Public Policies and Governance Perspective in Education Sector-Pakistan (Technical and Vocational)

Het overheidsbeleid en het bestuurlijk perspectief in de onderwijssector in Pakistan (het technisch en beroepsonderwijs)

(met een samenvatting in het Nederlands)

Proefschrift

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Table of Contents

List of Figures

List of Tables

List of Boxes

List of Abbreviations

ADB	Asian Development Bank
C.COM	Certification in Commerce
CBT	competency based training
CMC	Central management committee
D.COM	Diploma in Commerce
DAE	Diploma of associate engineer
DMT	Directorate of Technical Education & Manpower Training
DTTE	Department of training and technical education
ECNEC	Economic Coordination National Economic Council
EDUSAT	Education Satellite distance education systems
FATA	Federally Administered Tribal Areas
GOP	Government of Pakistan
GTZ	German technical Assistance
ICT	Information & Communication technology
ILO	International Labor Organization
IT	Information Technology
KPK	Khyber Pakhtunkhwa
LG	Local Government
LMIS	Labor Market Information Systems
MDGS	Millennium Develoepmnt Goals
MES	Modular Employable Skills
MTDF	Medium Term Development Framework
NAVTEC	National Technical Education & Vocational Training Commission
NCT	National capital territory
NEC	National Economic Council
NLC	National Logistic Cell
NOSS	National Occupational Skills Standards
NQF	National Qualification Framework
NRB	National Reconstruction Bureau
NSTI	National Staff Training Institute

NTB	National Training Bureau
NTDI	National Training Development Institute
NVTC	National Vocational Training Council
NAVTEC	National Technical Education and Vocational Training Commission
NVTP	National Vocational Training Project
NWFP	North Western Frontier Province
OECO	Economic Cooperation and Development
PPC	Pakistan Population Council
PSM	Public Service Management
RQ	Research Question
SBFC	Small business finance corporation
SDC	Skill Development Council
TEVT	Technical Education and Vocational Training
TEVTA	Technical Education and Vocational Training Authority
TOT	Training of Trainers
TTC	Technical Training Centre
UK	United Kingdom
UN	United Nations
UNDP	United Nation Development Program
UNESCO	United Nations Educational Scientific & Cultural Organization
VESD	Vocational Education and Skill Development
VTC	Vocational Training Centre
WETU	Women Employment and Training Units
WTTC	Women technical training center

DEDICATED TO MY LOVING MOTHER WHO IS AN ALZHEIMER's PATIENT

AND

ALL THOSE WHO ARE SUFFERING FROM THIS INCURABLE IRREVERSABLE DREADFUL NEUROLOGICAL DISORDER

Every four seconds, a new case of dementia occurs somewhere in the world.

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Chapter-1: Introduction

1.1 Introduction

The technical education and vocational training (TEVT) can help individuals to generate income and contribute towards economic growth and social development of a country by acquiring knowledge and skills. The quality of technical and vocational education in the country is quite debatable and challenging with regards to its effectiveness. It was imperative to carry out research on TEVT system in Pakistan. This study aimed at analyzing the past and present situation of technical education and vocational training system in the country. This involved an in-depth analysis of various policy, plans, strategies, programs/projects and the institution(s) involved in delivering TEVT in the country. The objectives developed for the study are; i) to map the TEVT policies, guidelines, programs, laws, ordinances, ii) to carry out a systematic assessment of national TEVT policies and programs implemented and above all iii) to find out the counter productive factors impeding the strategies and programs of TEVT System.

1.2 Research Question

In order to address these objectives the following research question was a guide to the study in evaluating the research problem:

- ***Investigating the contributing factors that facilitate or impede effective functioning of technical education and vocational training system.***

1.3 Significance of the Study

The study is of immense importance, which investigates the functioning and malfunctioning for the effectiveness of TEVT educational system. It highlighted the impeding factors responsible for the malfunctioning of the system and emphasized the need for appropriate policy measures and actions required. The country should follow a systematic effective national policy of vocational and technological transformation in a judicious and equitable manner which in the result would upgrade the knowledge and skills of the society's skill manpower. As on the delivery side the institutions are responsible to provide/deliver knowledge and skills to make human resources as an important asset to the society instead of a liability. Therefore, technical education and vocational training institutions may follow an effective and systematic training system that is to be governed in pursuance of respective polices and plans.

1.4 Explanation of the research parameters

The title of the study comprises of the terms namely: technical and vocational education & training, development & governance and the same has to be studied in terms of functioning/malfunctioning of the system.

i. Technical and Vocational Education and Training

The theory of Learning (Stromsforfer. E, 1972) refers to the technology of vocational training includes; training organization, pedagogy, instructional strategies, management and monitoring and feedback mechanism (Tsang, 1997)[1]. Technical and vocational education is defined by International Labor Organization (ILO) and United Nations Educational Scientific and Cultural Organization (UNESCO) as in addition to general education the aspects covers the study of technologies and related sciences, and the acquisition of hand-on/practical skills, attitudes, conceptual and understanding relating to occupations in various socio-economic life (Mustapha & Abdullah, 2001)[2]**.** This general view in practice leads to a differentiation between: i) vocational education focused on practical skills, and ii) technical education which is focused more on technologies and related sciences. Additionally, in general, technical education is provided at a higher level than vocational education, although this is not a simple division (UNESCO & ILO, 2003)[3].

In Pakistan's perspective, the concept is defined in clause-2h of the National Vocational and Technical Education Commission (NAVTEC, Ordinance, 2009)[4] as: "technical education and vocational training means training in any professional skill, trade, calling or occupation". This means both of the educations are interrelated and lead to the introduction or add value to the skills.

ii. Development

Modernization theory is a theory of development which states that the development can be achieved through following the processes of development that used by the respective government and the state is the central actor in modernizing "backward" or "underdeveloped" societies. The education and training is viewed as key to creating modern individuals. Samuel Phillips Huntington, political scientist regarded "development" to be as a linear process which every country must go through.

iii. Governance

Governance originated even earlier than Hummurabi's written code 4,000 years ago. Coase (1960)[5] advocated that there exists a strong linkage between; institutions, good governance and sustainable development. Chris (2007)[6] refers to the theories of Governance and regarded organizations are crucial in pursuance of the nature and the development of governance arrangements as they adopt to ensure legitimacy.

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1 Tsang, M.C. (1997), The cost of vocational training, International Journal of Manpower, Vol. 18 No. 1/2, 1997, pp. 63-89.

2 Mustapha, R, & Abdullah, A (2001), Globalization and its impact on technical-vocational education & training in Malaysia, Paper presented at the Annual Conference of the Association of Carrier and Technical Education, (75th, New Orleans, LA, December 13-16, 2001)

3 UNESCO & ILO. (2003). Technical and vocational education and training for the 21st century. Geneva: UNESCO/ILO. Document Number), pp. 7.

4 National Vocational and Technical Education Commission (NAVTEC), Ordinance, 2009, clause 2-h

5 Coase, R. (1960), "The problem of social cost", Journal of Law and Economics, Vol. 3, pp. 1-44.

6 Chris Mason, James Kirkbride, David Bryde, (2007) "From stakeholders to institutions: the changing face of social enterprise governance theory", Management Decision, Vol. 45 Issue: 2, pp.284 – 301.

Hirst, Paul, "Democracy and Governance", Oxford University Press, 2000" offers a more general definition of the expression. He asserts that governance can be generally defined as the means by which an activity or collection of activities is directed/controlled in such manner so that it may delivers a appropriate level range of result in accordance with the designed goals/standards. The governance is also regarded as the laws and regulations which come from the legislature entity and public policies.

The British Council emphasizes that "governance" is a broader view than government. Governance involves interaction between the formal institutions and the civil society. Governance refers to a process in which the basic fundamentals of society are blend by power/authority and pursue through policies and decisions relating to public life for the social uplift of the people.

The World Bank[7] which has a rich experience of development work in the developing countries referred to the concept of governance as: Good governance is characterized by predictable, crystal clear and progressive policy-making, a bureaucracy following professional approach and traditions for the; public good, the rule of law, transparent processes, and participating civil society in addressing public affairs.

Similarly United Nations Development Program (UNDP, 2006)[8] states that: governance is the exercise of socio-economic-political and administrative authority to manage the affairs of a nation. It is a comprehensive mechanism and processes and the institutions acts as means through which citizens/groups articulate their point of view and interests mediate their differences under legal framework.

Asian Development (ADB, 2001)[9] considered the concept of Governance as the manner in which power is exercised in the management of socio-economic resources of a country for its growth and development.

Peter McCawley[10] refers Governance as the capability of government to evolve implement public policy.

(Robinson, 2010)[11] gave the concept of good government as: it implies a top level of organizational effectiveness in relation to policy-formulation and those policies actually followed.

Hence it is clear that the concept of governance has over the years gained momentum. A wider meaning, however relates to the effective mechanism, refers to the laws and regulations which come from the legislature and public policies.

iv. Functioning /Malfunctioning

[7] The World Bank, Governance Barometer: Policy guidelines for good governance" Website of South Africa's National Party, http://www.gdrc.org/u-gov/governance-understand.html

[8] UNDP, Governance for the future, Gita Welch and Zahra Nuru, 2006, UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and the Small Island Developing States. pp 54-55

[9] Asian Development Bank (ADB) Long-term Strategic Framework (2001-2015), Policies and Strategies, Publication Stock No.03060. 2001.

[10] Governance in Indonesia: Some Comments, Peter Mccawley, Asian Development Bank Institute, Tokyo.

