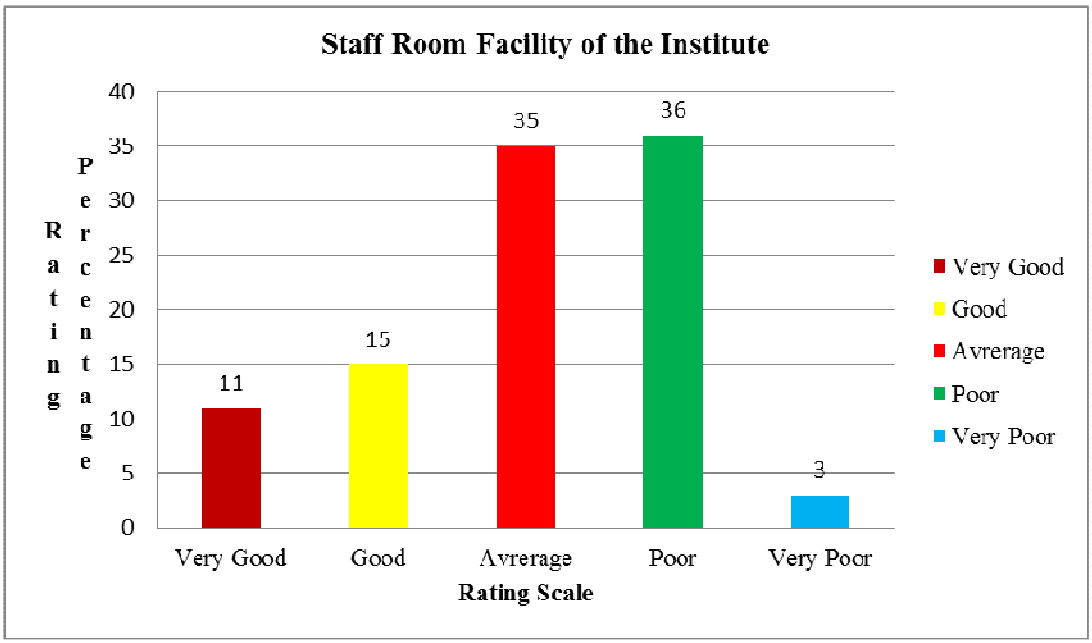
IMPLICATIONS: The data analysis shows that 77% teachers of the ITI's and Polytechnics considered the workshop facility of their institute as good. This will have a positive impact as the students will be industry ready.

Table 41: Staff Room Facility of the Institute

Staff Room Facility	Percentage %	Frequency
Very Good	11	11
Good	15	15
Average	35	35
Poor	36	36
Very Poor	3	3
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 22: Staff Room Facility of the Institute



INTERPRETATION: From the data analysis regarding the staff room facility of the institute from the view point of the teachers of the institute, it was found that 3% of the teachers considered the staff room facility of the institute as very poor, 11% considered it as very good, whereas majority of the teachers i.e. 36% considered the staff room facility of the institute as poor.

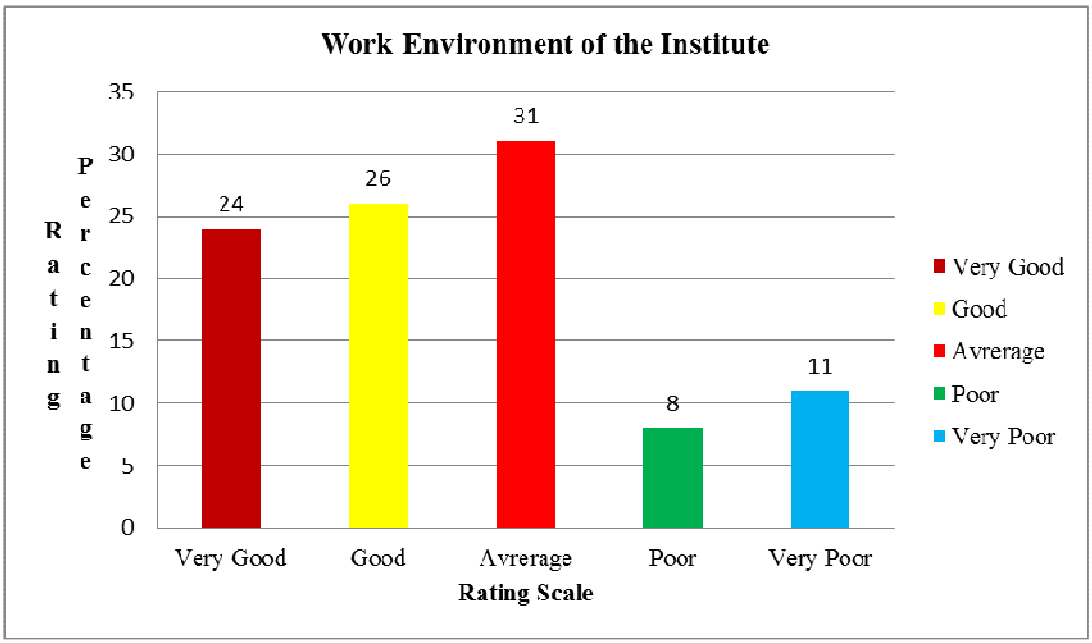
IMPLICATIONS: The data analysis shows that 39% teachers of the ITI's and Polytechnics considered the staff room facility of their institute as poor. This will have a negative impact as teachers will not be in a good frame of mind. This would affect their general well-being, leading to low performance levels.

Table 42: Work Environment of the Institute

Work Environment	Percentage %	Frequency
Very Good	24	24
Good	26	26
Average	31	31
Poor	8	8
Very Poor	11	11
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 23: Work Environment of the Institute



INTERPRETATION: From the data analysis regarding the work environment of the institute, from the view point of the teachers of the institute, it was found that 11% considered it as very poor, 26% considered it as good, whereas majority of the teachers i.e. 31% considered the work environment of the institute as average.

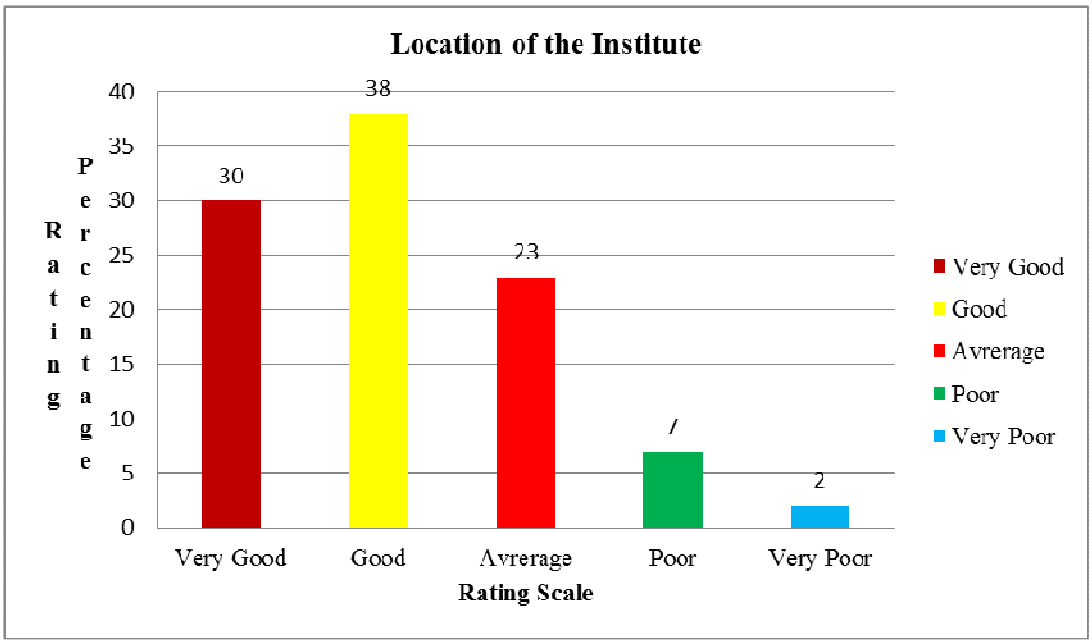
IMPLICATIONS: The data analysis shows that 50% teachers considered the work environment of their institute as good. This will have a good impact as teachers will be in a good frame of mind. This would affect their general well-being, leading to increase in performance.

Table 43: Location of the Institute

Location of Institute	Percentage %	Frequency
Very Good	30	30
Good	38	38
Average	23	23
Poor	7	7
Very Poor	2	2
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 24: Location of the Institute



INTERPRETATION: From the data analysis regarding the location of the institute from transport connectivity view point, it was found that 2% teachers of the institute considered the location of the institute as very poor, 30% considered it as very good, whereas majority of the teachers i.e. 38% considered it as good.

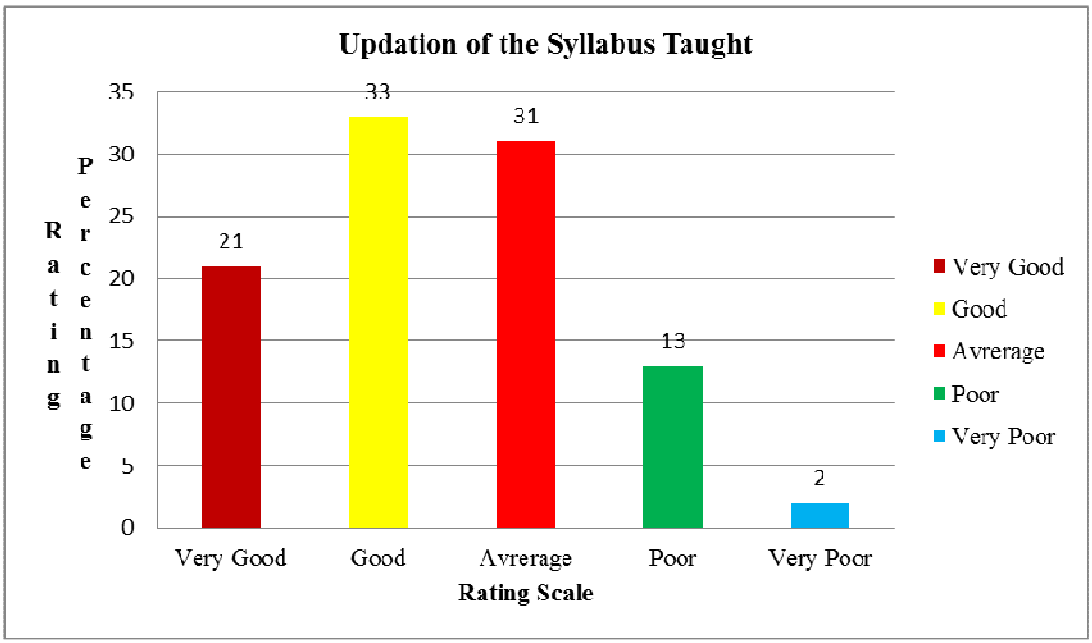
IMPLICATIONS: The data analysis shows that 68% teachers considered the location of their institute as good. This will have a positive impact on getting good faculty and retaining them. This will also positively impact the attendance and punctuality of the entire institution, leading to better productivity.

Table 44: Updation of the Syllabus Taught

Updation of The Syllabus	Percentage %	Frequency
Very Good	21	21
Good	33	33
Average	31	31
Poor	13	13
Very Poor	2	2
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 25: Updation of the Syllabus Taught



INTERPRETATION: From the data analysis regarding the updation of the syllabus taught in the institute, from the view point of the teachers, it was found that 2% considered it as very poor, 31% considered it as average, whereas majority of the teachers i.e. 33% considered it as good.

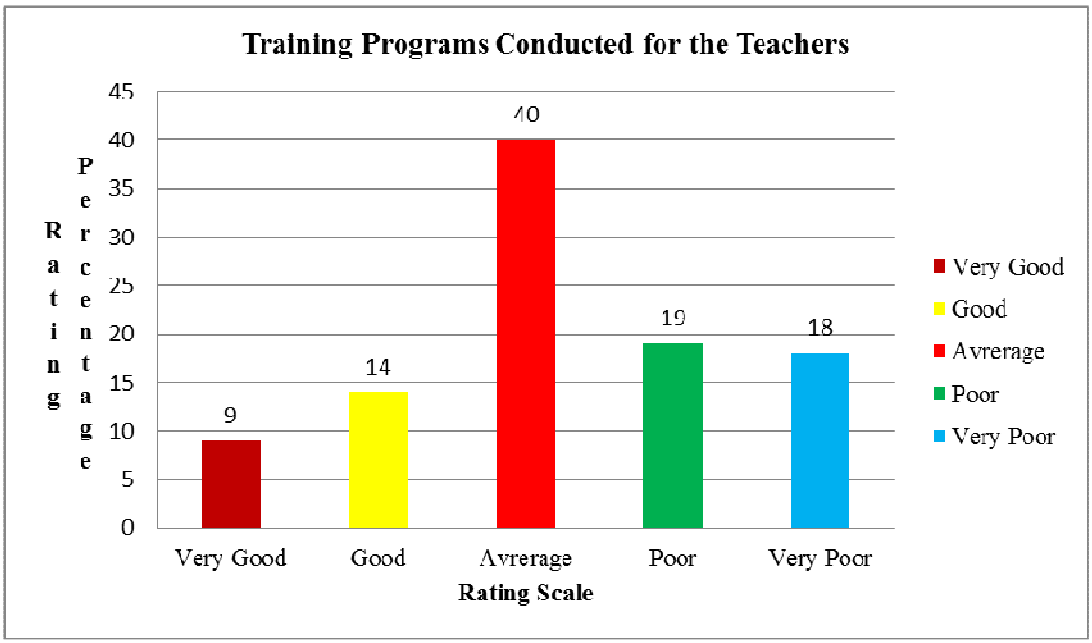
IMPLICATIONS: The data analysis shows that 54% teachers considered that the updation of the syllabus taught in their institute was good. This will have a positive impact as the students will be upto date with the current trends in technology, industry and research. This will highly enhance the employability of the students.

Table 45: Training Programs Conducted for the Teachers

Training Prog. for Teachers	Percentage %	Frequency
Very Good	9	9
Good	14	14
Average	40	40
Poor	19	19
Very Poor	18	18
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 26: Training Programs Conducted for the Teachers



INTERPRETATION: From the data analysis regarding the training programs conducted for the teachers by the institute, it was found that 9% teachers considered them as very good, 18% considered them as very poor, whereas majority of the teachers i.e. 40% considered them as average.

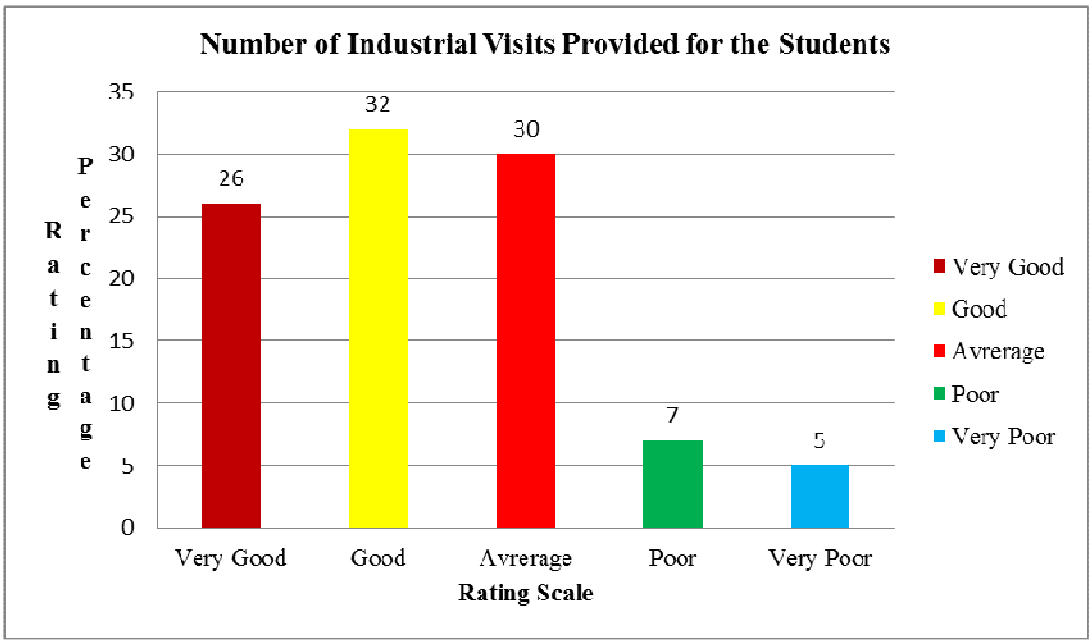
IMPLICATIONS: The data analysis shows that 40% teachers considered the training programs conducted for them by their institute as average. This will have a negative impact as the faculty which is not updated with the current trends of the industry, will not be able to train the students as per the industry requirements.

Table 46: Number of Industrial Visits Provided for the Students

Industrial Visits for Students	Percentage %	Frequency
Very Good	26	26
Good	32	32
Average	30	30
Poor	7	7
Very Poor	5	5
Total	100%	100 (Cumulative Frequency)

Source: Primary Data

Graph 27: Number of Industrial Visits Provided for the Students



INTERPRETATION: From the data analysis regarding the number of industrial visits provided for the students by the institute, it was found that 5% teachers considered them as very poor, 30% considered them as average, whereas majority of the teachers i.e. 32% considered them as good.

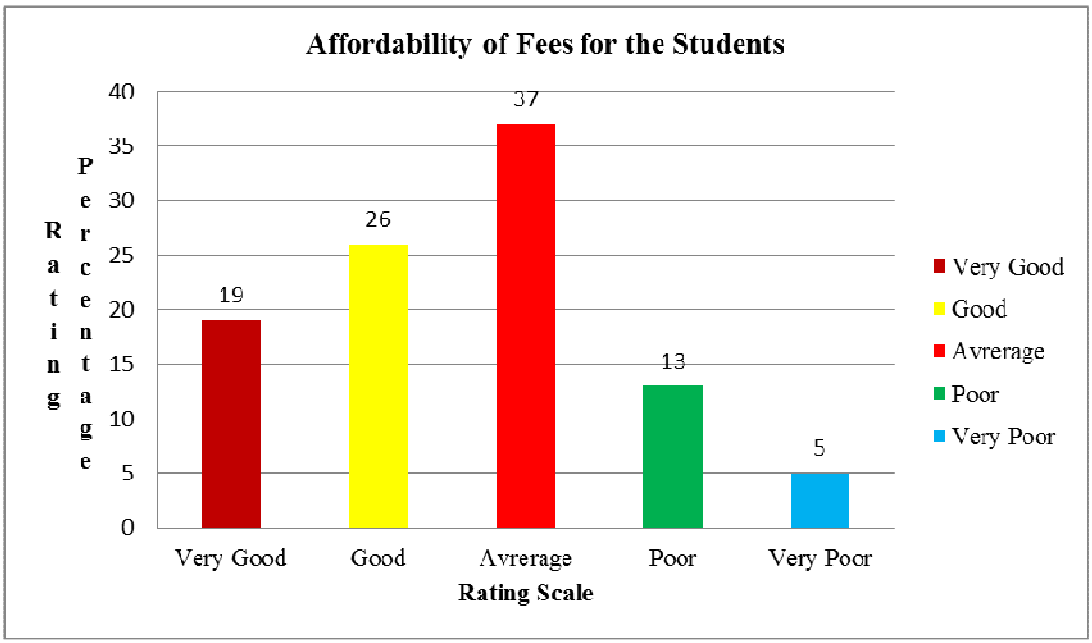
IMPLICATIONS: The data analysis shows that 58% teachers considered the number of industrial visits provided for the students of their institute as good. This will have a highly positive impact as the students will be industry ready.

Table 47: Affordability of Fees for the Students

Affordability of fees	Percentage %	Frequency
Very Good	19	19
Good	26	26
Average	37	37
Poor	13	13
Very Poor	5	5
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 28: Affordability of Fees for the Students



INTERPRETATION: From the data analysis regarding the affordability of the fees for the students from the view point of the teachers, it was found that 5% teachers considered it as very poor, 26% considered it as good, whereas majority of the teachers i.e. 37% considered the affordability of the fees of the institute for the students as average.

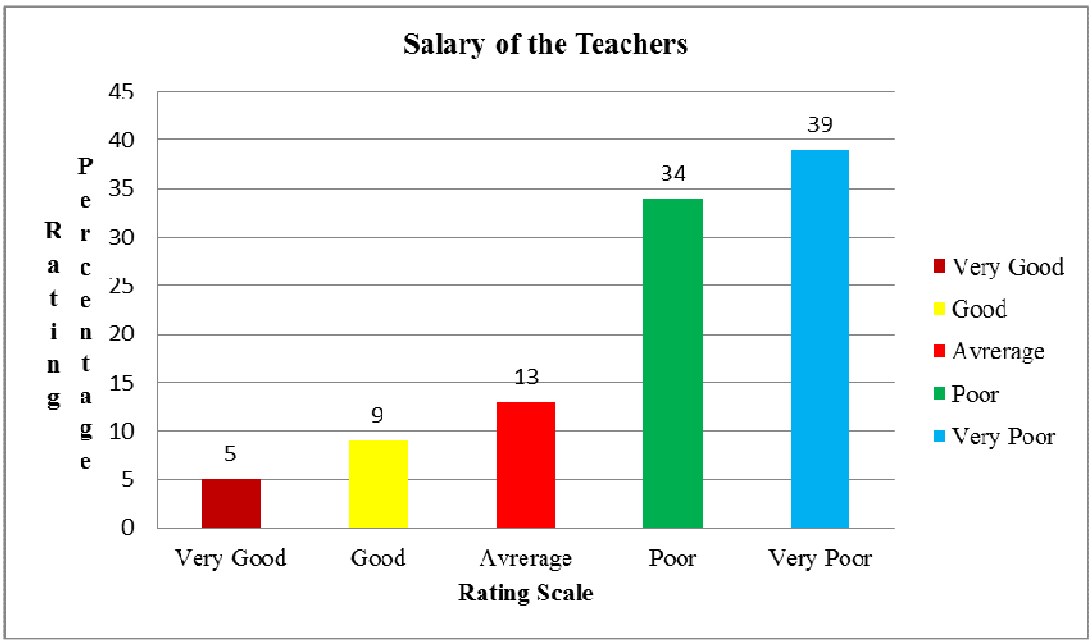
IMPLICATIONS: The data analysis shows that 37% teachers of the institute considered the affordability of the fees of the institute for the students as average. This will have a positive impact as a larger percentage of population can seek admission in these institutes.

Table 48: Salary of the Teachers

Salary of Teachers	Percentage %	Frequency
Very Good	5	5
Good	9	9
Average	13	13
Poor	34	34
Very Poor	39	39
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 29: Salary of the Teachers



INTERPRETATION: From the data analysis regarding the salary paid to the teachers of the institute, it was forum that 5% teachers considered the salary paid to them as very good, 34% considered it as poor, whereas majority of the teachers i.e. 39% considered the salary paid to them as very poor.

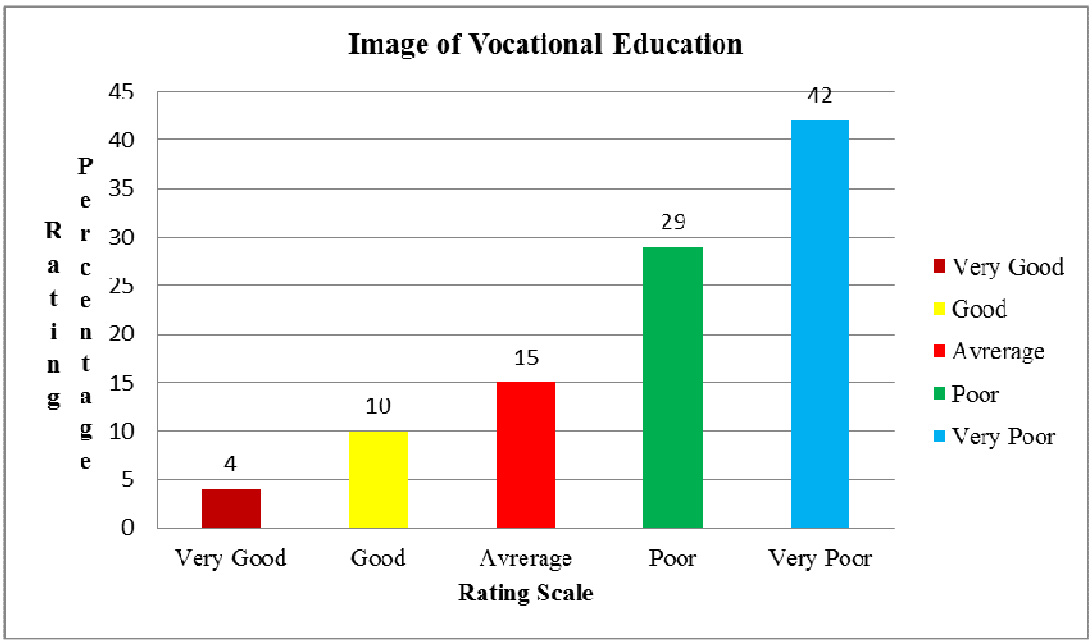
IMPLICATIONS: The data analysis shows that 73% teachers of the institutes considered the salary paid to them as poor. This will have a highly negative impact as the teachers will be highly disappointed and demotivated to perform.

Table 49: Image of Vocational Education

Image of VE	Percentage %	Frequency
Very Good	4	4
Good	10	10
Average	15	15
Poor	29	29
Very Poor	42	42
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 30: Image of Vocational Education



INTERPRETATION: From the data analysis regarding the image of vocational education from the view point of the teachers, it was found that 4% teachers considered it as very good, 29% considered it as poor, whereas majority of the teachers i.e. 42% considered it as very poor.

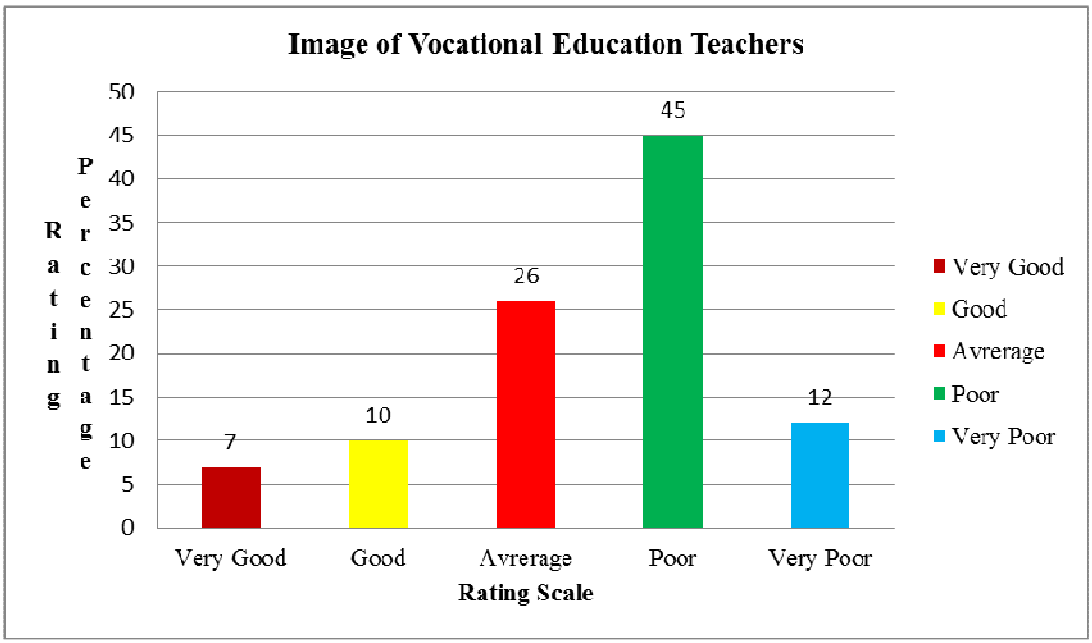
IMPLICATIONS: The data analysis shows that 71% teachers considered the image of vocational education and skill training in the Indian society as poor. This will have a highly negative impact as no student would want to take up vocational education or skill training. This in turn would lead to the depletion of skilled resources of the country and an alarming increase in the unemployment situation. This situation will also lead to major discontent and low self-esteem in the existing skilled workforce, which will impact their overall well-being (physical, emotional and mental).

Table 50: Image of Vocational Education Teachers

Image of VE Teachers	Percentage %	Frequency
Very Good	7	7
Good	10	10
Average	26	26
Poor	45	45
Very Poor	12	12
Total	100%	100(Cumulative Frequency)

Source: Primary Data

Graph 31: Image of Vocational Education Teachers



INTERPRETATION: From the data analysis regarding the image of vocational education teachers in the Indian society from the view point of the teachers, it was found that 7% considered it as very good, 26% considered it as average, whereas majority of the teachers i.e. 45% considered it as poor.

IMPLICATIONS: The data analysis shows that 57% teachers considered the image of vocational education teachers in the Indian society as poor. This will have a highly negative impact as nobody would want to join this field. The existing people in this field would be highly demotivated and this would also lead to greater unemployment levels.

Table 51: Descriptive Results for Faculty

Descriptive Statistics	Very Good	Good	Average	Poor	Very Poor
Valid	17	17	17	17	17
Missing	0	0	0	0	0
Mean	20.29	24.88	17.35	27.24	10.24
Std. Deviation	11.41	10.95	12.44	9.25	12.27
Variance	130.1	119.9	154.7	85.57	150.4
Minimum	4	9	0	13	0
Maximum	46	44	45	41	42

Table 52: Reliability Analysis
Scale Reliability Statistics

			95% Confidence Interval	
	McDonald's ω	Cronbach's α	Lower	Upper
Scale	-24.35	0.825	0.647	0.928

Note: Of the observations, 17 were used, 0 were excluded list wise and, 17 were provided

Table 53: Item Reliability Statistics

	Mean	Standard Deviation	Cronbach's α
Very Good	20.29	11.406	0.748
Good	24.88	10.948	0.745
Average	27.24	9.250	0.913
Poor	17.35	12.440	0.738
Very Poor	10.24	12.265	0.740

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the teachers of the ITI's and Polytechnics was equal to 0.825, which is more than 0.7 and considered as good, It means that the questionnaire related to the teachers of the institutes was reliable.

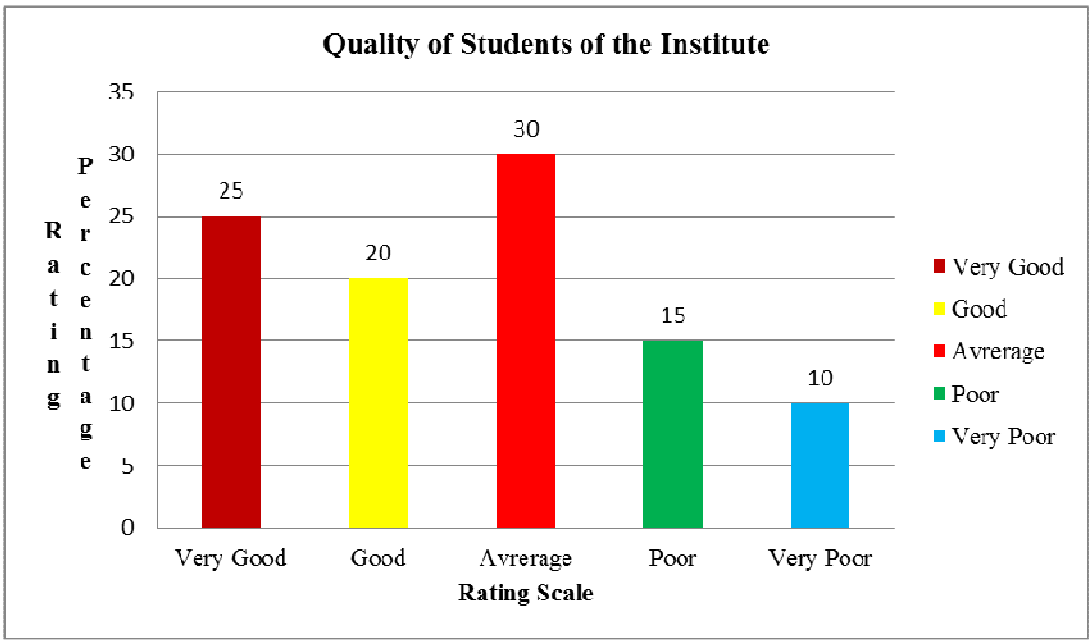
4.3. SECTION C: QUESTIONNARIE FOR THE PRINCIPALS

Table 54: Quality of Students of the Institute

Quality of Students	Percentage %	Frequency
Very Good	25	5
Good	20	4
Average	30	6
Poor	15	3
Very Poor	10	2
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 32: Quality of Students of the Institute



INTERPRETATION: From the data analysis regarding the quality f students of the institute, from the view point of the principal of the institute it was found that, 10% considered the quality as very poor, 25% considered the quality as very good, whereas majority of the principals i.e. 30% considered the quality as average.

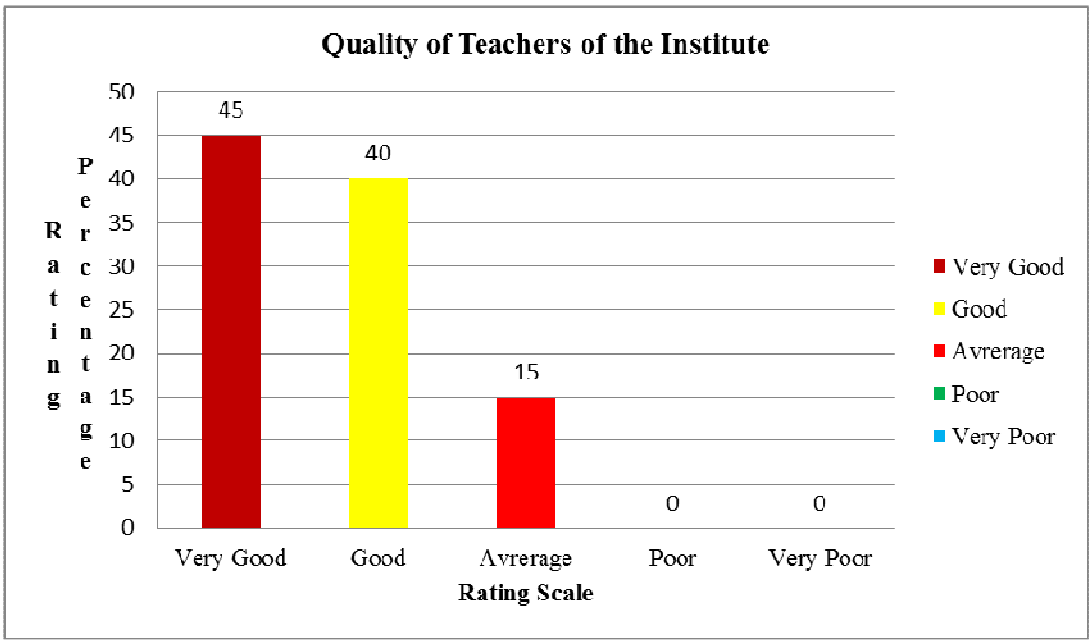
IMPLICATIONS: The data analysis shows that 45% principals of ITI's and Polytechnics considered the quality of students of their institute as good. This will have a positive impact on the image, performance and placement record of the institute.