[11] John Healey and Mark Robinson, Institutional Framework for Ocean Governance: A way forward, Tarmizi, World Maritime University, 2010, pp. 9-10

The functionalist theory (2009)[12] which has the roots with Emile Durkeim advocated the strength of various segments of the society and these segments are interdependent. Functionalism highlighted the harmony and order in the society, focusing on social firmness and shared public values. The society comprises of various parts and institutions which are structured to address different requirements through participation.

From this perspective, disorganization in the system, such as deviant behavior, leads to change because societal components must adjust to achieve stability. When one part of the system is not working or is dysfunctional, it affects all other parts and creates social problems, which leads to deviation.

Deming (1900-1993) gave the theory of variation which states that the variation always exists in any process. The variation of any of the variable leads to malfunctioning. The systems are most efficiently optimized by concentrating on activities as far upstream as possible. Some understanding of variation is required to accomplish optimization. Variation always exists in any process, whether it involves equipment or people. The amount of variation determines the functioning/ malfunctioning of the system.

Dasgupta (1999)[13] stated that malfunctioning is the situation where progressive institutions are blocked by well-established non-market institutions. These institutions may have had a validation in the past but at present are dysfunctional due to the fact that they are causing obstructions in the growth of such progressive institutions.

Jibladze (2009)[14] described that the causes of malfunctioning of the institutions. In the globalization processes representative and concrete changes disappeared. Structural isomorphism does not convert into real one. Changes become of a ritualistic nature when institutions apparently represent two major principle of the future world i.e. progress and justice. The necessities of these two guiding principles are not communicated well therefore impact is not effective at the grass-root level of the education system. This gap and functionality of these institutions leads to a hazy operational model.

Hence, it may be concluded that functioning is regarded as the things are moving according to their designs, objectives and targets whereas the malfunctioning which occurs due to impeding factors may be regarded as: i) negative deviation of the system with respect to the established standards, ii) the change(s) which leads to poor performance of the system, iii) the difference in the output and the process control parameters, iv) the extent of disparity exists and sustained in a manner causing infectivity and inefficiency in some process, v) the actions & processes responsible for poor level of productivity & competitiveness with regards to the product(s) or services.

[12] Anderson, M.L. and Taylor, H.F. (2009). Sociology: The Essentials. Belmont, CA: Thomson Wadsworth.

[13] Dasgupta Partha, Poverty Reduction and Non-Market Institutions, Report of a Seminar Organized by the Asian Development Bank, 2001, ISBN No. 971-561-351-9 , Publication Stock No. 020601, pp. 5:6

[14] Jibladze Elene, Institutional Isomorphism in Higher Education Reform in Post-Soviet Countries: reasons, results and implications, research project Annual Doctoral Conference, Department of Public Policy, CEU March, 2009. pp 10:11

1.5 Focus of the Study

The functioning/malfunctioning of the TEVT will be studied in perspective of TEVT policies, plans, programs and institutional capacity. This is located in area of governance and management in of technical and vocational education system and examines the effectives of the strategies responsible at the delivery stage.

1.6 Background

Human development can be evaluated for a country by taking into consideration the human development index (HDI) which measures a country's achievements in three aspects of human development: longevity, knowledge, and a decent standard of living (NHDR)[15]. It is reported that although Viet Nam and Pakistan have comparable levels of income per person, but life expectancy and literacy vary significantly between both of the countries. The former has a much higher HDI value than Pakistan (Human Development Report, 2005)[16]. This prominent dissimilarity starts arguments on public policies on health and education. According to United Nation Report (2003)[17], education is the single most important factor contributing to young people's likelihood for productive and responsible lives and focusing on the primary and secondary education in particular.
International labor organization (ILO) defines youth from 15 to 24 years age group as this is a commonly accepted statistical convention (Pakistan Unemployment Report, 2008)[18].
Pakistan's literacy rate for adults of 15 years and above is 53.5% (Education for all Report, 2007)[19] and about 21% of the total population of 170 million (51% male and 49% female) comprises of youth and 17% of this segment is unemployed (Labor Survey, 2009)[20]. This data suggested that at present about 35 million people are in youth age. The forecasted demographic transition over the next few years shows that the young population of 15-24 years will be at its peak by 2015 (PPC Assessment Report, 2003)[21]. It is therefore imperative to utilize this untapped potential of the society for the labor market through education and training along-with the appropriate skills.
In the country's current financial budget (2011-12)[22] government has allocated only 1.8% of the GDP (ranked among the bottom seven countries of the world in terms of the education expenditure as percentage of GDP) to the education sector, which is far less than the millennium development goals (MDGs) which required an increased public expenditure on education to four per cent GDP by 2015. In order to make a significant

[15] Pakistan National Human Development Report (NHDR), Technical Notes, Mahbub ul Haq Human Development Centre, pp 138.

[16] Human Development Report, 2005, Mahbub ul Haq Human Development Centre, Islamabad.

[17] The Global Situation of Young People, Chapter-1, World Youth Report, 2003, United Nations. ST/ESA/287, ISBN 92-1-130228-5

[18] Pakistan Unemployment Trends, Ministry of Labour and Manpower, Labour Market Information Analysis Unit, Government of Pakistan, 2008

[19] Education for All: Mid Decade Assessment, Country Report: Pakistan, Statistical Analysis, Ministry of Education, Government of Pakistan, Islamabad, 2007.

[20] Pakistan Labour Force Survey, Federal Bureau of Statistics, Government of Pakistan, 2008-09

[21] Munawar Sultana, Culture Silence, Pakistan Population Council, Adolescents and Youth in Pakistan: A Nationally Representative Survey (Islamabad and New York: Population Council, 2003).

[22] Federal Budget, 2011-2012, Finance Division, Government of Pakistan, Islamabad.

improvement in the country, Pakistan's human capital requires focusing on education particularly on technical and vocational education for the sustainable socio-economic development.

If the general and technical education is differentiated, then the general education may have the features like: i) general knowledge, ii) less professionalism, iii) not work oriented, iv) excessive theoretical information, v) more bookish knowledge and less relevance for the industry/employment, vi) low wage rates and limited career growth, vii) fewer opportunity for self- employment. On the contrary the technical and vocational education and training provide: i) knowledge and skills targeting professionalism, ii) focal point is job related education, iii) add value through practical know-how, iv) academic and technical skills useful to the industry, v) industry driven knowledge to enter into job market, vi) growing demand for skills, vii) self-employment generation and potential to absorb in the global market, viii) the effectiveness of the education for employments is more, ix) human capital with less education background can add their value with some skill can start the apprenticeship and improve their livelihood. Hence the effectiveness of general education seems lesser than technical and vocational education in accordance with the scope of the study.

ILO (2009)[23] has indicated that the employment-to-population ratio in Pakistan is 49.8% (for age 15+) which is very low. Research report on education showed that in Pakistan one more year of technical education causes 2.4 percent rise in income level.

In 2005, it was pointed out by Wagner[24] that vocational and training system would have a major positive impact on national competitiveness and the evidences of German-British industrial experience showed specific links between vocational training, products and competitiveness on the basis of match plant comparison. Wagner further points out that skill development depends on a number of factors including: training, specification of a detailed national curriculum that is well understood across the sector, active role of employers, relevancy with the needs and management of the system. Costs sharing among employers-individuals-state and available list of qualified trainers to oversee the quality of the on-the-job learning are the areas to be considered for the effective TEVT system. This may conclude that manpower equipped with technical education gives better work performance rather than the general education.

A number of arguments are given in favor of the general education and numerous advantages are ascribed to technical and vocational education as well. Psacharopoulos and Loxley (1985)[25] observed that low level of economic development is directly related to the intensity of technical and vocational system in the country. Backer (1964)[26] was of the view that, within human capital framework, general education creates 'general human capital' and vocational and technical education creates 'specific human capital'. This was

[23] Guide to new millennium development goals employment indicators, ILO employment sector, 2009, pp 35:36

[24] Wagner K. (2005) Productivity and Skills in Industry and Services – A British-German Comparison. The Pakistan Development Review, 44 : 4 Part I pp 411: 412

[25] Psacharopoulos, G. and Loxley, W. (1985) Diversified Secondary Education and Development. Baltimore: Johns Hopkins/ World Bank, p. 228.

[26] Becker, Gary S., (1964) Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education, 1st ed. (New York: Columbia University Press for the National Bureau of Economic Research).

further endorsed by Yang (1998)[27] that it is really a difficult choice that which education is more appropriate either general or technical/vocational as both of the educations are significant. A school of thought also considers technical and vocational education as simply the wastage of the resources and advocates the general education. It may be suitable for such social-economic structures which rely mostly on general education and training and the job requirements do not require any specific skills. For instance some economies depend on tourism (service sector) and do not require specialized persons for their growth. A number of social scientists had opposed the technical and vocational education like: Foster (1965)[28] regarded the vocational school system as myth and called it "vocational school fallacy." The same was advocated by Mark Blaug (1973)[29] and argued that vocationalisation cannot be a solution for educated unemployment and this type of education cannot assist the aspects like: i) to generate students for specific occupations, ii) to reduce mismatches between learning and the labor market. On social front, Blaug also pleaded that vocational schooling may create a sense of low level of class segment in society. However, the arguments in favor of technical and vocational education are enormous. The immense industrialization of 19th century is a outcome of the technical education which leads to the enormous industrial growth. Seybolt (1917)[30] visualized the need of high skilled education for the development of industrial technological advancement. Psacharopoulos (1987)[31] considered vocational education as the need of the future, and more countries will attempt to adjust their formal educational systems in accordance the technical one. Jeroen Onstenk and Franck Blokhuis (2007)[32] are of the view that there are two learning pathways, i) a school-based pathway and ii) work-based pathway. Workplace learning is valuable for apprentices/students however there are two main challenges: the quality of workplace learning (substance/contents, guidance, assessment) and the quality and effectiveness of the relation between workplace and school-based learning in order to make vocational education training more practice oriented. Billett (1996)[33] conducted research which shows that quality of workplace learning is not assured due to the fact that the school based learning and workplace is not compatible to address the apprehension of vocational and technical education. McNabb (1997)[34] was of the opinion that career and technical education must

[27] Yang, Jin (1998) General or Vocational? The Tough Choice in the Chinese Education Policy, International journal of Educational Development 18 (4) (July): 289-304

[28] Foster, P.J. (1965) The Vocational School Fallacy in Development Planning. In: Anderson and Bowman (eds.), pp. 142-66.