Table 55: Quality of Teachers of the Institute

Quality of Teachers	Percentage %	Frequency
Very Good	45	9
Good	40	8
Average	15	3
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 33: Quality of Teachers of the Institute



INTERPRETATION: From the data analysis regarding the quality of teachers of the institute, from the view point of the principal of the institute it was found that, 15% considered the quality as average, 40% considered the quality as good, whereas majority of the principals considered the quality as very good.

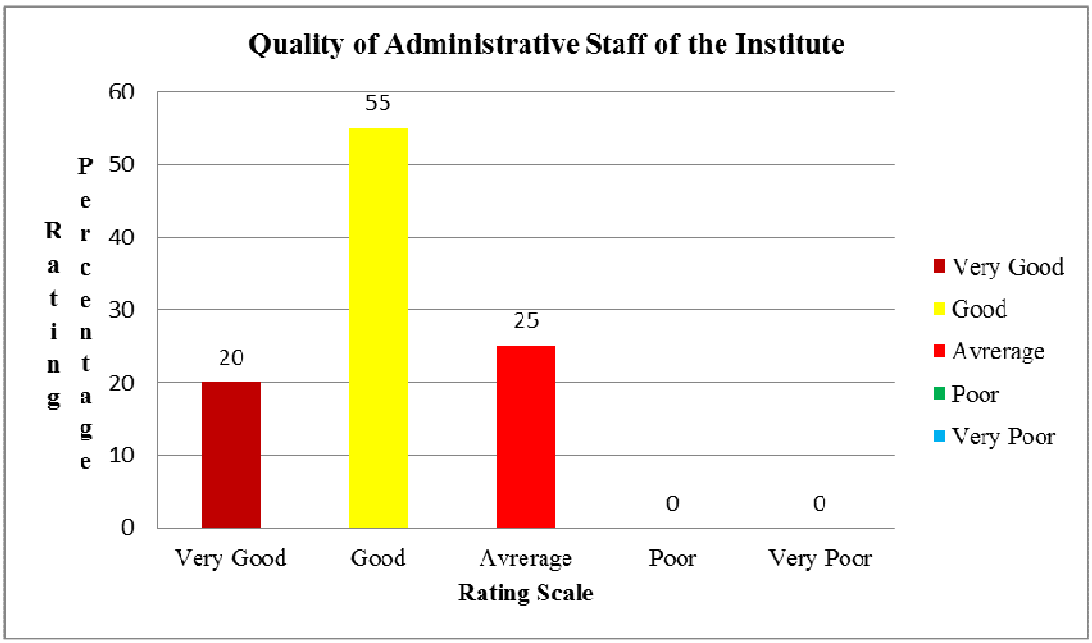
IMPLICATIONS: The data analysis shows that 85% principals of the ITI's and Polytechnics considered the quality of teachers of their institute as good. This should have a positive impact on the learning ability of the students. This should also have a positive impact on the image of the institution and skill training in general.

Table 56: Quality of Administrative Staff of the Institute

Quality of Admin. Staff	Percentage %	Frequency
Very Good	20	4
Good	55	11
Average	25	5
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 34: Quality of Administrative Staff of the Institute



INTERPRETATION: From the data analysis regarding the quality of the administrative staff of the institute, from the view point of the principal of the institute, it was found that, 25% considered the quality as average, 20% considered it as very good, whereas majority of the principals i.e. 55% considered the quality as good.

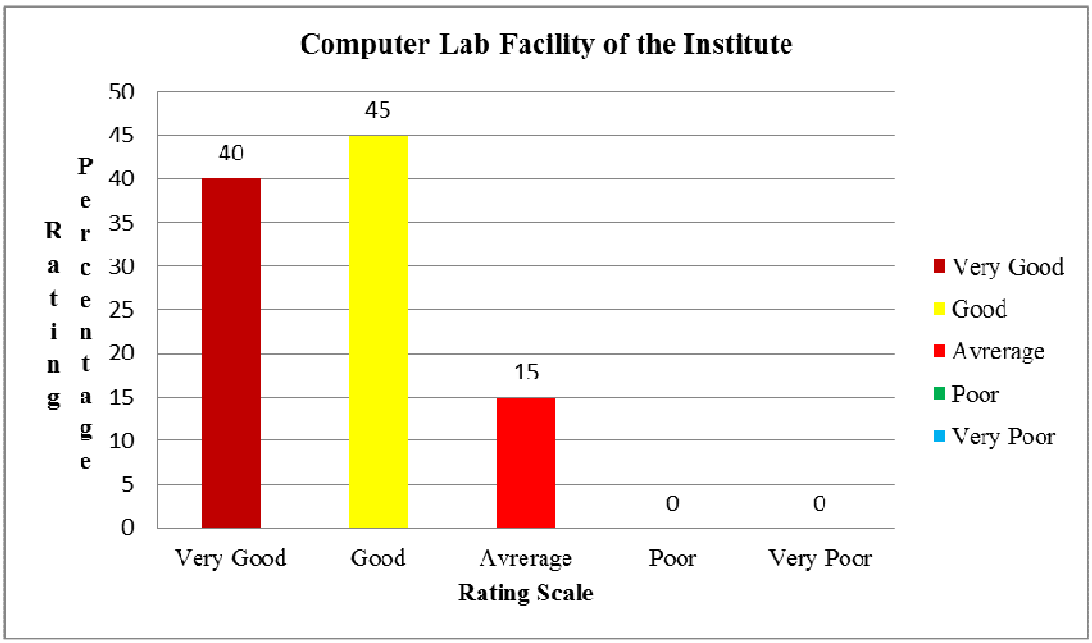
IMPLICATIONS: The data analysis shows that 75% principals of ITI's and Polytechnics considered the quality of the administrative staff of their institute as good. This will have a highly positive impact as it leads to a smooth functioning of the institute. This will lead to a better experience for the faculty and students.

Table 57: Computer Lab Facility of the Institute

Computer Lab Facility	Percentage %	Frequency
Very Good	40	8
Good	45	9
Average	15	3
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 35: Computer Lab Facility of the Institute



INTERPRETATION: From the data analysis regarding the computer lab facility of the institute, from the view point of the principal of the institute it was found that, 15% considered the quality as average, 40% considered it as very good, whereas majority of the principals i.e. 45% considered the quality as good.

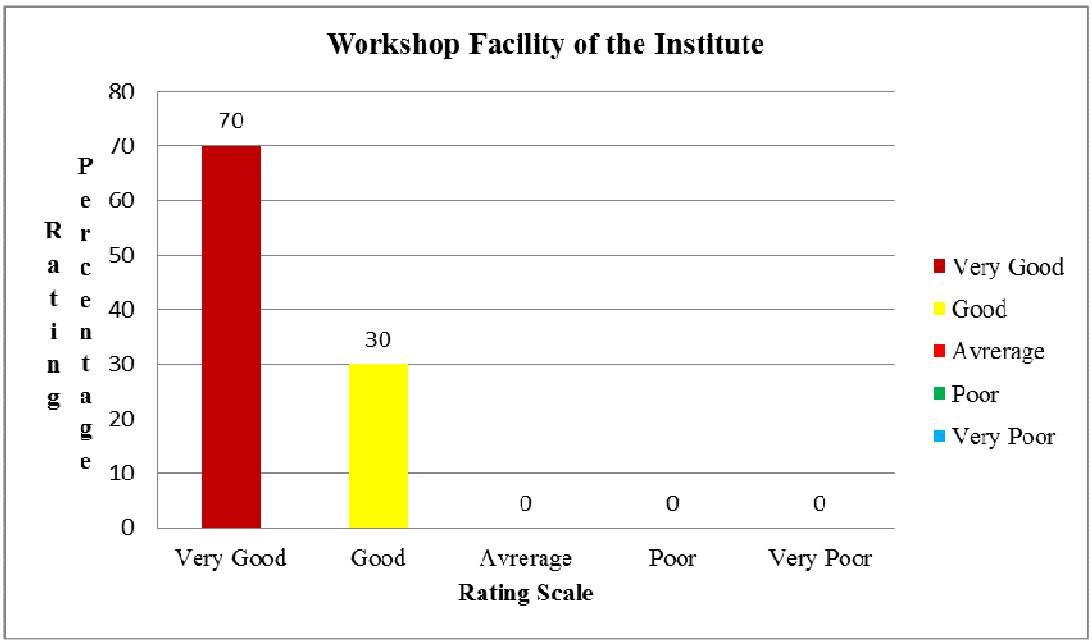
IMPLICATIONS: The data analysis shows that 85% principals of the ITI's and Polytechnics considered the computer lab facility of their institute as good. This will have a very good impact as it will improve the quality of learning and research of the students. It will also keep the students updated with the latest trends and requirements of the industry.

Table 58: Workshop Facility of the Institute

Workshop Facility	Percentage %	Frequency
Very Good	70	14
Good	30	6
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 36: Workshop Facility of the Institute



INTERPRETATION: From the data analysis regarding the workshop facility of the institute, from the view point of the principal of the institute it was found that, 30% considered it as good, whereas majority of the principals i.e. 70% considered it as very good.

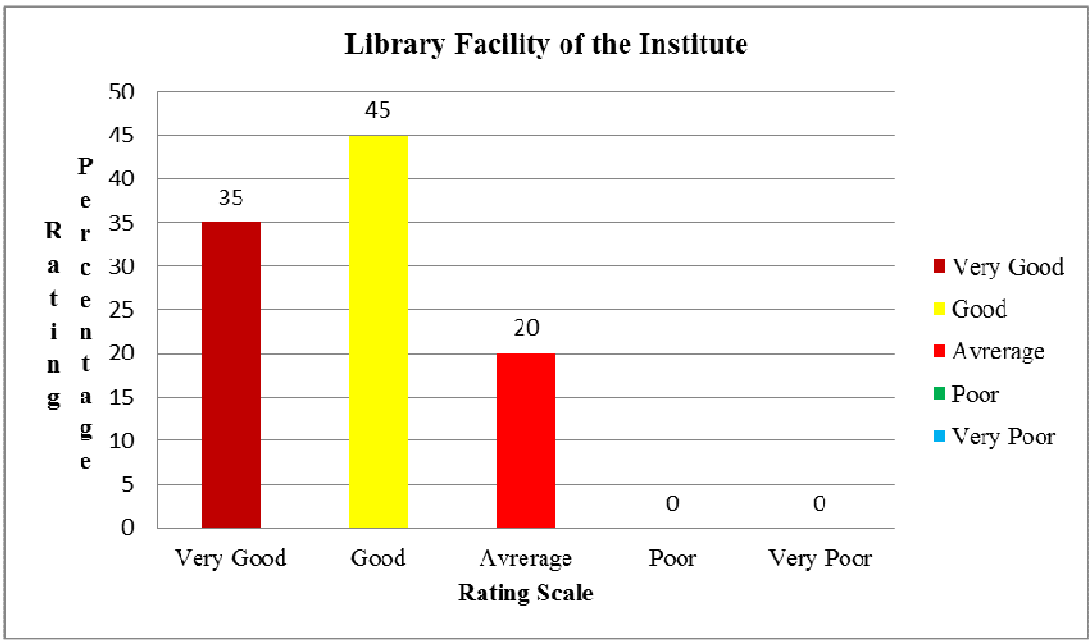
IMPLICATIONS: The data analysis shows that 100% principals of the ITI's and Polytechnics considered the workshop facility of their institute as good. This will have a positive impact as the students will be industry ready.

Table 59: Library Facility of the Institute

Library Facility	Percentage %	Frequency
Very Good	35	7
Good	45	9
Average	20	4
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 37: Library Facility of the Institute



INTERPRETATION: From the data analysis regarding the library facility of the institute, from the view point of the principal of the institute it was fund that, 20% considered the library facility as average, 35% considered it as very good, whereas majority of the principals i.e. 45% considered it as good.

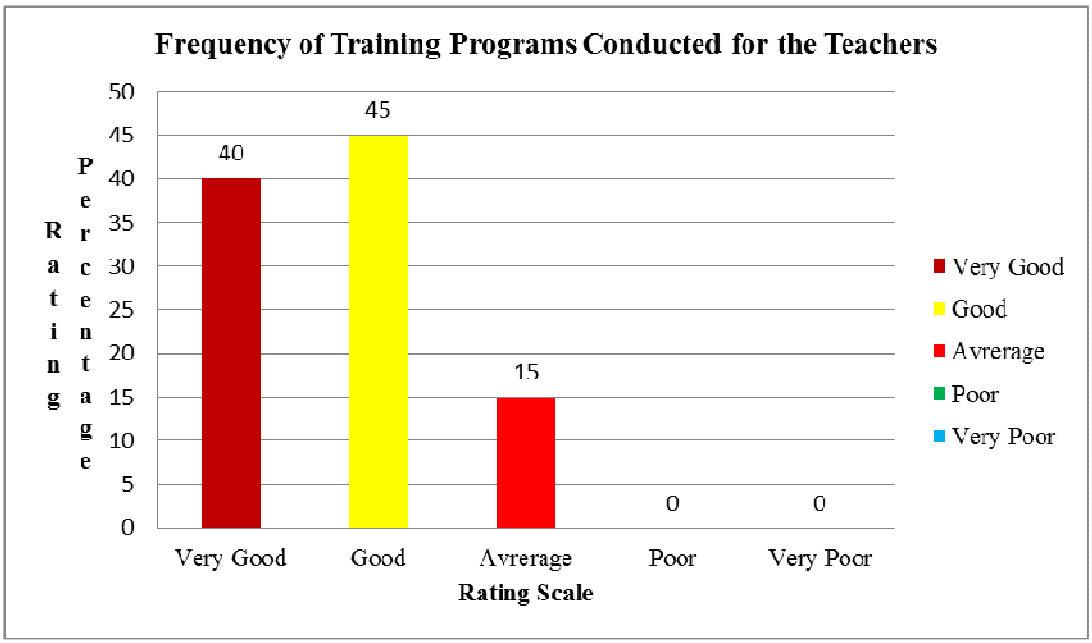
IMPLICATIONS: The data analysis shows that 80% principals of the ITI's and Polytechnics considered the library facility of their institute as good. This will have a very good impact as it will improve the quality of learning and research of the students.

Table 60: Frequency of Training Programs Conducted for the Teachers

Training Prog. for Teachers	Percentage %	Frequency
Very Good	40	8
Good	45	9
Average	15	3
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 38: Frequency of Training Programs Conducted for the Teachers



INTEPRETATION: From the data analysis regarding the frequency of training programs conducted for the teachers, it was found that 15% principals considered the frequency as average, 40% considered it as very good, whereas majority of the principals i.e. 45% considered the frequency as good.

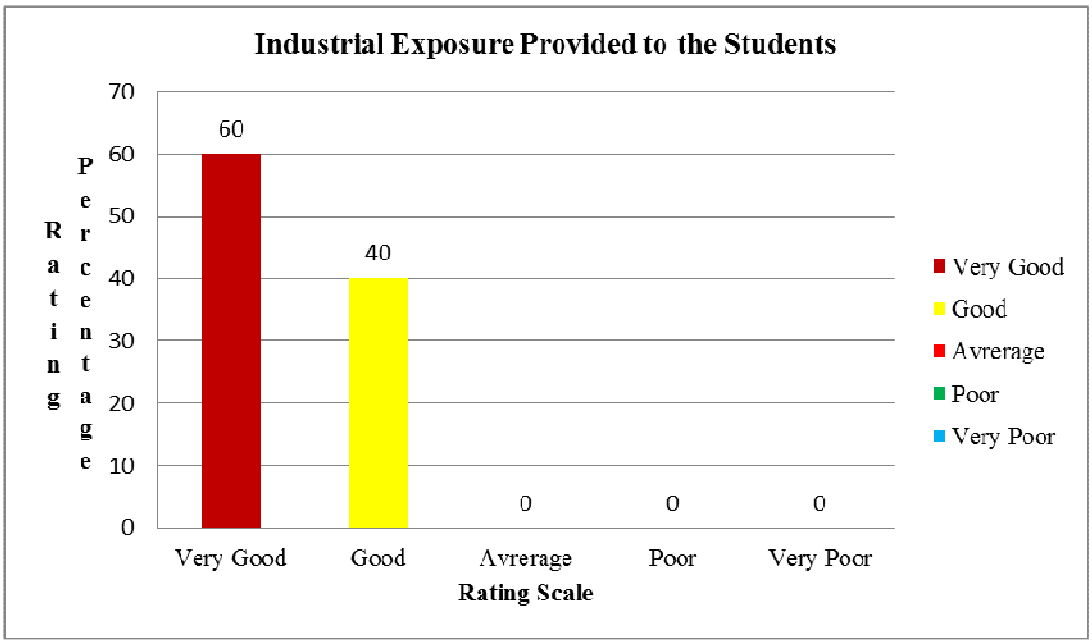
IMPLICATIONS: The data analysis shows that 85% principals of ITI's and Polytechnics considered the frequency of training programs conducted for the teachers of their institute as good. This will have a highly positive impact as, the teachers who are updated with the latest trends and requirements of the industry will be able to train the students better.

Table 61: Industrial Exposure Provided to the Students

Students Industrial Exposure	Percentage %	Frequency
Very Good	60	12
Good	40	8
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 39: Industrial Exposure Provided to the Students



INTERPRETATION: From the data analysis regarding the industrial exposure provided to the students of the institute, from the view point of the principals of the institutes it was found that, 40% considered it as good, whereas majority of the principals i.e. 60% considered it as very good.

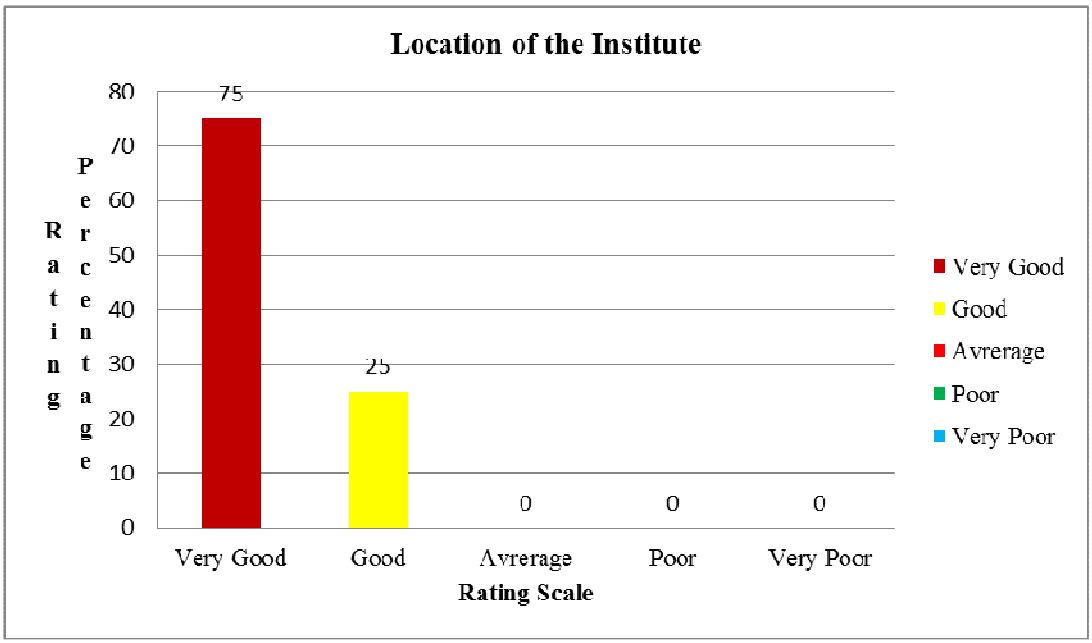
IMPLICATIONS: The data analysis shows that 100% principals of the ITI's and Polytechnics considered the industrial exposure provided to the students of their institute as good. This will have a highly positive impact as the students of the institute will be industry ready. This will enhance the level of employment of the students and the placement record of the institute.

Table 62: Location of the Institute

Location of Institute	Percentage %	Frequency
Very Good	75	15
Good	25	5
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 40: Location of the Institute



INTERPRETATION: From the data analysis regarding the location of the institute from transport connectivity view point, it was found that 25% principals found it to be good, whereas the majority of the principals i.e. 75% found it to be very good.

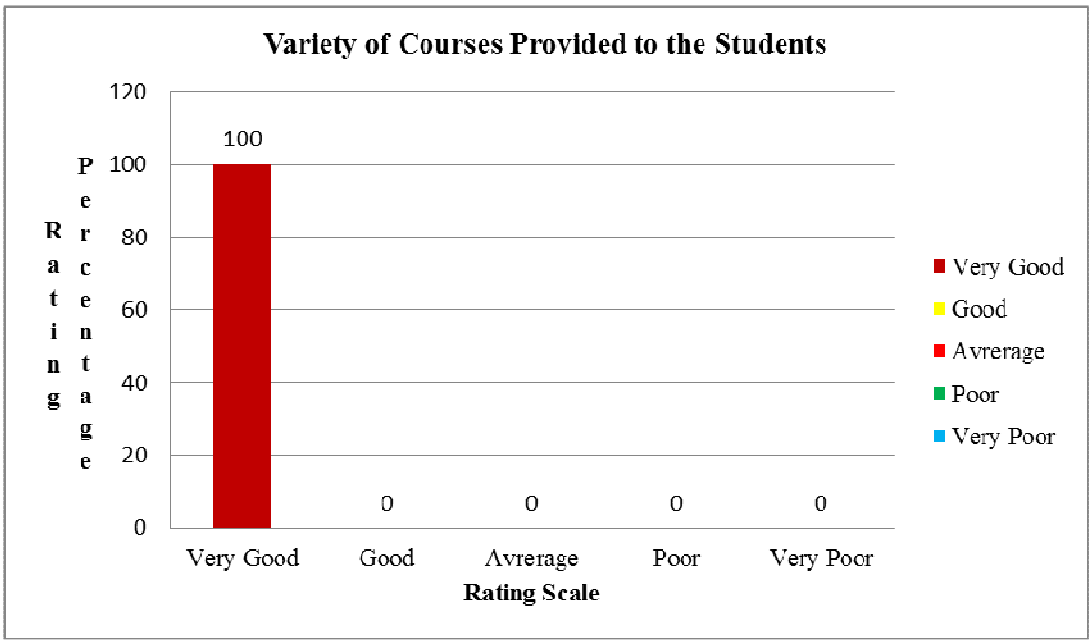
IMPLICATIONS: The data analysis shows that 100% principals of the ITI''s and polytechnics considered the location of their institute as good. This will have a positive impact on getting good number of admissions and faculty and also in retaining them. This will also positively impact the attendance and punctuality of the entire institution, leading to better productivity.

Table 63: Variety of Courses Provided to the Students

Variety of Courses Provided	Percentage %	Frequency
Very Good	100	20
Good	0	0
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 41: Variety of Courses Provided to the Students



INTERPRETATION: From the data analysis regarding the variety of courses provided by the institute, from the view point of the principals of the institutes it was found that, all of them i.e. 100% considered it as very good.

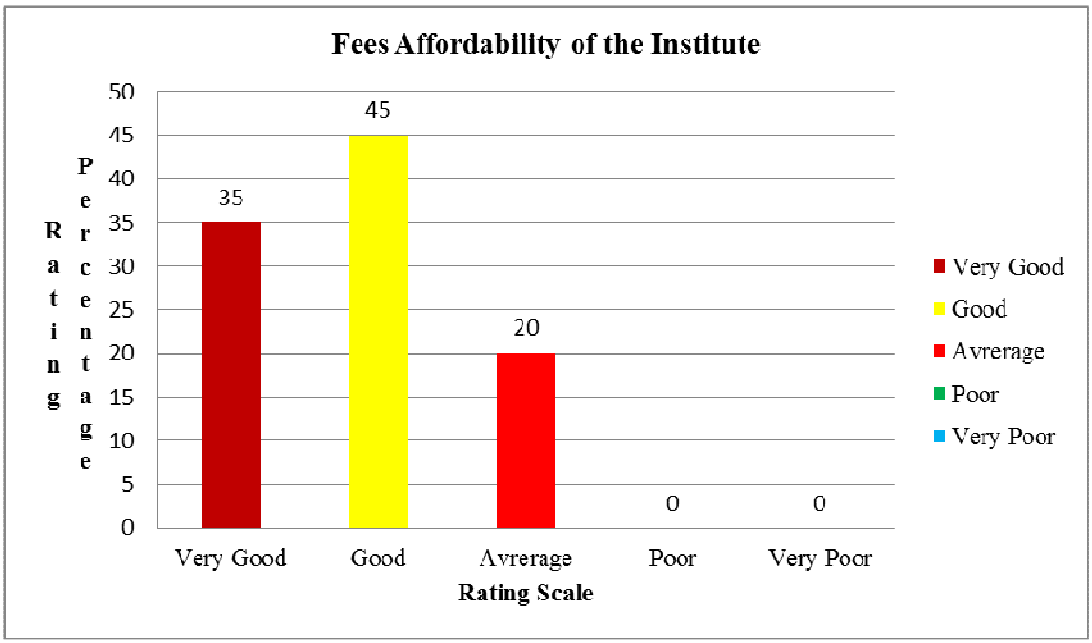
IMPLICATIONS: The data analysis shows that 100% principals of the ITI's and Polytechnics considered the variety of courses provided by their institute as very good. This will have a highly positive impact on the students as it helps them to find a better fit according to their aptitude. It is likely to lead to better learning, performance and employability.

Table 64: Fees Affordability of the Institute

Fees Affordability	Percentage %	Frequency
Very Good	35	7
Good	45	9
Average	20	4
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 42: Fees Affordability of the Institute



INTERPRETATION: From the data analysis regarding the affordability of the fees for the various courses provided by the institute, it was found that 20% principals considered it as average, 35% considered it as very good, whereas majority of the principals i.e. 45% considered it as good.

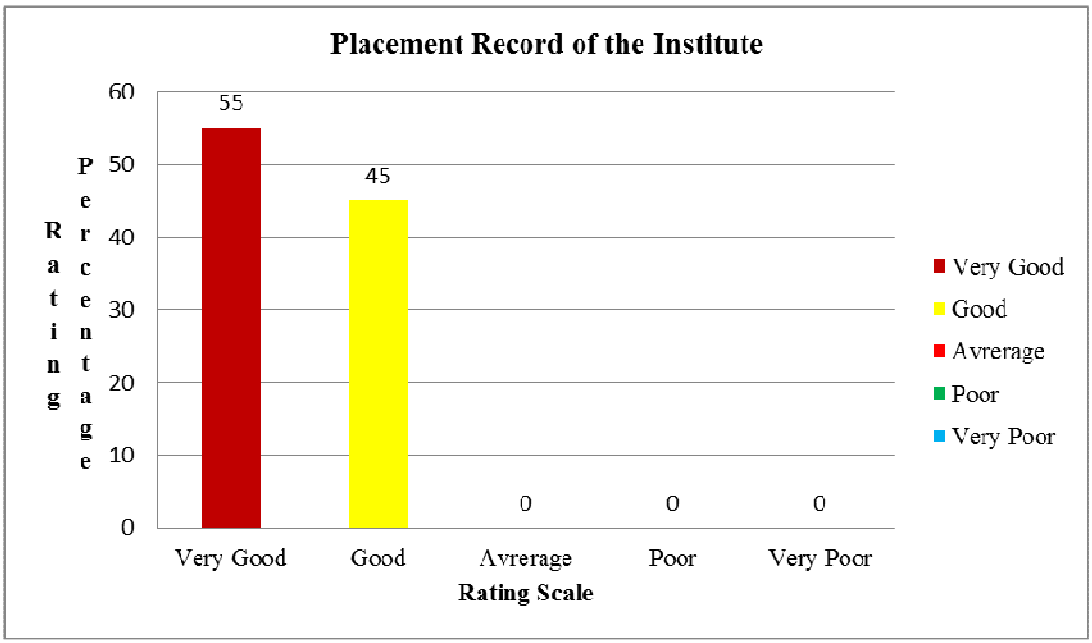
IMPLICATIONS: The data analysis shows that 80% principals of ITI's and Polytechnics considered the affordability of the fees charged by their institute as good. This will have a highly positive impact as the students will not shy away from seeking admission in their institute.

Table 65: Placement Record of the Institute

Placement Record	Percentage %	Frequency
Very Good	55	11
Good	45	9
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 43: Placement Record of the Institute



INTERPRETATION: From the data analysis regarding the placement record of the students of the institute, it was found that 45% principals considered it as good, whereas majority of the principals i.e. 55% considered it as very good.

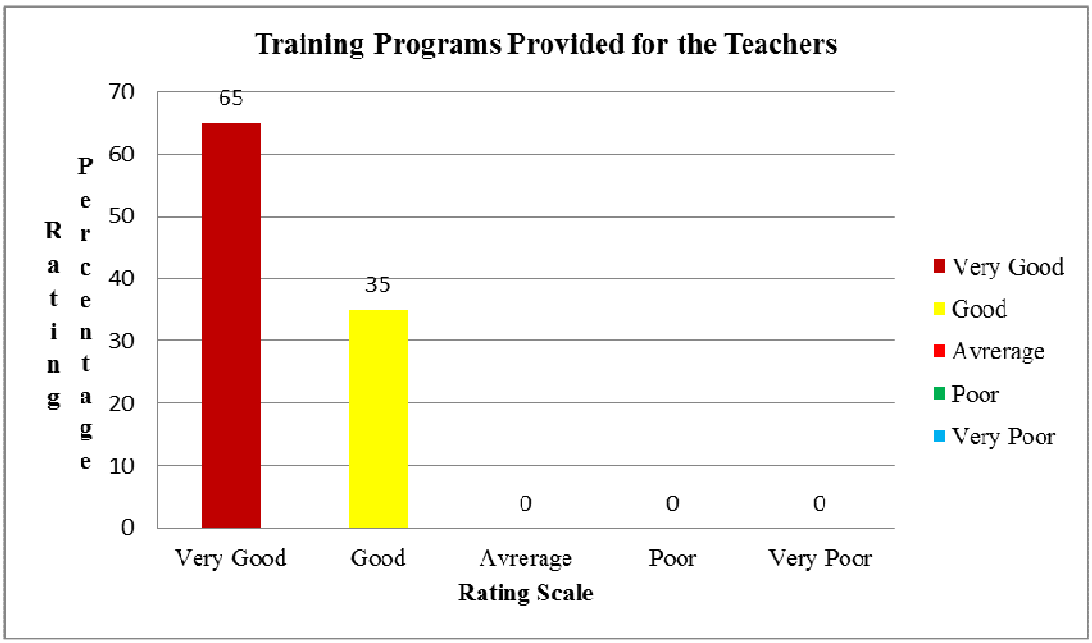
IMPLICATIONS: The data analysis shows that 100% principals of ITI's and Polytechnics considered the placement record of their institute as good. This should have a positive impact on the image of the institutes and help them get more admissions.

Table 66: Quality of Training Programs Provided for the Teachers

Training Prog. for Teachers	Percentage %	Frequency
Very Good	65	13
Good	35	7
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 44: Quality of Training Programs Provided for the Teachers



INTERPRETATION: From the data analysis regarding the quality of training programs provided for the teachers, it was found that 35% principals considered them as good, whereas majority of the principals i.e. 65% considered them as very good.

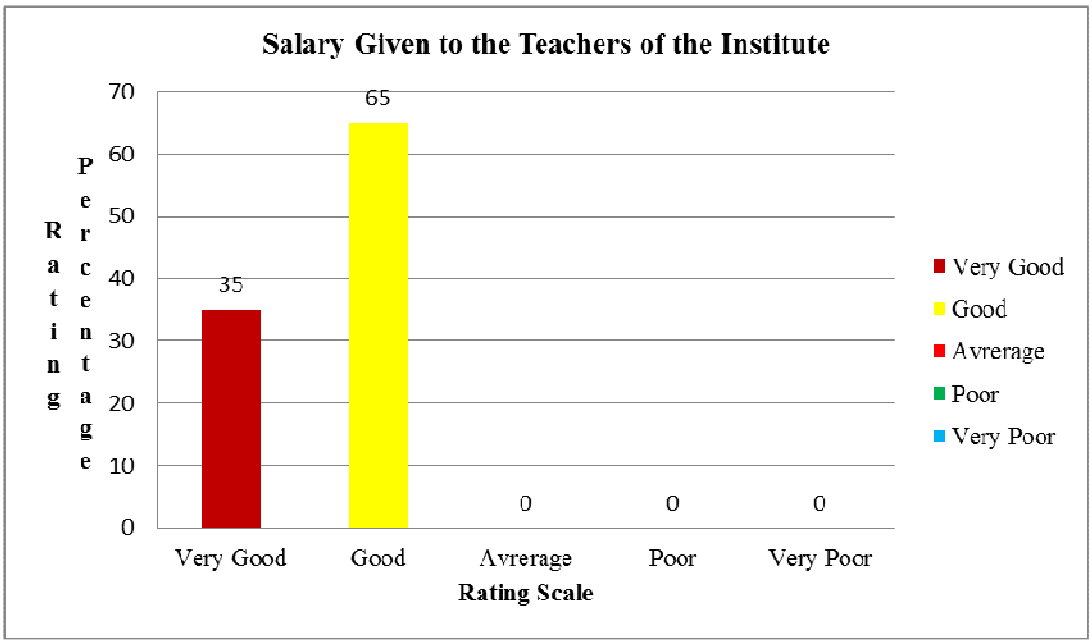
IMPLICATIONS: The data analysis shows that 100% principals of the ITI's and Polytechnics considered the quality of training programs provided to the teachers of their institute as good. This will have a highly positive impact as, the teachers who are updated with the current trends and requirements of the industry, will be able to train the students better.