[29] Blaug, M. (1973) Education and the Employment Problem in Developing Countries. Geneva: International Labor Office, p. 22

[30] Seybolt, R. F. (1917), Apprenticeship and apprenticeship education in colonial New England and New York. New York: Teachers College Press.

[31] Psacharopoulos, G. and Loxley, W. (1985) Diversified Secondary Education and Develop-ment. Baltimore: Johns Hopkins/ World Bank, p. 228

[32] Jeroen Onstenk, Franck Blokhuis, (2007) "Apprenticeship in The Netherlands: connecting school- and work-based learning", Education + Training, Vol. 49 Iss: 6, pp.489 - 499

[33] Billett, S. "Towards a Model of Workplace Learning: The Learning Curriculum." Studies in continuing education 18, no. 1 (1996): 43-58.

[34] McNabb, J. G. (1997), "Key affective behaviors of students as identified by a select group of secondary school teachers using the SCANS categories", Journal of Industrial Teacher Education [On-line serial], 34(4).

meet its obligations to all stakeholders which include: society, education community, business, industry and student/trainees. All the efforts are to be undertaken to identify employability and workplace skills and to transmit those skills to students. The precise nature of these skills may be changed by adopting problem-solving and collaborative approach instead of traditional one which is repetitive and manipulative tasks oriented.

In Pakistan the enrolment in technical & vocational education training (TEVT) has increased about 1.66 percent of the total education and during the last decade which is yet very low compared to 10 per cent in the world, 18 per cent in developed countries, 8 per cent in developing countries and 2 per cent in South Asia (NEP, 2009)[35].

In Pakistan the role of the government is prominent in technical and vocational education system right from the policy level to the implementation stage i.e. the governing structure. The Government has taken several major initiatives to bring about structural reforms in the education sector with a special focus on TEVT which includes: promulgation of national training ordinance 1980 amended 2002, national vocational & technical education commission ordinance, 2005, five years plans since 1951(ten in nos), 5 education policies (1972, 1979, 1992, 1998 and 2009). The aim of these initiatives is to improve the teaching quality, learning environment, building capacity of education managers and administrators, teachers, construction of intuitions and infrastructure etc and to improve the whole governing structure of TEVT.

There are lot of flaws and gaps in these efforts which require a radical policy strategy action plan to address in order to meet the rapid growing global competitive environment. Therefore this research will study the technical and vocational education training system of Pakistan and its effectiveness with reference to the government policies: past and present plans and strategies, program and regulatory framework with special focus on the governance aspects, i.e. performance, implementation and outcomes in a transparent and equitable manner. This will facilitate in identifying the functioning/malfunctioning aspects.

1.7 Preliminary aspects considered for the research

The two main broader areas of education i.e. general and technical are vital in learning process and thus become tools for the utilizing human capital in socio-economic growth of the country. The society can progress well when a comprehensive and balanced education system is practiced particularly in the context of the countries of developing economies. Historically it is debated that which type of education fits to a society. Jobs for the present and the future demand higher levels of competencies and skills. The skills and talent of the workforce provide a competitive edge for the individual(s) as well as entrepreneurs in an ever-changing working environment. Due to the technological advancements, radical changes have been observed in the production processes, methods and techniques adopted in the industries. Consequently, the demands for the skills have also changed. Modern technology requires specified educated and skilled human resource instead of skilled manpower based on experience from generation to generation of education. Technical and vocational education can produce exactly the kind of work force required in various technical jobs. For a country to acquire its position in the

[35] UNESCO, 2006: Education for all: Literacy for life. Paris: UNESCO.

national and international market it should possess highly skilled labor force. The respective economies of the countries have to improve its competitiveness by making the labor force more technically skilled hence productive which can only be possible by imparting technical and vocational education and skills through effective and efficient system.

The interest in pursuing the area of the research study is the technical education and vocational training (TEVT) in Pakistan's perspective with particular focus to its delivery system. The study took in to the account policies, plans, strategies and efforts undertaken in the past and at present in TEVT sector and investigated the factors facilitating or impeding/malfunctioning of TEVT system in the country. The area of study was chosen due to the fact that in Pakistan the policies, plans as well as institutions fail to produce tangible output as it was targeted due to the fact that they lack in contextual relevance and do not have the capacity to deliver. This is also based on personal experience working in various positions and involvement in public sector at various stages starting from policy level to the delivery stage. It was primarily important to pursue the study as it was motivated by the exposure to the efforts in other countries which has changed the landscape of these nations in term of massive socio-economic development.

1.8 Sources of Data

An attempt is made to document the reliable, comparable and authentic primary and secondary data to support the scope of the study which includes: books, research papers, public reports, international agencies documents, educational policies, institute documents, development plans, and studies of the task forces on the subject, study groups, proceedings of the conferences, seminars, workshops etc. Further case study is conducted of TEVT institution and the interviews and surveys are also conducted through questionnaires and meetings.

1.9 Structure of the study and chapter outlines

This dissertation consists of six chapters. Chapter 1 reflects the basic research question to be addressed in the study describes the current situation and need of the study in term of its scope and significance. The parameters involved in the research have also been discussed with relevant aspects. Chapter 2, the theoretical review comprises of literature review. The theories of; learning, behavioristic, institutional, governance and institutional have been highlighted. It deals with debate and arguments on various approached of education and its technical and vocational aspects. Further role of various stakeholders and functioning/malfunctioning of the institutions and related issues have also been argued. Chapter 3 deals with the procedure adopted to conduct the study. The researcher addressed the aspects of research design, conceptual framework, and theoretical framework of the study on the basis of literature review. The methodology and research instrument applied to address my research question. The historical perspective of research methodology is applied with accepted literature of criticism, construction and interpretation. The researcher tries to apply the historical fact, conclusions and analysis of the data in the study of the problem. To apply the narrow down approach, Chapter 4 relates to specifically with the technical and vocational education with historic perspective of various chronological phases which started from colonial period to the present one. The system of TEVT discussed by undertaken eighteen polices /reports,

laws/ordinances and eleven midterm five year plans of the country since 50s to 2011. The framework under which the system is being delivered at various tiers is also discussed and supplemented with required data. The Chapter-5 is the case study of the technical and vocational institution which is an in-depth study of a particular institution. The researcher applied the method to narrow down a very broad field of research into one easily researchable topic. The researcher used to test theoretical models by using them in real world situations and the research instruments was applied to collect valuable data. Chapter-6, the Conclusion, ties up the thesis and makes recommendations based on the salient issues emerged causing malfunctioning of TEVT system.

Box-1

The central argument is simply to determine the factors contributing in functioning or malfunctioning of technical and vocational system in Pakistan. The argument supported the importance of technical and vocational education through theories of learning and development which supports the acquiring of knowledge through skills and development through institutions. The parameter of the study has direct relationship with the leading question of the study considering the fact discussed in the literature of these aspects which has an important role in improving or deteriorating the national human development ranking. The researcher concludes that for an effective TEVT system, vibrant polices, legislations, programs and the role of the institutions is essential**.** There seems an imbalance between various stakeholders which can be overcome through rationalization and the way these instruments are utilized is critical. The present TEVT system of the country is characterized by resource scarcity, complexity of knowledge & skills and under utilizing the young person in productive way. This is established fact that TEVT can help individual to generate income and contributes to economic growth and social development of a country by acquiring knowledge and skills.

Chapter-2: Review of Literature for the Dissertation

2.1 Introduction

A huge amount of published literature on organization/institutes is available which speaks regarding different aspects such as its establishment, objectives and functions, system of operation, finances, programs and projects, success stories due to perfect functioning of the system and failure due to malfunctioning of the system etc. However it is very difficult to comprehend this vast literature here. However an effort is made to studying some of the material which is most likely fit to various aspects of this study and helped out to furthermore the arguments. Various themes for the current research have been developed in pursuance of the research objectives and the parameters of the study.

2.2 Education and Technical Skills

Education plays a critical role in the development process of any country and usually comprises of: education & training, scientific research and skill development or it can be regarded as the core aspect on which the whole foundation of socio-economic and political structure of the nation depends. The five essential components for effective education involve: quality education, curriculum and learning materials, educator training support, policy and management of the systems and approaches for its delivery.

In education, the process of learning is studied by a number of social and behavioral scientists as the same process is considered extremely complex. Like Skinner gave Behavioristic theory36 which advocated that the process of learning involves four elements: stimulus, response, reinforcement and repetition which can shape the behavior (Fodor, Bever, & Garrett, 1975)37. If people receive no acknowledgement of their behavior, they will likely change that behavior until they receive some kind of reinforcement. The first major attempt to apply learning theory to educational technology was Skinner's development of teaching machines. His idea was to develop curricula in such a way so that a learner could learn without fault. Effective instruction can only bring accurate responses. Skinner was critical of traditional teaching methods because these cause errors in learning and can not reinforce behavior effectively. On his theory, negative reinforcement (e.g. criticism, punishment) was to be avoided. Only positive reinforcement is supported which must be in accordance with the specific schedules to make sure effective learning. A curriculum is an important aspect for the effective learning. Curriculum defined as the specific knowledge and skills that students learn (ASCD 2005)[38]. This is what Dall'Alba (2005)[39] characterizes as the plan to address epistemology, described as the theory of knowing. The quality of curriculum is regarded

[36] Louis M. Smith (1999), quarterly review of comparative education (Paris, UNESCO: International Bureau of Education), vol. XXIV, no. 3/4, 1994, p. 519-32.