Table 67: Salary of the Teachers

Salary of Teachers	Percentage %	Frequency
Very Good	35	7
Good	65	13
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 45: Salary of the Teachers



INTERPRETATION: From the data analysis regarding the salary given to the teachers of the institute, it was found that 35% principals considered it as very good, whereas majority of the principals i.e. 65% considered it as good.

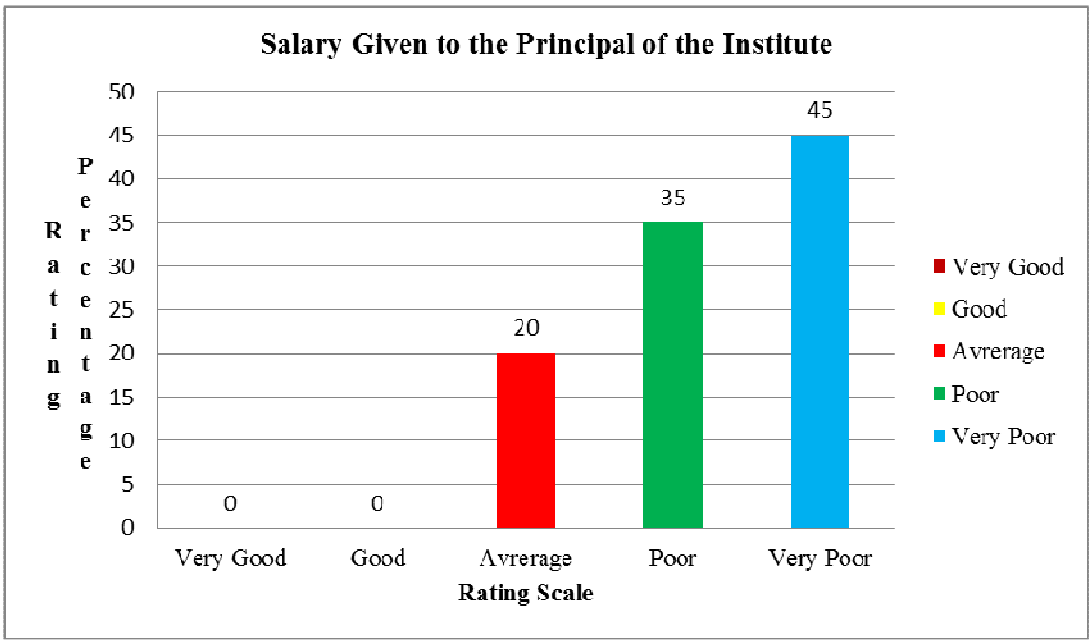
IMPLICATIONS: The data analysis shows 65% principals of the ITI's and Polytechnics considered the salary given to the teachers as good. This will have a highly positive impact as the teachers will be motivated to perform better.

Table 68: Salary of the Principals

Salary of the Principal	Percentage %	Frequency
Very Good	0	0
Good	0	0
Average	20	4
Poor	35	7
Very Poor	45	9
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 46: Salary of the Principals



INTERPRETATION: From the data analysis regarding the salary given to the principals of the institutes, it was found that 20% principals considered it as average, 35% considered it as poor, whereas majority of the principals i.e. 45% considered it as very poor.

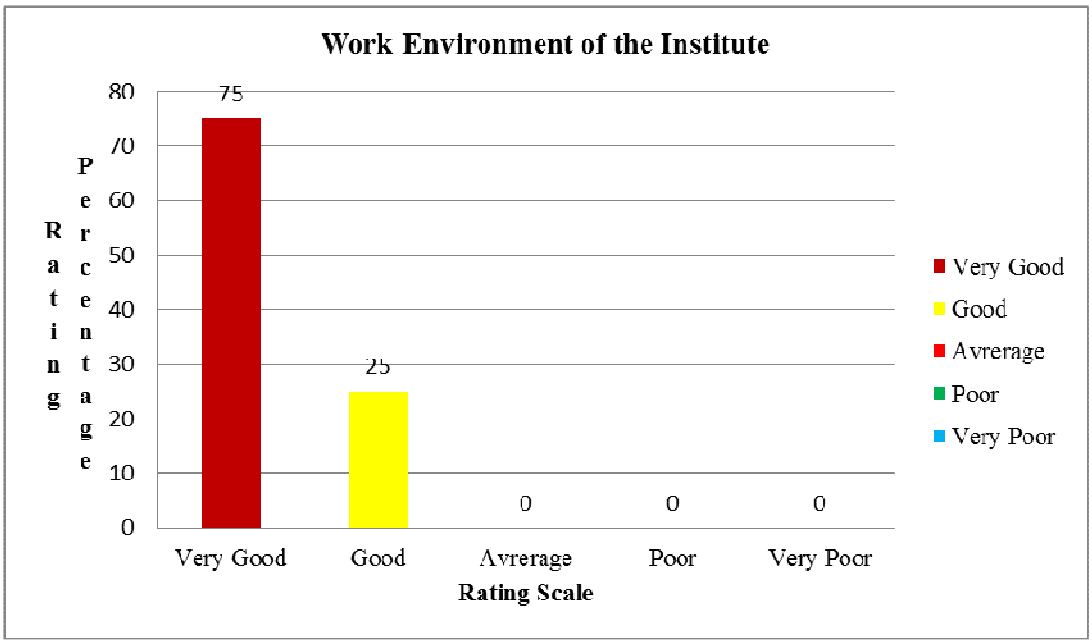
IMPLICATIONS: The data analysis shows that 45% principals of the ITI's and Polytechnics considered the salary given to them as very poor. This will have a highly negative impact as the principal who is the head of the institute will be highly demotivated to perform. This in turn will lead to a decrease in the overall performance of the institute.

Table 69: Work Environment of the Institute

Work Environment	Percentage %	Frequency
Very Good	75	15
Good	25	5
Average	0	0
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 47: Work Environment of the Institute



INTERPRETATION: From the data analysis regarding the work environment of the institute, it was found that 25% principals considered it as good, whereas majority of the principals i.e. 75% considered it as very good.

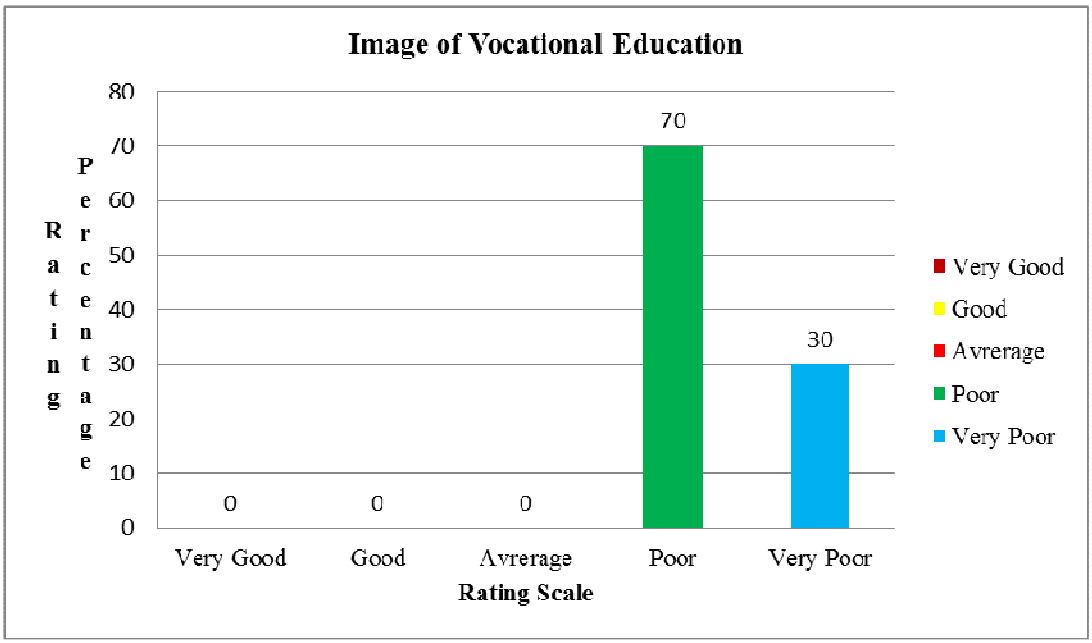
IMPLICATION: The data analysis shows that 75% principals of the ITI's and Polytechnics considered the work environment of their institute as very good. This will have a highly positive impact on the entire staff of the institute and lead to better performance by one and all.

Table 70: Image of Vocational Education

Image of VE	Percentage %	Frequency
Very Good	0	0
Good	0	0
Average	0	0
Poor	70	14
Very Poor	30	6
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 48: Image of Vocational Education



INTERPRETATION: From the data analysis regarding the image of vocational education in the Indian society, it was found that 30% of the principals considered it as very poor, whereas majority of the principals of the institutes i.e. 70% considered it as poor.

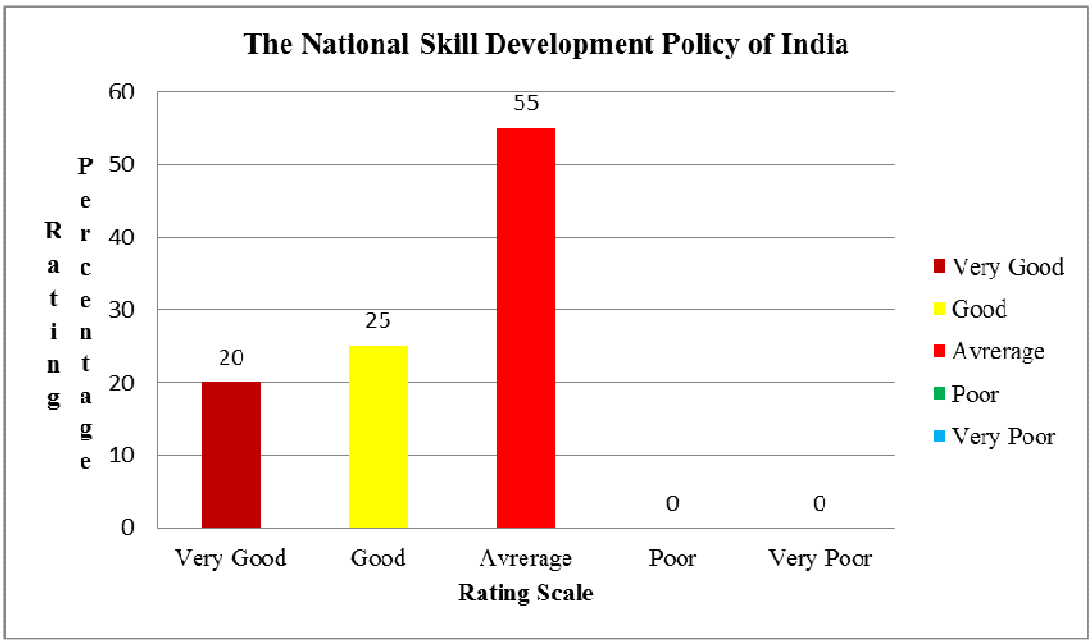
IMPLICATIONS: The data analysis shows that 70% principals of ITI's and Polytechnics considered the image of vocational training in the Indian society as poor. This will have a highly negative impact as no student would want to take up vocational education or skill training. This in turn would lead to the depletion of skilled resources of the country and an alarming increase in the unemployment situation. This situation will also lead to major discontent and low self-esteem in the existing skilled workforce, which will impact their overall well-being (physical, emotional and mental).

Table 71: The National Skill Development Policy

National Skill Dev. Policy	Percentage %	Frequency
Very Good	20	4
Good	25	5
Average	55	11
Poor	0	0
Very Poor	0	0
Total	100%	20(Cumulative Frequency)

Source: Primary Data

Graph 49: The National Skill Development Policy



INTERPRETATION: From the data analysis regarding the National Skill Development Policy of India, it was found that 20% principals considered it as very god, 25% considered it as good, whereas majority of the principals i.e. 55% considered it as average.

IMPLICATIONS: The data analysis shows that 55% principals of ITI's and Polytechnics considered the National Skill Development Policy of India as average. This will have a negative impact

Table 72: Descriptive Results for Principal

Descriptive Statistics	Very Good	Good	Average	Poor	Very Poor
Valid	18	18	18	18	18
Missing	0	0	0	0	0
Mean	8.833	6.5	2.389	1.333	0.9444
Std. Deviation	5.361	3.746	3.013	3.614	2.485
Variance	28.74	14.03	9.075	13.06	6.173
Minimum	0	0	0	0	0
Maximum	20	13	11	14	9

Table 73: Reliability Analysis

Scale Reliability Statistics

	Mean	Standard Deviation	McDonald's ω	Chronbach's α	Average Inter Item Crrelation
Scale	4	3.488	-2.700	0.777	0.137

Note: Of the observation, 18 were used, 0 were excluded list wise, and 18 were provided

Table 74: Item Reliability Statistics

	Chronbach's
Very Good	0.631
Good	0.747
Average	0.390
Poor	0.386
Very Poor	0.352

Reverse Scaled Item

The Chronbach's Alpha value for the questionnaire related to the principals of the institutes was equal to 0.77, which is more than 0.7 and is considered as good. It means that the questionnaire related to the principals of the institutes was reliable.

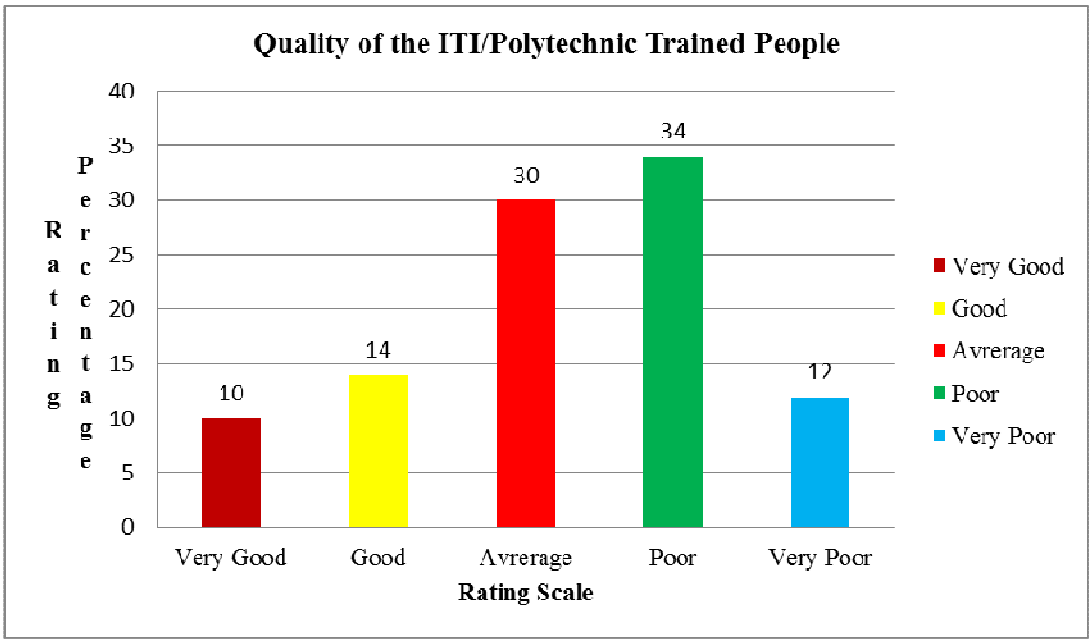
4.4. **SECTION D: QUESTIONNAIRE FOR THE EMPLOYERS**

Table 75: Quality of ITI/Polytechnic Trained People

Quality of Trained People	Percentage %	Frequency
Very Good	10	5
Good	14	7
Average	30	15
Poor	34	17
Very Poor	12	6
Total	100%	50 (Cumulative Frequency)

Source: Primary Data

Graph 50: Quality of ITI/Polytechnic Trained People



INTERPRETATION: From the data analysis it was found that 10% of the employers considered the quality of the ITI/Polytechnic trained people as very good and 14% considered them good. 30% employers found the quality of the ITI/Polytechnic trained people as average. Majority of the employers i.e. 34% found the quality of the ITI/Polytechnic trained people as poor.