[37] Fodor, JA: Bever, TG: & Garrett, MF. (1975), The Psychology of Language: An Introduction to Psycholinguistics and Generative Grammar. New York: McGraw-Hill, p 25.

[38] ASCD (2005), For the success of each learner: 2004 Year in review, Association for Supervision and Curriculum Development Annual Report

[39] Dall'Alba, G. (2005) Improving teaching: Enhancing ways of being university teachers, Higher Education Research & Development, 24(4), 361-372).

as the focal aspect. Reid and Loxton (2004)[40] agree that internationalization is a way of thinking about curriculum and its quality. They suggest that globalization approach should expand to focus on; teaching, research, quality of learning experiences and applying curriculum as the main vehicle. The curriculum may have the flexibility to change according to the demands of the market and technology. The curriculum design also needs to accommodate varied learning styles and methodologies and creating interest in the contents for the learners (Nulty, Vegh and Young 2002)[41].

Anderson's theory[42] of learning and cognition training systems monitors each interaction between the learner and the learning environment and interprets each action of behavior in relation to the learning goals being presented. The system is highly responsive to learner actions and adapts their instructions to individual requirements considering the learner's strengths and weaknesses. However the defined learning path has to be followed and there is no possibility for any one has some preferred strategy, whereas Skinner's theory represents learning as the formation of conditioned responses.

Skinner's school of thought is more acceptable which supports positive reinforcement and discourages traditional teaching tools which are not user friendly. Further the role of the learners or the trainees are vital as they are the main stakeholders in the whole process of learning to contribute according to their skills and abilities learned through various methods.

It is observed that numbers of academicians, policy makers, experts are of the view that the knowledge of education must be equipped with skills and handiness to make people productive. The Theory of Learning (Stromsforfer, 1972)43 refers to the technology of vocational training encompasses the training organization, pedagogy, instructional strategies, management and monitoring procedures. Further the human capital theory considers human capital as a primary source of economic growth and labor product & quality could be increased as a result of investment in human resources (Ramirez and Boli-Bennett, 1982)[44].

The constructive approach suggests that the teachers/trainer facilitate learning by encouraging active inquiry, guiding learners to question their implicit assumptions, and coaching them in the construction process while in the behavior list approach the teacher/trainer disseminates select knowledge, measures learner's passive reception of facts, and focuses on behavior control and task completion. A constructivist teacher is more interested in uncovering meanings than in covering prescribed material.

A constructivist method for helping novices to acquire expertise is cognitive apprenticeship**.** In cognitive apprenticeship, experts model the strategies and activities needed to solve problems, and learners approximate doing the activity while articulating

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[40] Reid, A. and Loxton, J. (2004), Internationalisation as a Way of Thinking about Curriculum Development and Quality. In: Rob Carmichael (Ed) Quality in a time of change. Proceedings of the Australian Universities Quality Forum, Adelaide, 7th -9th July 2004, pp99 – 103.

[41] Nulty, D., Vegh, V. and Young, J. (2002), Curriculum design innovation in flexible science teaching, In: Proceedings of the Scholarly Inquiry in Flexible Science Teaching and Learning Symposium pp30-51).

[42] Anderson, J. R. (1989). The Transfer of Cognitive Skill. Cambridge, MA: Harvard University Press.

[43] Mun C. Tsang, (1999) "The cost of vocational training", Education + Training, Vol. 41 Iss: 2, pp.79 - 97

[44] Ramirez, F. and Boli-Bennett, J. (1982). Global patterns of educational institutionalization Altbach and G. Kelly (eds) Comparative Education. New York: Macmillan, pp. 15-38

their thought processes. Experts/trainers coach the learners with appropriate scaffolds (physical aids and supporting materials), gradually decreasing assistance as, through continued practice: learners internalize the process by constructing their own knowledge base and understanding (Farmer, Buckmaster, and LeGrand 1992)[45]. Research confirms that the focus in teaching and learning should be on the individual's active construction of knowledge (Stevenson 1994, p. 29)[46]. The essential role of vocational education is to facilitate construction of knowledge through experiential, contextual, and social methods in real-world environments (1997, p. 27)[47]. Lillis, Hogan (1983)[48] and Grubb (1985)[49] regarded vocational education as the solution to an enrolment problem of the public education policies. Chung (1995)[50] reported that the 12 studies showing higher returns to vocational education than to general secondary education and ten studies otherwise: and five studies that give no clear results.

Considering the above theories and deliberations whether focusing the educator, learner or the environment under which the value addition of knowledge and skill is undertaken supports the technical and vocational education. The environment may be referred to policy framework, legal coverage, institutional capacity and management of the resources for such learning. TEVT could play an important role to the present and future workforce by lowering manning requirements through better utilization of workforce expertise. This productive workforce can become the main contributing factor in the economic development. The economic development is related to the market demand of particular trade or skill(s) which are acquired through the level of competency. The productivity has become the focal aspect due to the recent massive industrial development and technological innovation. Therefore at multiple level of the education system the technical and vocational education & training (TEVT) may be imparted through a participation and responsive approach with an effective institutional framework.

2.3 Institution

Institutional theory explains the effect of organization behavior, structure, interaction among office holders, norms, rules and procedures, strategies and philosophies on policymaking process. The institution framework is based on the concepts of universality to all and includes legitimate framework being assigned to a policy by the government institution, government policies are legal obligations and the deviation from the policy result into malfunctioning or legal consequences. Hence it is philosophy of governance that state should be fair with its programs. It has to account far as to why some segments of the society are better off due to some policy decisions and the answer rests in the

[45] Farmer, J. A., Jr.: Buckmaster, A.: and LeGrand, B. "Cognitive Apprenticeship." New directions in adult and continuing education no. 55 (Fall 1992): 41-49. (EJ 456 732)

[46] Stevenson, J., ed. Cognition at Work: The development of vocational expertise. Leabrook, Australia: National Centre for Vocational Education Research, 1994. (ED 380 542)

[47] Lynch, R. L. Designing vocational and technical teacher education for the 21st century. Columbus: ERIC Clearinghouse on Adult, Career, and Vocational Education, 1997.

[48] Lillis, K. and Hogan, D. (1983) Dilemmas of Diversification.

[49] Grubb, W.N. (1985) The Convergence of Educational System and the Role of Vocationalism. Comparative Education Review 29 (4): 526-548.

[50] Chung, Yue-Ping (1995) Returns to Vocational Education in Developing Nations, In: Carnoy, M. (ed.) International Encyclopedia of Economics of Education. Oxford: Pergamon, pp. 175-81

structural and behavior interaction, within and outside of the organization and rules and procedures under which the institutions operates.

The foremost stakeholder for knowledge & skills are the institution(s) which is/are responsible for the disseminating such know-how under the specific governing structure to the unskilled or partially skilled labor force. Nabli (1989)[51] referred the concept given by the World Bank and defines institutions as "sets of formal and informal rules governing the actions of individuals and organizations and the interactions of participants in the development process". This is to be clarified that the term institution broadly refers to the governmental and non-governmental social systems and their underlying values, rules, norms of behavior and traditions that govern social relations and among one of the most important institutions in a society is the government. The government through its legislative, executive, and judicial structures lay down the formal rules/procedures and implement through various coercive systems to create harmony in society. It is further to mention that World Bank realized the fact since 1980s that the major obstacle to development is not only the absence of technology or lack of resources but the unresponsiveness of administrative systems and weak institutions. According to North(1989)[52], for some scholars the institutions are rules, enforcement characteristics of rules, and norms of behavior that develop human interaction and for others they are simply a set of constraints, which governs the behavioral relations among individuals or groups. Joyce & Voytek (1996)[53] advocated that the technical and vocational institutions must have the capacity of producing skilled workers in relation to market requirements. The skills have to be compatible with the market by considering new horizons and absorbing the new emerging changes for the development of society. Doolittle (1999)[54] agreed that rethinking is very much required to determine the policies, institutional structure and deliver the content of technical education for workforce preparation in the future. The valuable functioning of the technical and vocational education institutions requires that their process of producing productive human resources is competitive and in accordance with the market demand and work in close liaison with the industry. Hence there exists a direct relationship between the function of the institutions with regards to affectivity, efficiency and productivity. Joost (2008)[55] emphasizes the institutional approach for analyzing the reasons for unsustainable development and advocated that the institutional analysis process helps to identify the problems and build a theoretical framework for policy making and basic changes required. The quality of the institutions

[51] Nabli, M.K. and Nugent, J.B. (1989), "The new institutional economics and its applicability to development", World Development, Vol. 17 No. 9.

[52] North, D.C. (1989), "Institutions and economic growth: a historical introduction", World Development, Vol. 17 No. 9.

[53] Joyce & Voytek. (1996), Navigating the new workplace, Vocational Education Journal, 71(5), pp. 30-32.

[54] Peter E. Doolittle & William G. Camp, 1999, "Constructivism: The Career and Technical Education Perspective" Journal of Vocational and Technical Education (JVTE), Volume 16, Number 1.