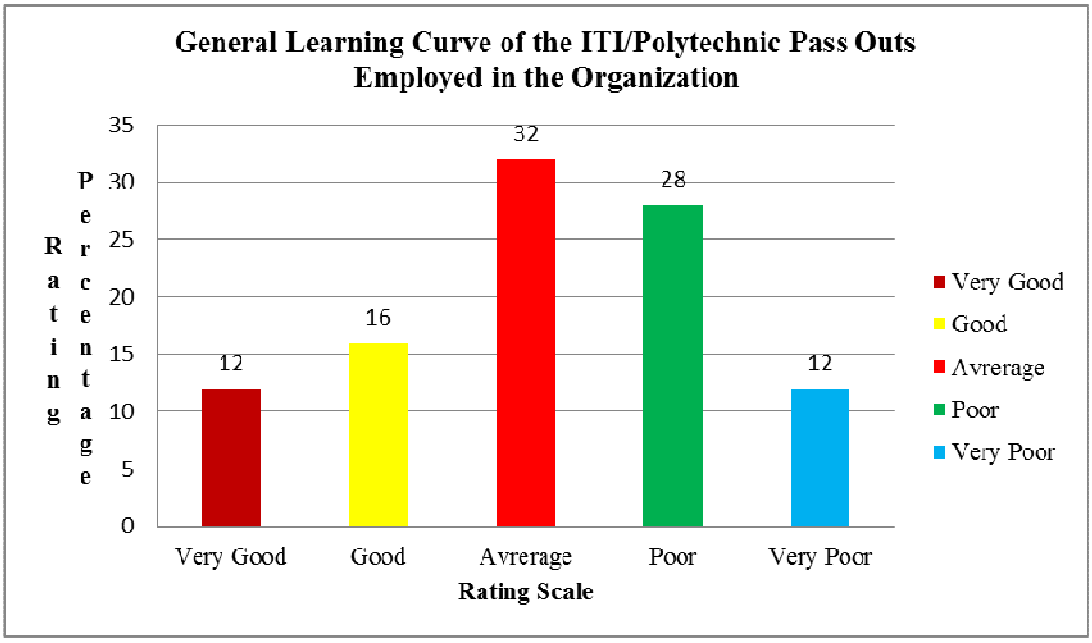
IMPLICATIONS: The data analysis shows that 46% employers considered the quality of the ITI and Polytechnic trained people as poor. This will have a highly negative impact as the employers will not want to employ the people passing out from these institutes.

Table 76: General Learning Curve of the ITI/Polytechnic Pass Outs

Learning Curve of Trained Staff	Percentage %	Frequency
Very Good	12	6
Good	16	8
Average	32	16
Poor	28	14
Very Poor	12	6
Total	100%	50(Cumulative Frequency)

Source: Primary Data

Graph 51: General Learning Curve of the ITI/Polytechnic Pass Outs



INTERPRETATION: From the data analysis it was found that 12% of the employers considered the general learning curve of the ITI/Polytechnic pass out people working in their organization as very good and 16% considered them as good. 28% employers considered the general learning curve of the ITI/Polytechnic pass out people working in their organization as

poor. Majority of the employers i.e. 32% found the general learning curve of the ITI/Polytechnic pass out people working in their organization as average.

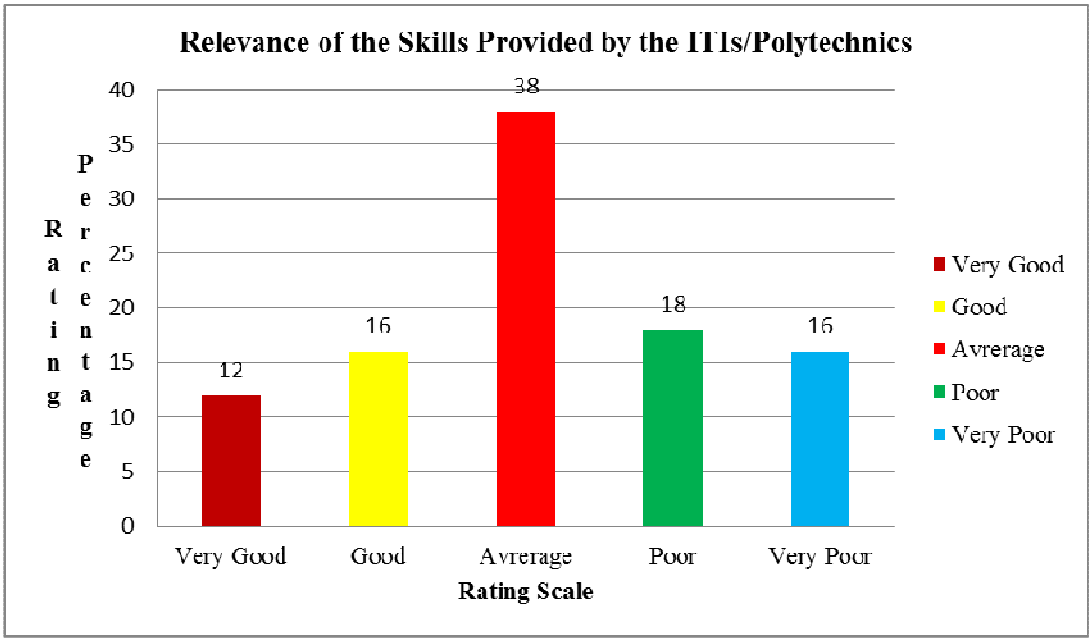
IMPLICATIONS: The data analysis shows that 32% employers considered the general learning curve of the ITI/Polytechnic pass outs employed in their organization as average. This will have a negative impact as the employers will not be interested in investing too much time and money on training these people. The employers will also refrain from employing the ITI/Polytechnic pass outs in the future.

Table 77: Relevance of the Skills Provided by the Institutes

Relevance of Skills Provided	Percentage %	Frequency
Very Good	12	6
Good	16	8
Average	38	19
Poor	18	9
Very Poor	16	8
Total	100%	50(Cumulative Frequency)

Source: Primary Data

Graph 52: Relevance of the Skills Provided by the Institutes



INTERPRETATION: From the data analysis it was found that 12% employers considered the relevance of the skills provided by the ITIs/Polytechnics as per the industry requirements to be very good. 18% employers found them to be poor. Majority of the employers i.e. 38% considered the relevance of the skills provided by the ITIs/Polytechnics as per the industry requirements to be average.

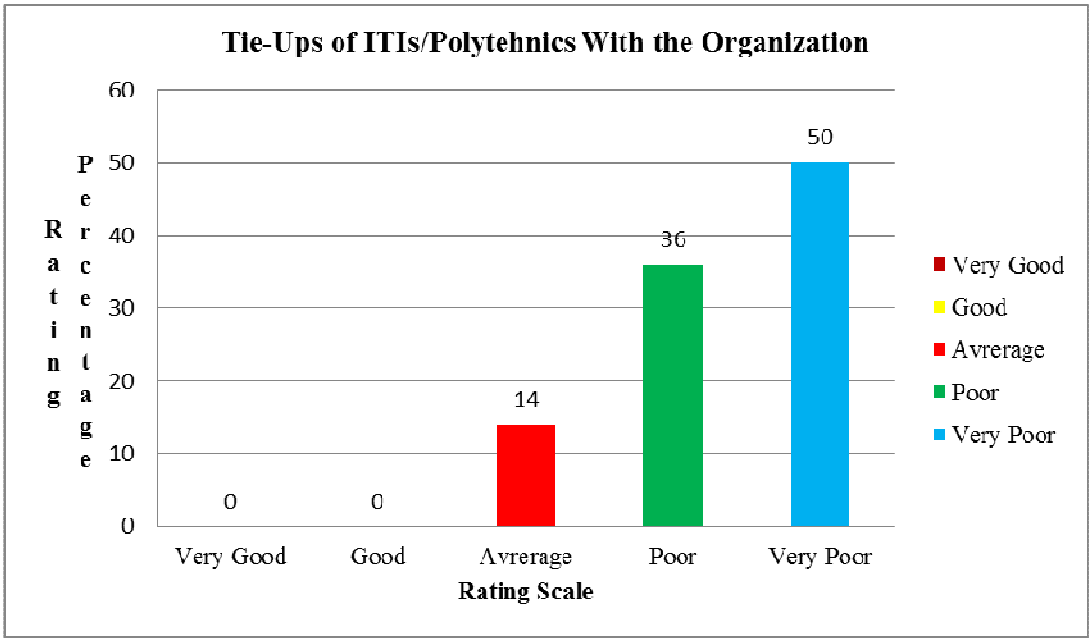
IMPLICATIONS: The data analysis shows that 38% employers considered the relevance of the skills provided by the ITI's/Polytechnics as per the industry requirements to be average. This will have a negative impact as the employers will not want to employ people who are not industry ready.

Table 78: Tie-Ups of the ITIs/Polytechnics with the Industry

Industrial Tie-Ups of Institutes	Percentage %	Frequency
Very Good	0	0
Good	0	0
Average	14	7
Poor	36	18
Very Poor	50	25
Total	100%	50(Cumulative Frequency)

Source: Primary Data

Graph 53: Tie-Ups of the ITIs/Polytechnics with the Industry



INTERPRETATION: From the data analysis it was found that 14% of the employers considered the tie-ups of the ITIs/Polytechnics with their organization as average. 36% employers considered the tie-ups of the ITIs/Polytechnics with their organization as poor. Majority of the employers i.e. 50% considered the tie-ups of the ITIs/Polytechnics with their organization as very poor.

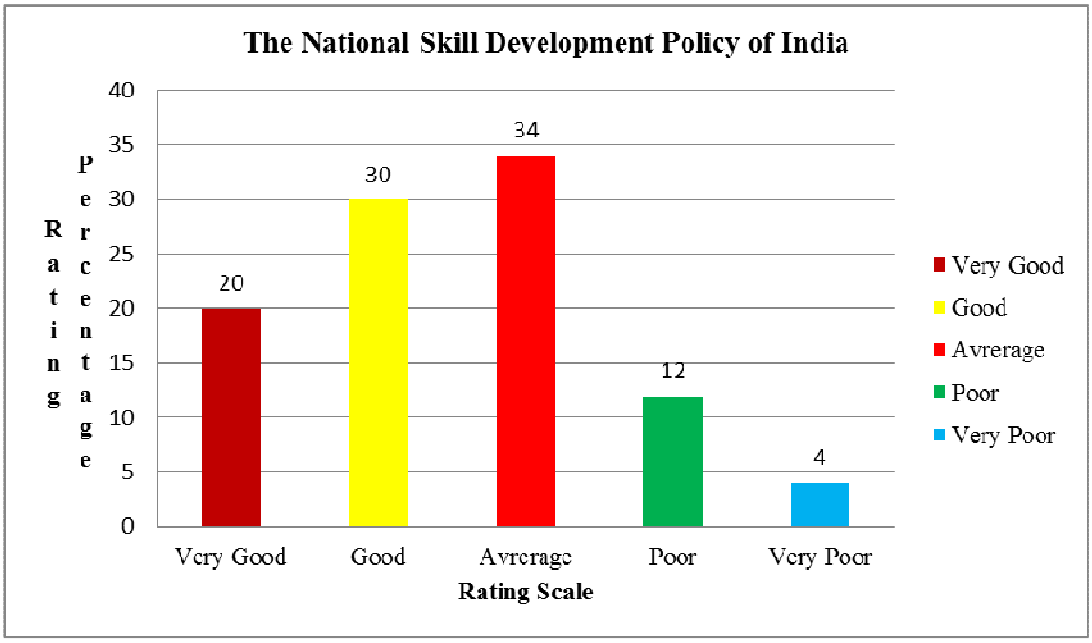
IMPLICATIONS: The data analysis shows that 80% employers considered the tie-ups of ITI's/Polytechnics with their organization as poor. This will have a highly negative impact as the students of these institutes will not be industry ready and thus the employers would not be interested in employing them.

Table 79: The National Skill Development Policy

National Skill Dev. Policy	Percentage %	Frequency
Very Good	20	10
Good	30	15
Average	34	17
Poor	12	6
Very Poor	4	2
Total	100%	50(Cumulative Frequency)

Source: Primary Data

Graph 54: The National Skill Development Policy



INTERPRETATION: From the data analysis it was found that 20% of the employers considered the National Skill Policy of India as very good. 30% employers considered the National Skill Development Policy as good. Majority of the employers i.e. 34% of the employers considered the National Skill Development Policy of India as average.

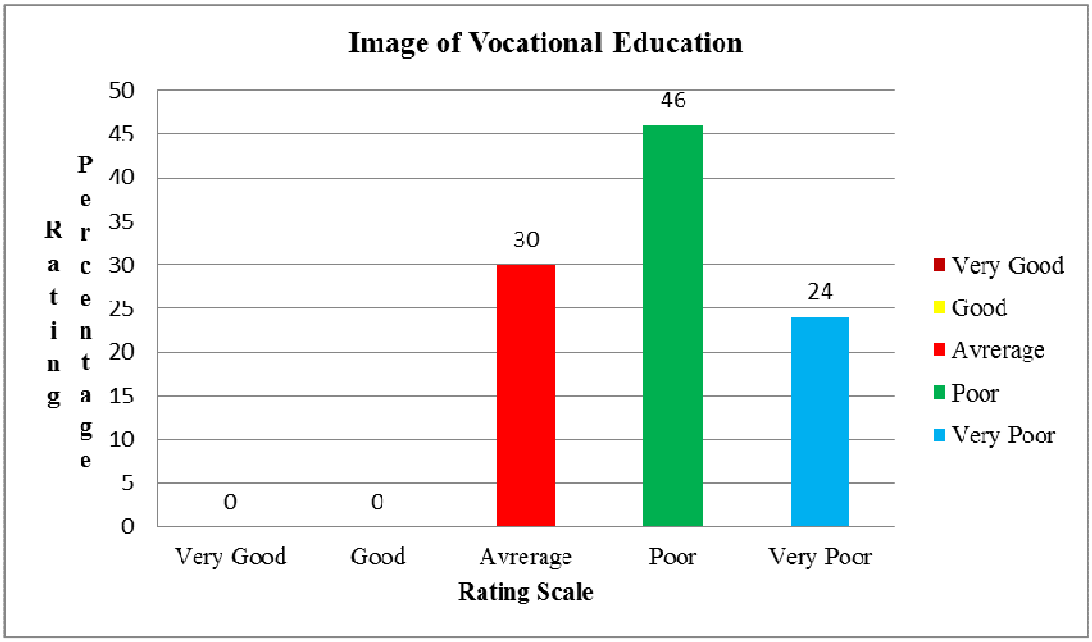
IMPLICATIONS: The data analysis shows that 34% employers considered the National Skill Development Policy of India as average.

Table 80: Image of Vocational Education

Image of VE	Percentage %	Frequency
Very Good	0	0
Good	0	0
Average	30	15
Poor	46	23
Very Poor	24	12
Total	100%	50(Cumulative Frequency)

Source: Primary Data

Graph 55: Image of Vocational Education



INTERPRETATION: From the data analysis it was found that none of the employers found the image of vocational education and skill development in the society as very good or good. 30% employers found the image of vocational education and skill development in the society as average. 24% employers found the image of vocational education and skill development in the society as very poor. Majority of the employers i.e. 46% found the image of vocational education and skill development in the society as poor.

IMPLICATIONS: The data analysis shows that 70% employers considered the image of vocational education and skill development in the society as poor. This will have a highly negative impact as no student would want to take up vocational education or skill training. This in turn would lead to the depletion of skilled resources of the country and an alarming increase in the unemployment situation. This situation will also lead to major discontent and low self-esteem in the existing skilled workforce, which will impact their overall well-being (physical, emotional and mental).

Table 81: Descriptive Results for Employers

Descriptive Statistics	Very Good	Good	Average	Poor	Very Poor
Valid	6	6	6	6	6
Missing	0	0	0	0	0
Mean	4.5	6.333	14.83	14.5	9.833
Std. Deviation	3.886	5.68	4.119	6.221	8.11
Variance	15.1	32.27	16.97	38.7	65.77
Minimum	0	0	7	6	2
Maximum	10	15	19	23	25

Table 82: Reliability Analysis

Scale Reliability Statistics

			95% Confidence Interval	
	McDonald's ω	Cronbach's α	Lower	Upper
Scale	0.998	0.963	0.737	0.995

Note: Of the observations, 6 were used, 0 were excluded list wise, and 6 were provided

The Chronbach's Alpha value for the questionnaire related to the employers was 0.737, which is more than 0.70 and is considered as good. This means that the questionnaire related to the employers was found to be reliable.

Table 83: Reliability analysis for group of variables

Serial Number	Description	Reliability Factor
1	Descriptive Results for Students	0.797
2	Descriptive Results for Teachers	0.928
3	Descriptive Results for Principals	0.777
4	Descriptive Results for Employers	0.995

The Croanbach- Alpha values for all the four groups were above 0.7, which shows that the variables taken up for the study and the grouping of variables are reliable in nature.

CHAPTER FIVE

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The final chapter of the thesis is on discussion of the findings, conclusions drawn from the findings and recommendations emerging out of the study. The chapter is divided into five sections. The first section deals with the discussion of the results from the student's perspective and the conclusions drawn from the findings. The second section deals with the discussion of the results from the teacher's perspective and the conclusions drawn from the findings. The third section deals with the discussion of the results from the perspective of the principals of the various ITI's and Polytechnics and the conclusion drawn from the findings. The fourth section deals with the discussion of the results from the perspective of the employers and the conclusions drawn from the findings. The fifth and final section deals with recommendations emerging out of the study.

SECTION A:

5.1. Major Findings (Student's Perspective):

i) 35.55% students of the ITI's and Polytechnics considered the quality of teachers of their institute as poor.

ii) 47.6% students considered the library facility of their institute as average.

iii) 44.8% students considered the computer lab facility of their institute as average.

iv) 43.88% students considered the workshop facility of their institute as average.

v) 49.95% students considered the industrial relevance of the syllabus taught by their institute as average.

vi) 59.43% students considered that the connectivity of their institute was very good.

vii) 53.9% students considered the canteen facility of their institute to be good.

viii) 48.63% students considered the Choice of courses offered by their institute as good.

ix) 53.9% students considered the canteen facility of their institute as good.

x) 48.63% students considered the Choice of courses offered by their institute as good.

xi) 29.33% students considered the frequency of Industrial visits provided by their institute as poor.

xii) 50% students considered the Placement record of their institute as average.

xiii) 43.16% of the students considered the affordability of the fees of their institute as very good.

xiv) 45.21% students considered the personality development classes provided to them by their institute to be very poor.

xv) 31.46% students found the benefits of vocational education to be average.

xvi) 38.11% students considered the image of vocational education in the Indian society to be very poor.