[55] Joost (2008), An institutional capital approach to sustainable development Joost Platje, Faculty of Economics, Opole University, Opole, Poland, Management of Environmental Quality: An International Journal Vol. 19 No. 2, 2008, pp. 222-233

in Pakistan always remains a challenge and studies have shown that the structure and quality of the institutions are obsolete, ineffective and inefficient (Almas, 2003)[56].
Considering the above thoughts, the institutions represent infrastructure, resources, interpretation and reflect the translation of legal language in to operational procedures and application represents the activity of actual delivery of services with enforcement techniques. This is highly imperative that the institutions can play a key role in the process of socio-economic development through effective planning and implementation process to ensure long-term sustainability of development projects/programs. Further the role of the government in these institutions is central and focal to provide public services and designs the rules, regulations and standards. Conducive social policies with best practices are very much required for the institutional development process. The institutional capital may be regarded as institutional governance to create the structures to enforce the rules of the game to be effective in reducing uncertainty and encouraging adaptive efficiency. The capacity of the institutions can only be capitalized when a well defined governance structure is practiced with a participating approach. In the following lines some material is being presented on the important factor of 'governance'.

2.4 Governance

Chris (2007)[57] refers two theories of governance: Stakeholder and Stewardship and stated the utility and importance of neo-institutional theory while analyzing the social enterprise of governance. The Stakeholder theory presents moral justification for the management of different groups who affect or are affected by an organization and these groups priorities their needs but the criteria of prioritization is debatable. Stewardship focuses gave importance to non-economic factors like trust to attain maximum social benefit. The philosophy this view is that managers are not only motivated by self-serving interests and pro-organizational aspects. The institutional theory gave the variety of justification and explanation that makes organizations distinct like ethical values. However the legitimacy for such organizations is vital as it may account far the nature and development of governance arrangements that they adopt to guarantee the legitimacy.
Governance broadly conceived as institutions, rules and political processes and thus plays a central role in fostering human security. Governance has to promote human development and is not just a pro-people/people center for it has to be owned and participated by the people.
Coase (1960)[58] advocated the inter-linkage of institutions, good governance and sustainable development. This means that the institutions play a crucial role in development because they determine the costs of exchange and production through facilitation of smooth human relations and reduce uncertainties by providing both formal and informal rules and leads to promote social relations and behaviors. Blunt (1995)[59]

[56] Almas, Z. H. 2003. Export Diversification and Sustainable Growth. Daily DAWN. Newspaper, November 17, 2003

[57] Chris (2007), From stakeholders to institutions: the changing face of social enterprise governance theory, Chris Mason, James Kirkbride, David Bryde, Liverpool Business School, , Liverpool John Moores University, Liverpool, UK, Management Decision, Vol. 45 No. 2, 2007, pp. 284-301

[58] Coase, R. (1960), "The problem of social cost", Journal of Law and Economics, Vol. 3, pp. 1-44.

[59] Blunt, P. (1995). 'Cultural Relativism, Good Governance and Sustainable Human Development', Public Administration and Development, Vol. 15, pp. 5-7.

pointed out number of requisites for good governance including political legitimacy, accountability, freedom of association and participation, legal and transparent framework, rule of law, freedom of information and expression, sound and competent administration, open institutions, vibrant civil society and respect for human rights. In 1996, Rhodes[60] refers that the governance has to do with self-organizing inter-organizational networks that substitute and complement the functions of hierarchies (i.e. bureaucracies) and markets or co-exist with them.

Doornbos (2003)[61] points out that for a long time the word "governance" was not clearly defined in dictionary as usually it refers to some corporate bodies for the boards of governors related to administration and having less focus on management. He further pointed out that the concept of good governance was developed for referring to the way in which; countries, provinces, cities and institutions are being governed.

Najem (2003)[62] gave a broad view of good governance including policies for free economy and conducive environment for market growth, transparency in decision making for socio-economic economic uplift, encouragement to civil society and concrete measures to address global challenges like; education, health and the environment. Arie Halachmi (2005)[63] distinguished between governing and governance and referred that governing has to do with control, while governance is related with steering. The governing is state-centered while governance assumes a polycentric (or at least a decentralized) institutional structure with the government apparatus as only one of several actors. Roy and Tisdell (2008)[64] considered that the possibility for good governance depends on institutional structures and the economic resources available for ensuring governance and the centralized governance structures are inefficient and unproductive. It was further argued that the decentralized governance structure reduces the need for co-ordination as the centralized structure transfers the functions to lower tiers of government which it cannot handle effectively. In this perspective the decentralization has taken three structure: i) "de-concentration" referring to transferring resources and decision making from headquarters to the lower level, (ii) "devolution" referring to devolution of resources and power to autonomous units of government and iii) "delegation" meaning delegation of resources and power to organizations outside the traditional bureaucratic structures.

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[60] Rhodes, R.A.W. (1996), "The new governance: governing without government", Political Studies, Vol. 44 No. 3, pp. 652-67

[61] Doornbos, M. (2003), "Good governance: the metamorphosis of a policy metaphor", Journal of International Affairs, Vol. 57 No. 1, pp. 3-18.

[62] Najem, T.P. (2003). 'Good Governance--the definition and application of the concept' in Najem T.P and Hetherington, M. (eds) Good Governance in the Middle East Oil Monarchies, Routledge Curzon

[63] Arie Halachmi (2005), "Governance and risk management: challenges and public productivity", International Journal of Public Sector Management (IJPSM) Vol. 18 No. 4, 2005. pp. 300-317, Zhongshan University, Zhongshan, China and Tennessee State University, Nashville, Tennessee, USA,

[64] K.C. Roy and C.A. Tisdell (2008), Good governance in sustainable development: the impact of institutions, International Journal of Social Economics, 25,6/7/8, The University of Queensland, Brisbane, Australia.

Bo Rothstein and Jan Teorell (2008)[65] while discussing the quality of governance considered effectiveness and efficiency as the most important aspects of the governance. They were of the view that it would be indeed a weird to argue that a government that is inefficient or ineffective can have a high quality of governance (QoG). Shah (2005)[66] considered that two features of government performance were responsiveness (whether the public manager is doing the right things—i.e., delivering services consistent with citizen preferences) and efficiency (whether the public manager is doing them right—i.e., providing services of a given quality in the least-cost manner). Similarly, La Porta et al. (1999)[67] consider efficiency and effective spending as essential indicators to observe QoG.

These examples suggest that there are actually (at least) two dimensions of state capacity: i) the degree of successful policy implementation—effectiveness—and ii) the amount of government output delivered relative to input—efficiency.

Esade and Francisco Longo (2008)[68] stated that the research agenda for quality of governance (QoG) should just focus on identifying those factors that consistently produce satisfactory results in different institutional environments. QoG requires the application of a range of criteria which includes: (a) extent to which policies are persistent, (b) adaptability of the policies in accordance with the circumstantial changes, (c) degree of coherence and coordination of policies and actions among the actors who participate in their design and implementation, (d) quality of implementation and enforcement, (e) degree to which policies pursue the best public interest, and (f) the extent of efficiency that which policies reveal an allocation of limited resources that ensures maximum returns. Rothstein and Teorell (2008)[69] use the expression quality of government as a synonym of good governance in their article. In their view and in view of various authors there is consensus (Aguilar 2006[70]: Kettl 2002[71]: Kooiman 2003[72]: Loeffler 2003[73]:

[65] Bo Rothstein and Jan Teorell (2008), "What Is Quality of Government? A Theory of Impartial Government Institutions", An International Journal of Policy, Administration, and Institutions, Vol. 21, No. 2, April 2008 (pp. 165–190), Lund University.

[66] Shah, Anwar. 2005. "Overview." In Public Services Delivery, ed. Anwar Shah.Washington, DC: The World Bank.

[67] La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. 1999. "The Quality of Government." Journal of Law, Economics and Organization 15 (1): 222–279.

[68] Esade and Francisco Longo (2008), "Quality of Governance: Impartiality Is Not Enough", An International Journal of Policy, Administration, and Institutions, Vol. 21, No. 2, April 2008 (pp. 191–196), Ramon Llull University.

[69] Rothstein, Bo, and Jan Teorell. 2008. "What Is Quality of Government? A Theory of Impartial Government Institutions." Governance 21 (2): 165–190.

[70] Aguilar, Luis F. 2006, Governance and Public Management. Mexico: Fondo de Cultura Economica, Institute of Public Governance and Management, ISBN 978-968-16-8133-3

[71] Kettl, Donald F. 2002. The Transformation of Governance. Public Administration for Twenty First Century America. Baltimore, MD: Johns Hopkins University Press, pp 204

[72] Kooiman, Jan. 2003. Governing as Governance. International Public Management Journal, Vol 7, No 3, pp 429: 442, UK.

[73] Loeffler, Elke. 2003, ed. Tony Bovaird and Elke Loeffler, Public Management and Governance, Pub: Routledge, Londn, ISBN 0-203-63421-7.

Mayntz 1998[74]) that current governance is characterized by the relational nature of the public sphere in dealing with emerging issues (Clarke and Stewart 1997), which require effective governmental collaboration and coordination.

Jan Kooiman (1996)[75] gave three theories on governance under various concepts as follows: i) for the World Bank and the developmental literature, the governance concept is the essence of enlightening its traditional technical capacity-building scope to a base in which there is room for civil society and its participation, ii) the second concept is that using governance to develop an extensive theory of social-political interaction, the basic argument is that since modern societies are diverse, dynamic and complex, the problems associated with those societies have peculiar characteristics and their solutions. The traditional problem solving approaches ignore the diversity and can not cope up with dynamics and complexity and iii) governance serves as a comprehensive concept in the development of problem-oriented Public Service Management (PSM) theories that are open-minded with respect to inclusion of pluralistic societal forces.

The international donor agencies consider governance in context with good governance. According to World Bank (2008)[76], it refers to the way through which the power is exercised in the management of the country's scare socio-economic resources and identified three distinct aspects of governance: (i) the form of political regime: (ii) the process and methods by which authority is exercised and (iii) the capacity of governments to design, formulate, and implement policies and perform functions. The bank viewed governance more broadly and asserted nature for Good governance is characterized by predictable, open, enlightened and transparent policymaking through specialized bureaucracy. The executive of government must be accountable for its actions and a strong civil society has to participate in public matters under the umbrella of the rule of law. The bank has promoted the mechanisms of decentralized decision making and private sector participation for achievement of greater efficiency, transparency and accountability in the delivery of social and infrastructural services. "Voice" refers to the willingness and ability of the citizens of a society to exert pressure on public service regulators and providers to perform/deliver social services effectively (Paul, 1991)[77]. Promoting decentralized and participating decision making through the "voice" mechanism allows local communities, civil society and the poor to contribute in decision making process. Examples include involvement of local communities and participation of parents in governance of schools.

According to United Nations Development Programme (UNDP) good governance is considered in terms to apply political-economic and executive authority in order to deal with the helm of affairs of the country at multiple levels. It consists of a framework of

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[74] Mayntz, Renate. 1998. New Challenges to Governance Theory. European University, Institute, The Robert Schuman Centre. Florence-Jean Monnet Chair Papers, no.50.

[75] Jan Kooiman (1996), "Research and theory about new public services management Review and agenda for the future", International Journal of Public Sector Management, Vol. 9 No. 5/6 1996, pp. 7-22, Erasmus University, Rotterdam.

[76] Public sector governance reform: the World Bank's framework Praveen Kulshreshtha, Department of Humanities and Social Sciences, Indian Institute of Technology Roorkee, Roorkee, India, International Journal of Public Sector Management Vol. 21 No. 5, 2008 pp. 556-567

[77] Paul, S. (1991), "Strengthening public service accountability: a conceptual framework", Discussion Paper No. 136, The World Bank, Washington, DC. p. vii

practices, methods and institutions and through which various segments of the society express their interests, work out their lawful rights, meet their responsibility, and communicate their divergence. Similarly organization for Economic Cooperation and Development (OECD) gave the idea of governance and regarded it as to apply the political influence and authority to the society and resource management for the socio-economic development. The commission on global governance illustrated the concept of governance that it is the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action may be taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest. The aspect of good governance has become so immense that even the Secretary Gen United Nations considers it as the single most important factor for eradicating poverty and promoting development. In order to give a global legal framework all head of the states of the member countries including Pakistan agreed to provide good governance at all levels for sustainable development, sustained economic growth and poverty eradication under UN Millennium Declaration.

The challenges of governance in the South Asia region are paramount and "good governance" is considered to be vital to improve public services and addressing the citizen's needs. India, Pakistan and Bangladesh constituted about 95% of total south Asia population and were liberated in 1947 from British rule. People's Perception Survey (2005)[78] conducted for south Asian countries (India, Pakistan, Sri Lanka and Bangladesh) reveals that the South Asians are well aware of the institutional failures of the state and the governance issues which have caused serious deterioration in the region. This was revealed that the corruption in the state institutions has increased over the last five years and primarily due to lack of accountability and transparency in public offices and citizens feels them insecure in socio-economic and political areas**.** In the absence of equitable and just distribution of resources due to ethnicity, caste and religion leads to discrimination among the fellow citizens. The illiteracy rate in South Asia is two and a half times the rate in the rest of the developing world. The proportion of malnourished children under five is almost three times as high and access to health facilities one and a half times as low. The majority of south Asians demand that education should be the top priority for the government budget.

After partition in 1947 Pakistan being the developing country is striving in the phase of development process in various areas for achieving the desired social development indicators. There is an increase in poverty in the country and according to Asian Development Bank (2009) [79] about 1/3rd of the population of the country is living below poverty line which is alarming figures. United Nations University (2001)[80] conducted world governance assessment survey for 16 developing countries and Pakistan was rated as one of the lowest governance country by obtaining a score of 65 at scale of 100 and one of the main parameter of the survey was deteriorating socioeconomic indicators.

[78] People's Perceptions Survey 2005, Human Security in South Asia, MHHDC Monograph Series, Mahbub ul Haq Human Development Centre. pp 164

[79] Asian Development Annual Report, 2009

[80] Survey conducted by United Nations University, Tokyo, 2001.

By late 1990s many international development and donor agencies in Pakistan have shifted their emphasis from supporting service delivery programmes focus building state institutions and improving governance in Pakistan. The governance programs focuses on building the capacity of the public institutions and programs which may enhance their achievements to desired Millennium Development Goals (MDG's). MDG of the United Nations for Pakistan comprises of the enrolment of all children in primary school and eradicate disparities at all levels of education by 2015. It was also recognized that successful reform in Pakistan depends primarily on a country's institutional and political policies (World Bank yearly Report 1998)[81].

According to UNDP, the governance assistance in Pakistan required three interventions: (a) devolution (b) strengthening institutions, and (c) enhancing socio-economic development. Strong, credible and effective governing institutions those have the ownership of the society posses the capability to deliver in accordance their mandate are essential pursue sustainable socio-economic development. Asian Development Bank (ADB) is of the view that the second-generation governance reform of Pakistan is in progress and there is an urgent requirement to intensify the present reforms and broaden their scale. This includes strengthening fiscal management at all the tiers of the government, improving the obligatory social services and creating conducive environment for private sector development through competitiveness. ADB also mentioned that there is no central point for rational policy planning for the TEVT sector and malfunctioning of the institutions can impede development progress and their level of the effectiveness can be determined through their formal laws, policies, and rules under which they function (ADB, 2003)[82].

Malik (2006)[83] referred various reports of the World Bank and conducted an analysis and compared Pakistan with other countries of similar Gross Domestic Product (GDP) level, it has 42 % lower health spending per capita, 27 percent more infant deaths per thousands and 24 percent lower rate of literacy in adult population which is primarily due to bad governance. The same was further confirmed by Mansoor (2008)[84] that the governance in Pakistan deteriorated to the lowest ebb in 2007 than a decade ago and lower than India and China and in some cases even below Bangladesh.

Sania(2008)[85] undermining the poor governance due to inability of government(s), therefore to reform the government functioning, one must address issues of governance at first instance and evaluation and assessment has to be the backbone of such efforts. The attributes of governance which need measurement and tracking overtime involves impartial assessment and mechanism tools to be developed on priority and commitment for a long-term systemic governance reforms essential for the social sector.

Pakistan's education policy highlighted that the problem of a fragmented structure of governance in the education sector has plagued the technical and vocational sector of the country and many institutions and jurisdictions are involved in governance of this area of

[81] The World Bank report, 1998, p. 52-53.

[82] Asian Development Bank (ADB) Annual Report 2003, Pub. Date: 2004, Chapter of "The Role of Institutions in Inclusive Development".

[83] Javed Ahmed Malik, In Search of a Model for Pakistan: Governance and Development UNDP HDRs various issues and WB report 2002.

[84] Mansoor Ahmad, The daily News, 25/6/2008

[85] Dr Sania Nishtar http://www.thenews.com.pk/daily_detail.asp?id=127784

education without a clear demarcation of their respective roles and responsibilities (National Education Policy, 2009)[86]. The analysis of a study conducted by Naved (2005)[87] suggested that although globalization has changed the landscape of the world but the entire benefits of globalization in terms of improved social indicators have not been realized in Pakistan because of bad governance primarily due to inefficient governing structure and mechanism**.** Amjad (2005)[88] stated that although the government is modifying, improving and expanding the education system in the country but still the country remained in a low-level skills trap and if it has to move into the knowledge based economy (KBE), then it must break out of this trap by equipping the human resource with better skills.

Considering these various points of views and knowledge and experience, it is a fact that Pakistan has huge resources like water, land and human, the country is still facing serious challenges in socio-economic fabric of the society. At present there is a huge gap for an action research on the problems & issues like: transparency, weak institutions, access to justice, effectiveness, openness, responsiveness, accountability, poverty, human resource development, rule of law, population, inadequate infrastructure, extremism & terrorism, refugees, acceptance of diversity and pluralism and above voice of real stakeholders in the decision making process. These aspects lead to the malfunctioning of the institutions and causes poor governance. These broad concepts encompasses the role of public authorities in establishing the environment in which social and economic operators function and in determining the distribution of benefits as well as the nature of the relationship between the ruler and the ruled. It seems that consensus exists among aid agencies, international financial institutions, academics, government leaders, non-governmental organizations and civil society groups that the good governance is a key factor to achieve sustainable development.

2.5 Public Polices and Plans

Thomas (2005)[89] defined policy as law or a regulation. The system theory literature on the policy implementation allow analyst to visualize the conventional public administrative process in organizational perspective. It is capable to introduce new thinking, outside the box in terms of; new legislative techniques, administrative directions and effective utilization of emerging technologies. The theory addresses the issues of implementation practice and studies the policy output of managerial agencies and consequent outcome of the decision in relation with the original policy objectives (Chand, 2010)[90]. In addition, the system theory also provides understanding a feedback in legislative decision and formulation opportunities and contributing factors for non compliance included: vague monitoring programs and ineffective control (Mazanian and

[86] National Education Policy, Ministry of Education, Govt of Pakistan, 2009.

[87] Naved Ahmad, Institute of Business Administration, (IBA) Governance, Globalization, and Human Development in Pakistan, The Pakistan Development Review, 44 : 4 Part II (Winter 2005) pp. 585–594

[88] Amjad, Rashid (2005) Sills and Competitiveness: Can Pakistan Break Out of the Low-Level Skills Trap? The Pakistan Development Review 44:4.