5.2. Conclusions Drawn: The following conclusions were drawn from the above findings:

i) The quality of teachers of the ITI's and Polytechnics is poor.

ii) The library facility is average.

iii) The computer lab facility is average.

iv) The workshop facility of the institutes is average.

v) The industrial relevance of the syllabus taught by the institutes is average.

vi) The connectivity of the institutes is very good.

vii) The canteen facility of the institutes is good.

viii) The choice of courses offered by the institutes is good.

ix) The frequency of industrial visits provided by the institutes is poor.

x) The placement record of the institutes is average.

xi) The affordability of the fees of the institutes is very good.

xii) Personality development classes provided by the institutes are very poor.

xiii) The benefits of vocational education are average.

xiv) The status of vocational education in the Indian society is very poor.

SECTION B:

5.3. Major Findings (Teacher's Perspective):

i) 37% of the teachers of the ITI's and Polytechnics considered the quality of students joining their institute as average.

ii) 46% teachers considered the quality of teachers of their institute as very good.

iii) 33% of the teachers considered the placement record of their institute as very good.

iv) 41% of the teachers considered the learning ability of the students of the institute as average.

v) 39% of the teachers considered the library facility of their institute as good.

vi) 30% teachers considered the computer lab facility of their institute as good.

vii) 44% teachers considered the workshop facility of their institute as good.

viii) 36% teachers considered the staff room facility of their institute as poor.

ix) 31% teachers considered the work environment of their institute as average.

x) 38% teachers considered the connectivity of their institute as good.

xi) 33% teachers considered the updation of the syllabus taught in their institute as good.

xii) 40% teachers considered the training programs conducted for them by their institute as average.

xiii) 32% teachers considered the frequency of industrial visits provided for the students by their institute as good.

xiv) 37% teachers considered the affordability of the fees of their institute as average.

xv) 39% teachers of the ITI's and Polytechnics considered the salary paid too them as very poor.

xvi) 42% teachers considered the image of vocational education in the Indian society as very poor.

xvii) 45% teachers considered the image of vocational education teachers in the Indian society as poor.

5.4. Conclusions Drawn: The following conclusions were drawn from the above findings:
i) Quality of students joining the institutes is average.

ii) Quality of teachers of the institutes is very good.

iii) Placement record of the institutes is very good.

iv) Learning ability of the students of the institutes is average.

v) Library facility of the institutes is good.

vi) Computer lab facility of the institutes is good.

vii) Workshop facility is good.

viii) Staff room facility of the institutes is poor.

ix) Work environment of the institutes is average.

x) Connectivity of the institutes is good.

xi) Updation of the syllabus taught in the institutes is good.

xii) Training programs conducted for the teachers by the institutes are average.

xiii) Number of industrial visits provided for the students are good.

xiv) Affordability of the fees of the institutes is average.

xv) Salary paid to the teachers is very poor.

xvi) Image of vocational education in the Indian society is very poor.

xvii) Image of vocational education teachers in the Indian society is poor.

SECTION C:

5.5. Major Findings (Principal's Perspective):

i) 30% principals of ITI's and Polytechnics considered the quality of students of their institute as average.

ii) 45% principals considered the quality of teachers of their institute as very good.

iii) 55% principals considered the quality of administrative staff of their institute as good.

iv) 45% principals considered the computer lab facility of their institute as good.

v) 70% principals considered the workshop facility of their institute as very good.

vi) 45% principals considered the library facility of their institute as good.

vii) 45% principals considered the frequency of training programs conducted for the teachers of their institute as good.

viii) 60% principals considered the industrial exposure provided to the students of their institute as very good.

ix) 75% principals considered the connectivity of their institute as very good.

x) 100% principals considered the variety of courses provided to the students by their institute as very good.

xi) 45% principals considered the affordability of the fees of their institute as good.

xii) 55% principals considered the placement record of their institute as very good.

xiii) 65% principals considered the training programs conducted for the teachers of their institute as very good.

xiv) 65% principals considered the salary paid to the teachers of their institute as good.

xv) 45% principals considered the salary paid to them as very poor.

xvi) 75% principals considered the work environment of their institute as very good.

xvii) 70% principals considered the image of vocational education in the Indian society as poor.

xviii) 55% principals of ITI's and Polytechnics considered the National Skill Development Policy of India as average.

5.6. Conclusions Drawn: The following conclusions were drawn from the above findings:

i) The quality of students of ITI's and Polytechnics is average.

ii) The quality of teachers of the ITI's and Polytechnics is very good.

iii) Quality of administrative staff is good.

iv) Computer lab facility is good.

v) Workshop facility is very good

vi) Library facility is good.

vii) Frequency of training programs conducted for the teachers is good.
Industrial exposure of the students is very good.

viii) Connectivity of the institute is very good.

ix) Variety of courses provided by the institutes is very good.

x) Affordability of the fees is good.

xi) Placement record of the institutes is very good.

xii) Training programs conducted for the teachers are very good.

xiii) Salary paid to the teachers is good.

xiv) Salary paid to the principals is very poor.

xv) Image of vocational education in the Indian society is poor.

xvi) The National Skill Development Policy of India is average.

SECTION D:

5.7. Major Findings (Employers Perspective):

i) 34% employers considered the quality of people trained from ITI's and Polytechnics as poor.

ii) 32% employers considered the general learning curve of the ITI and Polytechnic pass out people working in their organisation as average.

iii) 38% employers considered the relevance of the skills provided by the ITIs/Polytechnics as per the industry requirements to be average.

iv) 50% employers considered the tie-ups of the ITIs/Polytechnics with their organization as very poor.

v) 34% of the employers considered the National Skill Development Policy of India as average.

vi) 46% of the employers found the image of vocational education and skill development in the society as poor.

5.8. Conclusions Drawn: Following were the conclusions drawn from the above findings:

i) The quality of people trained from ITI's and Polytechnics is poor.

ii) The learning curve of people trained from IT's and Polytechnics is average.

iii) The relevance of the skills provided by the ITI's and Polytechnics as per the industry requirements is average.

iv) The tie-ups of ITI's and Polytechnics with industries are very poor.

v) The National Skill Development Policy of India is average.

vi) The image of vocational education and skill development in the society is poor.

SECTION E:

5.9. Recommendations: Following are the recommendations based on the findings and conclusions:

i) The ITI's and Polytechnics should recruit well qualified and experienced teachers to ensure good quality of teaching staff. The quality of the teaching staff can be improved by conducting regular refresher courses for them in their concerned fields. They should also take regular feedback from the students about the teaching staff and take actions as per the feedback.

ii) The ITI's and Polytechnics should improve the condition of their libraries by adding relevant books of reputed authors ever year. This will improve the quality of learning and research of the students.

iii) The ITI's and polytechnics should upgrade their workshops from time to time and equip them with the latest machines and tools so that, their students get the opportunity to learn modern and industry relevant skills.

iv) The syllabus taught in the ITI's and Polytechnics should be updated from time to time to make it industry relevant, which in turn would increase the employability of their students and the placement record of the institutes.

v) The curriculum of the ITI's and Polytechnics should be prepared and updated in consultation with the employers. 50% curriculum should be hands on practical training in the industries.

vi) The ITI's and Polytechnics should increase the frequency of industrial visits for their students so that, the students get first-hand and practical experience of how things actually work in an industry.

vii) The ITI's and Polytechnics should take initiatives to make personality development as a part of their standard curriculum so that, their students are not only equipped with technical and vocational skills but, also with soft skills. This will have a positive effect on their general self-confidence, presentation, employment and performance at work.

viii) The ITI's and Polytechnics should improve the staff room facility for the teachers of the institute like, clean and fresh drinking water, comfortable and adequate furniture, locker facility, good ventilation system etc. This would help in the productivity of the teachers of the institute.

ix) The ITI's and Polytechnics should improve their work environment by providing good infrastructural facilities like good transportation facility, clean drinking water, clean washrooms, uninterrupted power supply etc., provide an open-door policy at the work place, provide some recreational facilities for the staff, ensure that there is no discrimination based on gender, caste, creed or race. Tis will help in increasing the productivity of the teachers. The ITI's and Polytechnics should conduct good quality and frequent faculty development programs for their teachers so that, they stay updated with the latest trends of the industry.

x) The ITI's and Polytechnics should also conduct soft skills training programs for their teachers. This will have a positive effect on their general self-confidence, presentation and performance at work.

xi) The salary paid to the teachers of the ITI's and Polytechnics should be at par with that of the teachers of other institutions.

xii) To enhance the image of vocational education and training in the society, initiatives should be taken to educate the common man about the importance and benefits of vocational education and skill development so that, more people are motivated to join ITI's and Polytechnics for vocational and skill training.

xiii) The salary paid to the principals of the ITI's and Polytechnics should be at par with that of the principals of other institutions.

xiv) The ITI's and Polytechnics should train their students in the skills which are relevant to the current industrial requirements and trends. These should be done in consultation with the industry people.

xv) The ITI's and Polytechnics should work towards increasing their tie-ups with industries. This can be done only if the quality of people trained from the ITI's and Polytechnics is good and they are trained in skills which match with the requirements of the industry.

xvi) The industries/employers should invest in providing training to the students of the ITI's and Polytechnics, so that they get people who are trained as per the latest requirements of the industries. This will help them save time and cost of training people.

xvii) The image of vocational education and skill training can be improved to a great extent if the industries only employ people who are certified in the vocational streams.

xviii) The image of vocational education and skill training can also be enhanced if the trainees are paid a stipend for the training period. This will motivate more students to opt for vocational and skill training, and it will also motivate the trainees to complete the training program that they have opted for.

xix) The image of vocational education and skill training can also be improved to a great extent if, the industries give a handsome salary package to the pass outs of these industries.

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Appendix-I

Annexure A

List of Government Industrial Training Institutes of Delhi

Serial Number	Name of The Industrial Training Institute (ITI)
01	Sir CV Raman Industrial Training Institute, Dheerpur
02	ITI (W) , Mori Gate, Gokhle Road
03	ITI Nand Nagri
04	ITI Khichripur, Mayur Vihar
05	ITI Malviya Nagar
06	ITI Pusa
07	ITI Shahadra
08	ITI Arab Ki Sarai Nizamuddin
09	ITI Jahangirpuri
10	ITI Jail Road, Hari Nagar
11	ITI Siri Fort (W)
12	ITI Tilak Nagar
13	ITI Lala Hans Raj Gupta
14	ITI Veer Savarkar Basic Training Centre, Pusa
15	ITI for Women, Vivek Vihar
16	ITI Jaffarpur

Source:

http://web.delhi.gov.in/wps/wcm/connect/doit_tt/Training+and+Technical+Education/Home/Institutions+And+Student+Related+Information/Institutes/Govt.+Industrial+Training+Institutes+%28ITIs%29 (Accessed on 01.06.2015)

Annexure B

List of Government Polytechnics in Delhi

Serial Number	Name of The Polytechnic
01	Ambedkar Polytechnic
02	Aryabhat Polytechnic
03	Govind Ballabh Pant Polytechnic
04	Guru Nanak Dev Polytechnic
05	Integrated Institute of Technology
06	Kasturba Polytechnic for Women
07	Meerabai Institute of Technology
08	Pusa Polytechnic
09	Bhai Parmanad Institute of Business Studies
10	Delhi Institute of Tool Engineering

Source: https://www.coursesafter10th.com/diploma-courses/government-polytechnic-colleges-delhi/ (Accessed on 01.06.2015)

Annexure C

List of Government Industrial Training Institutes of Delhi That Gave Permission for Data Collection

Serial Number	Name of The Industrial Training
01	ITI Arab Ki Sarai, Nizamuddin
02	Sir CV Raman Industrial Training Institute, Dheerpur
03	ITI (W), Mori Gate, Gokhle Road
04	ITI Khichripur, Mayur Vihar
05	ITI Malviya Nagar
06	ITI Shahadra
07	ITI Jahangirpuri
08	ITI Siri Fort (W)
09	ITI Lala Hans Raj Gupta
10	ITI for Women, Vivek Vihar
11	ITI Jaffarpur
12	ITI Tilak Nagar

Annexure D

List of Government Polytechnics of Delhi That Gave Permission for Data Collection

Serial Number	Name of The Government Polytechnic
01	Ambedkar Polytechnic
02	Aryabhat Polytechnic
03	Govind Ballabh Pant Polytechnic
04	Guru Nanak Dev Polytechnic
05	Kasturba Polytechnic for Women
06	Meerabai Institute of Technology
07	Pusa Polytechnic
08	Delhi Institute of Tool Engineering

Appendix-II

Annexure-A

QUESTIONNAIRE FOR INSTITUTE STUDENTS

Thank you for reading this. I would like to invite you to take part in my research study by completing this questionnaire. Your responses would be highly valued. My study is about skill development and vocational education in India. It aims to find out, what all is being done in the field of skill development and vocational education, in our country. I neither need your name nor any identifying details, and all reasonable steps will be taken to ensure confidentiality. Responses from completed questionnaires will be collated for analysis, and used in my thesis, without giving any reference of any person or institutions.

It would be highly appreciated, if you would answer all the questions.

Rate the following in your institute on a 5 point scale of – Very Good, Good, Average, Poor, Very Poor:

1. Quality of teachers of the institute.
   Very Good, Good, Average, Poor, Very Poor

2. Library facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

3. Computer Lab facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

4. Workshop facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

5. Industrial relevance of the syllabus taught by the institute.
   Very Good, Good, Average, Poor, Very Poor

6. Connectivity of the institute.
   Very Good, Good, Average, Poor, Very Poor

7. Canteen facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

8. Choice of courses offered by the institute.
   Very Good, Good, Average, Poor, Very Poor

9. Industrial visits conducted by the institute for the students.
   Very Good, Good, Average, Poor, Very Poor

10. Placement record of the students of the institute.
    Very Good, Good, Average, Poor, Very Poor

11. Affordability of the fees of the institute.
    Very Good, Good, Average, Poor, Very Poor

12. Personality Development classes provided by the institute.
    Very Good, Good, Average, Poor, Very Poor

13. Benefits of Vocational Education.

    Very Good, Good, Average, Poor, Very Poor

14. Image of Vocational Education in the Indian Society.

    Very Good, Good, Average, Poor, Very Poor

Thank you for your valuable time given in completing the questionnaire and helping me move forward in my research work.

If you have any concerns regarding this research, please contact me in the first instance.

Annexure-B

QUESTIONNAIRE FOR INSTITUTE FACULTY

Thank you for reading this. I would like to invite you to take part in my research study by completing this questionnaire. Your responses would be highly valued. My study is about skill development and vocational education in India. It aims to find out, what all is being done in the field of skill development and vocational education, in our country. I neither need your name nor any identifying details, and all reasonable steps will be taken to ensure confidentiality. Responses from completed questionnaires will be collated for analysis, and used in my thesis, without giving any reference of any person or institutions.

It would be highly appreciated, if you would answer all the questions.

Rate the following in your institute on a 5 point scale of - Very good, Good, Average, Poor, Very Poor:

1. Quality of students joining the institute.
   Very Good, Good, Average, Poor, Very Poor

2. Quality of teachers of the institute.
   Very Good, Good, Average, Poor, Very Poor

3. Placement record of the students of the institute.
   Very Good, Good, Average, Poor, Very Poor

4. Learning ability of the students of the institute.
   Very Good, Good, Average, Poor, Very Poor

5. Library facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

6. Computer Lab facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

7. Workshop facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

8. Staff room facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

9. Work environment of the institute.
   Very Good, Good, Average, Poor, Very Poor
10. Location of the institute from transport connectivity viewpoint.
    Very Good, Good, Average, Poor, Very Poor

11. Updation of the syllabus taught in the institute.
    Very Good, Good, Average, Poor, Very Poor

12. Training programs conducted for the teachers by the institute.
    Very Good, Good, Average, Poor, Very Poor

13. Number of industrial visits conducted by the institute for the students.
    Very Good, Good, Average, Poor, Very Poor

14. Affordability of the fees of the institute, for the students.
    Very Good, Good, Average, Poor, Very Poor

15. Salary paid to the teachers by the institute.
    Very Good, Good, Average, Poor, Very Poor

16. Image of Vocational Education in the Indian Society.

    Very Good, Good, Average, Poor, Very Poor

17. Image of Vocational Education teachers.

    Very Good, Good, Average, Poor, Very Poor

Thank you for your valuable time given, in completing the questionnaire and helping me move forward in my research work.
If you have any concerns regarding this research, please contact me in the first instance.

Annexure-C

QUESTIONNAIRE FOR THE INSTITUTE PRINCIPAL

Thank you for reading this. I would like to invite you to take part in my research study by completing this questionnaire. Your responses would be highly valued. My study is about skill development and vocational education in India. It aims to find out, what all is being done in the field of skill development and vocational education, in our country. I neither need your name nor any identifying details, and all reasonable steps will be taken to ensure confidentiality. Responses from completed questionnaires will be collated for analysis, and used in my thesis, without giving any reference of any person or institutions.