[89] Thomas A Brikland, An introduction to policy process: Theories, concepts and model of public policymaking, 2nd Ed., 2005, ME Shaoe, p.18.

[90] Bashir Chand, Public Policy conceptual framework, p. 78, ISBN: 978-969-9468-00-1, 2010

Sabatier, 1989)[91]. Peters (1999)[92] gave some thoughts and elaborated the public policy as the sum of government actions whether directly or through representatives to influence on the livelihood of society. Another interpretation made by Clark (1999)[93] described the policy as the outcome of the efforts of government that who acquire what.

According to UNESCO (2001)[94], the policy should be devise and technical and vocational education govern in support of the objectives adopted for the educational process as well as for national and regional socio-economic requirements of the present and the future within legislative and financial framework. Policy should be directed to both the structural and the qualitative improvement of technical and vocational education.

After policy the stage comes of the planning which is also quite critical as it materialized the policy. Good(1973)[95] regarded the policy development as the function of a person or legal entity with the authority and delegates the responsibility for the development of policies and these polices has to be organized to form planning. Chandrasekrana (1994)[96] argued that the planning is the foresight in shaping the policies by taking in to account the real socio-economic aspects of a particular national system. The process involves setting the decisions for the targeted goals and objectives. Nwankwo (1981)[97] defined planning as a progression that reflects the way in which people performing through structured entities which make efforts to resolve the issues in accordance with the objectives utilizing existing resources through the best means. According to Zaki (1988)[98] the planning comprises of three elements: i) formulation of policy & determination of objectives, ii) taking such actions to achieve objectives and above all iii) optimal and effective use of limited resources. Ghaffor (1987)[99] explained principle for the effective planning is to reduces (if not eliminate) the wastages of the resources. Similarly, Nwankwo (1981)[100] also described the education planning as a continuous development of the information from empirical base to provide reliable and authenticated information for an effective education system to the decision makers to achieve the earmarked goals. Thomas (2005)[101] emphasized the need of sufficient availability of the resources for the implementations of polices effectively and theses resources includes: money, manpower, energy and technology. For effective implementation two approaches emerges either top-bottom or bottom-up. The first approach helps to understand implementation process

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91 Daniel A. Mazanian and Paul A. Sabatier, Implementation and Public Policy, 1989, University Press of America, p. 16.

92 B.Gay Peters, American public policy, Promise and performance, Chatham house, Chappaqua, New York, 1999.

93 Clark E. Cochran, American Public Policy: An introduction 6th Ed,. St. Martin Press, New Yourk, 1999.

94 Technical and vocational education for 21st century, UNESCO Recommendation, Section for Technical and Vocational Education pp-13-14, Paris, 2001

95 Good, C.V, 1973, Dictionary of Education, McGraw Hill Book Company, New York, USA, pp.371, 428

96 Chandrasekrana, 1994, Education Planning & Management, Sterling Publishers, New Delhi, pp.1-10.

97 Nwankwo, J.I. 1981, Educational Planning, Theory & Methods (Nigeria), Izhar Sons, Lahore. P.1-2

98 Zaki, W.M, 1988, Educational Planning, National Book Foundation, Islamabad, pp. 16, 27

99 Ghafoor, A. 1987, Guidelines for Educational Planning & Management, Academy of Educational Planning and Management, Islamabad, p.23

100 Nwankwo, J. I. (1981). Educational planning theory and methods, Nigeria Lahore: Izhar sons.

101 Thomas R. Dye, Understanding Public Policy, 2005, Prentic Hall, New Jersey, p.53.

keeping an eye on goals and strategies adopted in the statue and in the later one the implementation should start from the bottom (grass root level) of the chain and move upwards(2005)[102]. Most of the policies lead to failure due to the fact that conflict of interest between policy objectives and implementing agencies. The bottom-up approach can deviate for conformity to accommodate prevailing norms, motivations and rewards within a community. In contrast, top-down approach makes sure to comply-with and do not has flexibility to accommodate the consensus or to reach some compromise (1996)[103]. David (1965)[104] was of the view that the legal statements and actions of policymakers, plus the implementation process reveal the actual policy of the time. Danial and Paul(1989)[105] were of the view that with all actions and policy incentives there is no guarantee that the fundamental change in people's life will occur at least, an American experience. The same was also endorsed by Brian and Lewis (1999)[106] who shared the experience of UK, in 1960's the most of the governmental sponsored socio-economic programs ended up in disappointment due to the failure in implementation. In early 1970's it started developing up in the academia world dealing with pre and post implementation process and phases, policy analysts concluded gap in implementation aspect. If the policy is regarded as failure than what has learned and questions arises whether this experience able to explain what happened and why (Dunsire, 1978)[107]. This leads to the question of whether the policy is implemented and if the policy was implemented then was the policy implemented whole-heartedly or with some gaps. The implementation revolves around the activities including resources allocations, infrastructure development to carry out enacted policies. Bennell and Segerstrom (1998)[108] stated that the frequent change of policies and priorities of the organizations like the World Bank in case of vocational education have caused considerable confusion among the developing countries on the view of investing in TEVT.

Regardless of the variation of the definition and concept of public policy as discussed above, it is thought that any policy including governmental actions, regulation, rule, law or discourse affect the life of citizens. The policy is used as tools to find a solution to a problem of public interest or change the undesired and unacceptable conditions perceived by the public. It might be through the intervention of governmental action or non-action but still it is public policy. The policy planning can be effective through a national body responsible for coordinating planning in technical and vocational education based on analysis of statistical data and projections to facilitate complimentarily between educational policy planning and employment policy and facilitates the implementation

[102] Thosmas A. Birkland, AN introduction to Policy Process: Theories, Concepts, Nodlesl of Public Policy making, 2nd Ed, 2005, ME Sharpe, New York, p 182.

[103] Rene Torenviled, 'Poltical Control of Implementation Agencies" Policy Science 8, No. 1, 1996, p. 25-57.

[104] David Easton, A. System Analysis of political Life, 1965, Wiley Publication, New York.

[105] Daniel A. Mamanian and Paul A Sabatier, Implementation and Public policy University Press American, 1989, p.1-5.

[106] Brian W. Hogwood, Lewis A. Gunn, Policy Analysis, Oxford University Press, 1999, p.13-19

[107] A. Dunsire, Implementation in Bureaucracy, 1978, Oxford, Mortin Robertson.

[108] Bennell, Paul and Sergerstrom, J. (1998) Vocational Education and Training in Developing Countries: Has the World Bank Got it Right? International Journal of Educational Development 18 (4) (July): 271-87.

stage. The implementation phase which is closely related with the governance reflects the execution to achieve an outcome of specific policy, might expands the definition of public policy from "who gets what and why" to "how", which is an ongoing mechanism to deliver services. It has been observed that public expect that government's intervention can be at any level (federal, provincial or local level) depending on the social change required. The implementation which is regarded as delivery aspect is a continuation of policy process and helps to understand the effect of policy proposal and secure the desired objectives of the respective policies intended to reach. The implementation may be regarded as set of activities directed towards putting programs in to effect through organization, interpretation and application. This also indicates that the policy and its implementation have to be compatible for its effectiveness for meeting the obligation of the social fabric of the society. Education being the major component of the social sector hence its role is critical. Further it has also been argued that technical education brings radical change in the development of the society hence the same has to account for human resource development. It is also to be mentioned that the new economic giants like Singapore, Korea and Malaysia have considerably chalked out policy reforms of technical and vocational education in their respective countries by prioritizing this area. In addition to the national public policies of the international political giants like World Bank, ADB, UNESCO, UNDP are also responsible for the supporting or otherwise the TEVT. Their policies and allocating the appropriate resources depends on their framework, which some time changes according to their priority for short/long term strategies. The subject of technical and vocational education is being governed primarily by the public sector hence the policy planning may be considered in perspective of the public policy planning approach. The government requires its own interpretation to define its scope hence for focusing issue in our case the policy refers to what the government does and what it does not do.

In Pakistan since the role of the governments is foremost in providing school-based TVET, therefore the system of allocating the resources and its effective and efficient utilization is a big challenge. Hence the policy reforms have to be considered at various stages starting from planning to execution and through feedback, redefining policies according to the new challenges.

2.6 Development

Asfaw (2004)[109] referred to Marx and Max Weber who established the relationship between institutions and development. Marx was of the view that the institutions of any given socio-economic system (including state) reflect the values and culture of the particular society. For example in communal society, slave society, feudal society, capitalist society and communist society etc, the structures differ from one another according to the prevailing forms of fabricated relations. Weber argued that the motivating force behind development to the entrepreneurship and forethought of the individuals are themselves who are the products of a specific culture and civilization. Like the Protestant ethic embodied the spirit of capitalism, Confucianism in China and Buddhism in India.

Sen's(1999)[110] argues development as freedom and distinguishes five different types of freedom for human development: i) political freedoms, ii) participation in socio-economic development and role in institutional governance, iii) access to education, health care, and other social services, iv) transparency directly related to good governance, v) protective security for institutional strength. The social development which is for the social sector (health, education, poverty eradication, human resource development & training) has described Garry and Cleveland (1999)[111] as the process of organizing human capabilities, expertise, energies and activities at optimum levels to achieve maximum output through effective utilization of human capital. The Valid theory can tell us not only what should be done, but also what can be done and the process by which it can be achieved and in the absence of Valid theory of social development remains largely a process of trial and error experimentation, with a high failure rate and very uneven progress.

2.7 Functioning/Malfunctioning:

Functionalism Theory [112] examines society through interdependent elements. The social institutions have a specific function and Functionalists believe in equilibrium and cohesion can solve most social problems for the functioning of any part of the society including organization.