It would be highly appreciated, if you would answer all the questions.

Rate the following in your institute on a 5 point scale of - Very Good, Good, Average, Poor, Very Poor:

1. Quality of students of the institute.
   Very Good, Good, Average, Poor, Very Poor

2. Quality of teachers of the institute.
   Very Good, Good, Average, Poor, Very Poor

3. Quality of administrative staff of the institute.
   Very Good, Good, Average, Poor, Very Poor

4. Computer Lab facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

5. Workshop facility of the institute.
   Very Good, Good, Average, Poor, Very Poor

6. Library of the institute.
   Very Good, Good, Average, Poor, Very Poor

7. Frequency of training programs conducted for the teachers.
   Very Good, Good, Average, Poor, Very Poor

8. Industrial exposure provided to the students by the institute.
   Very Good, Good, Average, Poor, Very Poor

9. Location of the institute.
   Very Good, Good, Average, Poor, Very Poor

10. Variety of courses provided by the institute to the students.
    Very Good, Good, Average, Poor, Very Poor

11. Affordability of the fees of the institute for the students.
    Very Good, Good, Average, Poor, Very Poor

12. Placement record of the students of the institute.
    Very Good, Good, Average, Poor, Very Poor

13. Quality of training programs provided for the teaching staff.
    Very Good, Good, Average, Poor, Very Poor

14. Salary given to the teachers of the institute.
    Very Good, Good, Average, Poor, Very Poor

15. Salary given to the principal of the institute.
    Very Good, Good, Average, Poor, Very Poor

16. Work environment of the institute.
    Very Good, Good, Average, Poor, Very Poor
17. Image of Vocational Education in the Indian Society.

    Very Good, Good, Average, Poor, Very Poor

18. The National Skill Development Policy of India.

    Very Good, Good, Average, Poor, Very Poor

Thank you for your valuable time given, in completing the questionnaire and helping me move forward in my research work.
If you have any concerns regarding this research, please contact me in the first instance.

Annexure-D

QUESTIONNAIRE FOR INDUSTRY OWNERS

Thank you for reading this. I would like to invite you to take part in my research study by completing this questionnaire. Your responses would be highly valued. My study is about skill development and vocational education in India. It aims to find out, what all is being done in the field of skill development and vocational education, in our country. I neither need your name nor any identifying details, and all reasonable steps will be taken to ensure confidentiality. Responses from completed questionnaires will be collated for analysis, and used in my thesis, without giving any reference of any person or institutions.

It would be highly appreciated, if you would answer all the questions.

Rate the following in your institute on a 5 point scale of - Very Good, Good, Average, Poor, Very Poor:

1. Quality of ITI/Polytechnic trained people.
   Very Good, Good, Average, Poor, Very Poor

2. General learning curve of the ITI/Polytechnic pass outs.
   Very Good, Good, Average, Poor, Very Poor

3. Relevance of the skills provided by the institute.
   Very Good, Good, Average, Poor, Very Poor

4. Tie-Ups of the ITIs/Polytechnics with the industry.
   Very Good, Good, Average, Poor, Very Poor

5. National Skill Development Policy of India.
   Very Good, Good, Average, Poor, Very Poor

6. Image of Vocational Education in the Indian society.
   Very Good, Good, Average, Poor, Very Poor

Thank you for your valuable time given, in completing the questionnaire and helping me move forward in my research work.
If you have any concerns regarding this research, please contact me in the first instance.

Appendix-III
Certificate of
Conferences Attended

UGC Sponsored International Conference on
"Recent Trends in Business Finance and Economics"
8-10 October 2015

Organised by:
Department of Business Finance and Economics
Faculty of Commerce and Management Studies
Jai Narain Vyas University, Jodhpur (India)

CERTIFICATE

This is to certify that ..... SUMEDHA TYAGI .....

Research Scholar, Vardhman Mahaveer Open Univeristy kota

has participated and presented / contributed in absentia a paper titled

Importance of Soft Skills Training for Business Management

Students: A Students' Perspective

in the conference.

Prof. Mahendra Singh Rathore	Dr. Krishn Awatar Goyal	Dr. Kshitiz Maharshi	Dr. Rajendra Prasad Meena
Chairperson	Director	Dy. Director	Secretary

विद्ययाऽमृतमश्नुते

M.P. COUNCIL OF SCIENCE & TECHNOLOGY ESTD 1981

एन सी ई आर टी NCERT

UNESCO United Nations Educational, Scientific and Cultural Organization

International Conference on "Emerging Trends in Technical and Vocational Education and Training : Vision 2025"

Certificate

This is to certify that Ms. Sumedha Tyagi, Research Scholar of Dept. of Management, Vardhman Mahaveer Open Univ., Kota, Raj. participated as paper presenter in the International Conference on "Emerging Trends in Technical and Vocational Education and Training : Vision 2025", organized by PSS Central Institute of Vocational Education, NCERT, Shyamla Hills, Bhopal, in collaboration with Madhya Pradesh Council of Science & Technology, Govt. of M.P., from 18th to 20th February, 2015.

Prof. Asfa M. Yasin
Organising Secretary
PSSCIVE, Bhopal

Prof. R.B. Shivagunde
Joint Director
PSSCIVE, Bhopal

Prof. B.K. Tripathi
Director
NCERT, New Delhi

Appendix-IV
Copy of
Research Articles
Published

The TVET Scenario and Challenges Faced by the SAARC Nations: With a Special Focus on the Indian Situation

Sumedha Tyagi (Vardhaman Mahaveeer Open University, India)

Source Title: Technical Education and Vocational Training in Developing Nations

DOI: 10.4018/978-1-5225-1811-2.ch006

Abstract

The chapter aimed at examining the technical and vocational education and training (TVET) issues across South Asian Association for Regional Cooperation (SAARC) countries with a view to understanding current scenario and challenges faced by them in terms of skilling their population in order to reap demographic dividend. It helped comprehend the skill issue in the context of globalization and sought to scrutinize how the skilling efforts that have moved on to central stage in all countries are regarded an important growth driver in knowledge based globalized economy. It explored the theme in a much wider context across nations and clearly brings out that these nations have a scarcity of trained workforce resulting in low work productivity, inadequately trained faculty, irrelevance of course content low industry involvement in TVET and terribly low institutional training capacity, TVET systems being too supply driven and far-removed from market demand. The chapter's inquiry based on primary data collected from the National Capital Region of India revealed this phenomenon clearly. The methodology combined both primary data with that of secondary data to support our hypotheses formulated in the study. The study has direct policy implications to India and other SAARC countries that the challenges to provide skill training are enormous in view of its complexity and heterogeneity of labour force. Continuous up gradation of skills is, therefore, paramount necessity in the context of globalized milieu. Unless numerous technical and vocational courses are qualitatively improved to make them marketable, these would continue to become less relevant to the needs of market.

Introduction

Skills and knowledge are the driving forces of economic growth and social development of any country. The economy becomes more productive, innovative and competitive through the existence of more skilled human potential. The level of employment, its composition and the growth in employment opportunities are the critical indicators of the process of development in any economy. Increasing pace of globalization and technological changes provide both challenges and growing opportunities for economic expansion and job creation. In taking advantage of these opportunities as well as in minimizing the social costs and dislocation, which the transition to a more open economy entails, the level and quality of skills that a nation possess are becoming critical factors. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of globalization (Planning Commission, Ministry of Labour and Employment, Government of India, 2011).

The world is undergoing a phase of new global economy that is dominated by knowledge, skills and emerging technologies. Therefore, the economies that grew at rapid pace are primarily the Knowledge Based Economies, educated and skilled labour force which is the key to the economic growth. Thus the human resource in an economy should have the knowledge and skills to assimilate new and rapidly emerging technologies. Skilled workforce has played a key role in economic growth of almost all the developed countries in Asia particularly, in their industrial growth during the last five decades. For example the

economies of Japan, Singapore, Korea, Taiwan, Thailand and Malaysia are among a few of the classical examples of recent era where the main stay of industrial growth, poverty reduction and employment generation was on their skilled and knowledge based workforce. As a matter of fact, these countries are exporting the knowledge and skills of their people. Adequately trained workforce played a pivotal role for these economies to remain competitive in emerging global economic arena and thus the strategic advantage of skilled workforce was capitalized for significant contribution in poverty reduction. Whereas, on the other hand, the importance of skill development for global competition has been ignored to a great extent by some of the countries particularly, in South Asia and as a result their economies have been suffering to a great extent.

The 21st Century necessitates developing a workforce in demand driven skills by appropriately investing in education and training to achieve sustainable economic development. Skill development in the modern era is extremely important for nations to compete globally. In South Asia a large part of the workforce continues to have low income opportunities because of low levels of skill. This situation can improve through more investment in education and training in the coming years. Acquisition of new technologies provides potential for improvement in global trade share. Sound economic policies and the way in which these actions are translated into strategies provide a foundation to promote employment-related human performance across all sectors of the economy. Key challenge in designing such strategies is how sensitive and innovative the regional countries are to the occupational needs of people with skills. Young population requires skills needed by the economy and the already employed workforce needs skills up-dating.

Investment in priority areas of education and skills development is very important for South Asia to reduce the skill gaps of the workforce. This gap is likely to widen in the coming years across region, if additional investment is not rapidly made. In order to have a sound TVET system in a country, a solid foundation in the form of basic education is a prerequisite. Many areas of the South Asia region are suffering badly due to lack of investment in core general education system. Likewise, it is also equally important to develop skills that are transferable across the occupations. The high illiteracy rates in South Asia add to the costs of doing business. Focus and investment in education and training is the key to progress for economic development. Societies which do not gear themselves to learn, find it difficult to progress.

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Importance of Soft Skills Training for Students of ITI's and Polytechnics: The Teachers' View

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Abstract

A well rounded personality, full of confidence is the first step to gain success in each and every aspect of life. Soft skills play a pivotal role in shaping and polishing a person's personality and are avidly sought by one and all in today's competitive world. This paper makes an attempt to know how important is soft skills training for the students of the Industrial Training Institutes (ITI's) and Polytechnics according to their teachers. The study was conducted in Delhi on 300 teachers of 5 ITI's and 5 Polytechnics. Judgemental and Convenience sampling was used as the sampling technique and primary data was collected through a self-developed questionnaire. The results of the study showed that most teachers considered soft skills to be of great importance for advancement in one's career and also for social interaction. Communication skills, presentation skills, leadership skills, time management and stress management were the five most important soft skills identified by the teachers.

Keywords: Soft Skills, Soft Skills Training, Importance of Soft Skills, ITI and Polytechnic Students, Teachers' View

Introduction

A well rounded personality, full of confidence is the first step to gain success in each and every aspect of life. Soft skills are highly sought after by both, employers and employees of today's world. Rainsbury, Hodges, Burchell and Lay (2002) defined soft skills as "interpersonal, human, people or behavioural skills necessary for applying technical skills and knowledge in the workplace" (As cited in Osman, 2013). According to Sirat et al (2012), soft skills refer to an individual quality which follow the attributes terms, such as selfconfidence, focus and commitment (As cited in Osman, 2013). Soft skills basically refer to

personalities, attributes, qualities and personal behaviour of individuals. Soft skills include certain abilities such as communication, problem-solving, self-motivation, decision-making, and time management skills (As cited in Majid, Liming, Tong and Raihana, 2012). According to Hewitt Sean (2008) soft skills are "non-technical, intangible, personality specific skills" which determines an individual's strength as "a leader, listener and negotiator, or as a conflict mediator" (AS cited in Seetha, 2013). Soft skills are the traits and abilities of attitude and behaviour rather than of knowledge or technical aptitude (Tobin, 2006), (As cited in Seetha, 2013).

Literature Review

Concerning the importance of including soft skills in colleges, Thacker and Yost (2002) noted that students require training to be effective team members. Employers often come across that "business graduates lack good team leadership skills" (As cited in Seetha, 2013). Similarly, according to Knell et al (2007) employers are continually asking for a work force rich in creativity, communication skills and cultural understanding (As cited in Seetha, 2013).

In a recent survey, 348 IT managers were asked to rate the importance of various skills (Aasheim et al., 2009). Soft skills were rated high, while hard skills related to knowledge of operating systems, hardware, databases, security, web development languages, telecommunications, and networking were rated much lower (As cited in Zhang, 2012). Soft skills have become the new mantra for organizations and trainers. Despite the occasional emphasis on sensitivity towards overseas cultures and visitors, it has become important not only in dealing with foreign clients, but also domestic ones (Venkataramana, 2013), (As cited in Kumar. K. R and Kumar. A. V., 2014). It is important to invest effort in perfecting soft skills to face everyday situations in not only the organization but also in our daily life. The development of 'soft skills' in the job market is important when there is intense competition for many available positions (www. hinduonnet.com), (As cited in Kumar. K. R and Kumar. A. V., 2014).

Studies have proved that employers of today's world give great importance to soft skills while recruiting, so, even students of today's world should give equal importance to these skills and make a sincere effort in acquiring soft skills. Giving students soft skills could make the difference in their being hired for a job in their field (Evenson, 1999), and the lack of soft skills can sink the promising career of someone who has technical ability and professional expertise but no interpersonal qualities (Klaus, 2010), (As cited in Robles, 2012).

Objectives of the study

1. To investigate the importance given by the teachers to soft skills.
2. To find out the top five soft skills according to the teachers.
3. To find out the level of soft skills possessed by the students according to the teachers.

Methodology of the study

1. **Data source:** Primary data was the source of data used for the study.
2. **Sampling technique:** Judgemental sampling was used to select the five ITI's and five Polytechnics from Delhi, further to select the respondents from the five ITI's and Five Polytechnics, convenience sampling was used.
3. **Sample size:** 300 teachers were selected as the sample for the study.
4. **Method of data collection:** A questionnaire consisting of closed ended questions was used to collect data from the teachers. The questionnaire consisted mainly of a rating scale matrix questions to elicit responses. The questionnaires were handed out manually to the respondents and collected immediately after they were completely filled by them.

Limitations of the study:

1. The study is limited to Delhi.
2. The five ITI's and five Polytechnics selected were on the basis of judgemental sampling technique.
3. From the ITI's and Polytechnics, the respondents were selected on the basis of convenience sampling technique.

Findings and Discussion

The objective wise findings and discussion of the study are as follows:

1. **Importance given to soft skills by the teachers:** Table 1 below shows the teachers' overall perceptions of the importance of soft skills. It was found that majority of the teachers
   either agreed or strongly agreed with the statements that soft skills were very important for
   career advancement, highly sought after by employers, important for getting a better

job,
getting along with people, and difficult to learn as compared to professional knowledge. On

the contrary it was found that a majority of the teachers either disagreed or strongly disagreed
with the statements that soft skills can't be enhanced through practice, these skills are important for academic performance, and that these skills were not as important as professional knowledge.

Table 1: General perceptions of soft skills

Statement	SD	D	N	A	SA
Soft skills are critical for career advancement	4	14	38	152	92
Soft skills are highly sought after by employers	11	15	24	166	84
Soft skills are important for getting a better job	8	10	60	186	36
Soft skills are difficult to learn compared to professional knowledge	14	52	38	138	58
Soft skills cannot be enhanced through practice	159	85	25	17	14
Soft skills are not as important as professional knowledge	77	129	46	31	17
Soft skills are important for getting along with people	10	15	20	177	78
Soft skills are important for academic performance	46	132	59	42	21

SD: strongly disagree, D: disagree, N: neutral
A: agree, SA: strongly agree

2. **Top five soft skills as per the teachers:** Table 2 below shows the top five soft skills as per the teachers. The top five soft skills as per them were: communication skills, presentation skills, leadership skills, time management and stress management.

Table 2: Top five soft skills

Soft Skills	Rank
Communication Skills	1
Presentation Skills	2
Leadership Skills	3
Time Management	4
Stress Management	5

3. **Level of soft skills possessed by the students as per the teachers:** The teachers were asked to do an assessment of the level of soft skills possessed by the students of their institute, and the top five soft skills which the teachers assessed the students to be good at were: team work (91%), willingness to learn (80%), decision making (65%), motivation (61%), leadership skills (59%)

Conclusion

The purpose of the study was to know the importance of soft skills training for the students of the Industrial Training Institutes (ITI's) and Polytechnics according to their teachers. The results showed that the teachers believed that soft skills play a very important role in the lives

Statement	SD	D	N	A	SA
Soft skills are critical for career advancement	4	14	38	152	92
Soft skills are highly sought after by employers	11	15	24	166	84
Soft skills are important for getting a better job	8	10	60	186	36
Soft skills are difficult to learn compared to professional knowledge	14	52	38	138	58
Soft skills cannot be enhanced through practice	159	85	25	17	14
Soft skills are not as important as professional knowledge	77	129	46	31	17
Soft skills are important for getting along with people	10	15	20	177	78
Soft skills are important for academic performance	46	132	59	42	21

of a student because, apart from professional knowledge, employers of today's world judge people on their confidence level, communication skills, presentation skills, leadership qualities, body language, time management skills, etc. while interviewing them for various positions. Thus, it can be concluded form the study that, apart from education, the one thing that separates the successful from the mediocre is-Personality. A well rounded personality, full of confidence is the first step to gain success in each and every aspect of life, be it academics, co-curricular activities, personal relationships, business or career.

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