However in decision-making of the organization, one expects that organization may not undergo to function and would not operate in a way it was originally designed. There may be number of factors to impede the organizational functionality. According to

[109] Asfaw (2004), The role of institutions in the development process of African countries, Asfaw Kumssa, United Nations Centre for Regional Development (UNCRD) Africa Office, Nairobi, Kenya, and Isaac M. Mbeche, College of Humanities and Social Sciences, University of Nairobi, Nairobi, Kenya, International Journal of Social Economics, Vol. 31 No. 9, 2004, pp. 840-854

[110] Sen, A. (1999), Development as Freedom, Anchor Books, New York, NY.

[111] Garry Jacobs and Harlan Cleveland (1999), Social Development Theory, The International Center for Peace, November 1, 1999

[112] Brym, R.J. (2001). Introducing sociology. In R.J. Brym (Ed.), New society: sociology for the 21st century (pp. 2-25). Toronto: Harcourt.

Cooper (1995)[113] it can be learned from discrete event system theory, and classical and model-predictive control literature focused on chemical and power plant control. There are at least two major benefits in taking such an approach. First, drawing on the fields of control theory and related disciplines, quarry a wealth of concepts, phenomena, insights, analytical methods, and design techniques. Second, discover that much of organizational malfunctions may not necessarily be products of human (individual or organizational) cognitive limitations, psychology, training, or culture. Even though the significance of such factors must not be minimized, the malfunctions are also likely to originate in the systemic limitations of an organization's design (i.e., its structure and processes). (Davidoff S and Lazarus S. 1997)[114] are of the view that all organizations made up of certain elements which needs to function in a particular way to ensure the whole system healthy. Bruce (1998)[115] is of the view that Systems theory has served us well and will continue to provide managers and students of organizations with metaphors, terminology and explanations about how organizations function. Further the Systems theory has, in fact, dominated as a framework for managerial behavior and organizational analysis. However, there are some emerging theories and perspectives that are starting to challenge some of the tenets of the dominant systems principles.

Considering these thoughts it can be concluded that any aspect of the organization shows to be malfunctioning will have an impact on the whole system. Therefore it is critical that all components of the institution gain skills and insight into how they should function and how they need to contribute to the healthy functioning of the system. In this regard, Morison (1998: xii)[116] stated that the effective way to manage change and to empower people is by utilizing the potential of human capital of an organization. Functional analysis recognizes that systems have some requirements and the same can be met by analyzing the functions that are operated through structure, rules, procedures and practices. Hence, functional analysis highlights the means to achieving the needs of the various systems and sub-systems. Under this category, organizations are cooperative whose stakeholders have common objective and the existence of the system depends on the collective engagements and its intensity to secure sustainability (Scott 1992)[117].

Hence it is derived that organizational development depends on its functioning according to its goals and objectives. The intervention to any aspect of the organization has to look in its totality which may cause its malfunctioning. In order to improve organizational effectiveness and efficiency in day-today function, judicious resource mobilization is a pre-requisite.

[113] Cooper, J. R., Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis, Langley, VA: CIA Center for the Study of Intelligence, 1995.

[114] Davidoff S and Lazarus S. 1997, The Learning of School. An Organizational Development Approach, Cape Town, Juta.

[115] Bruce Millett, (1998), Understanding Organisations: The Dominance of Systems Theory, International Journal of Organisational Behaviour, Volume 1, No 1, p-1.

[116] Morrison K, 1998, Management Theories for Educational Changes, Thosuands Oak, Californai, Sage Publications.

[117] Scott, W.R. 1992, Organisations: Rational, Natural and Open Systems Prentice Hall, Inglewood Cliffs, N.J. p. 25

Box-2

The literature reviewed in terms of theories, research, reports and findings carried out by scholars in the areas of; education and skills, institution, governance and development, public policies & plans. This valuable and esteemed research work leads to focus the research question of my study through the guidelines which depict the malfunctioning of the system and institution focusing TEVT system. The theories of; teaching, behavioral studies, institutional, governance and malfunctioning of the system support various approaches. These approaches support such aspects responsible for the malfunctioning of the system and the institution. The salient factors are:

- quality of education, curriculum, materials, response, reinforcement, learning environment, teaching methods, institutional capacity, and human capital.
- behavior & structural framework, rules, procedures, technological and research and innovation & productivity.
- policy implementation through its rational and participatory formulation & its implementation with effective & efficient utilization of the required resources.
- the quality of governance factors to be responded like; stability, adaptability, coherence, coordination, and the manner in which the power is exercised in the management of the resources.

The researcher is of the view that the policies and plans must account far by the institution and new technological and market driven changes to incorporate to develop realistic policies and plans to implement the same by observing the quality of governance. In addressing the research question for factors causing the (mal) functioning of TEVT system, the same can not be studied with an isolated approach instead the system approach is foremost to address the existing gaps of knowledge, skills and other factors. The factors causing system constraints includes: lack of access to formal/informal training on a national basis, weak links with industry, lack of entrepreneurial focus, poor quality control, limited institutional capacity, inadequate finances, curriculum standards of, quality of master trainers, inappropriate legislation, duplication of work and less coordination between various tiers, mismatch of plans/projects, minimal role of private sector and the relevance of training with industry, and continuation of education etc. Therefore the effectiveness of the system can be evaluated by the effectiveness of the institution(s) and the role played by it in TEVT system which is critical in determining the functioning or malfunctioning aspects.

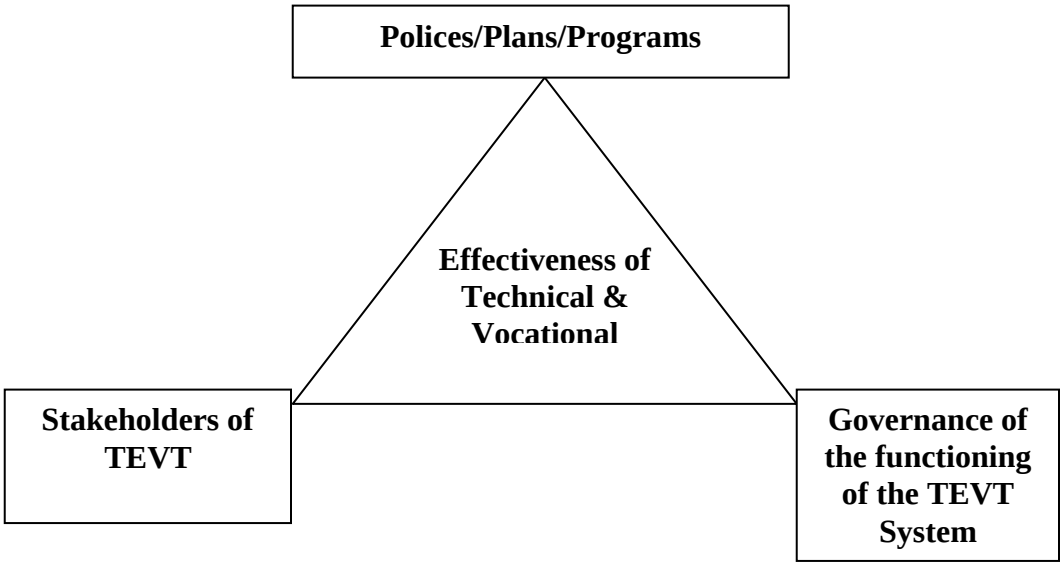
Chapter-3: Research Methodology

3.1 Introduction

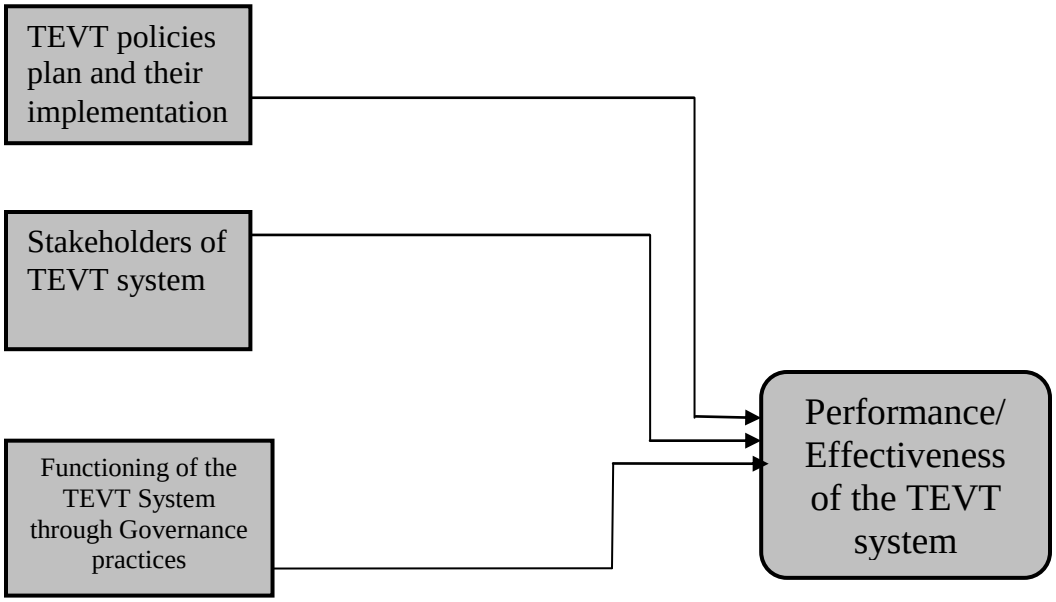
This chapter reflects the methods and steps adopted in conducting research and collecting data for the research study. Keeping in view the nature of the study the data obtain from related literature, research papers, books, journals, published documents, official surveys, meetings and questionnaire/interviews etc. This research is aimed to conduct a thorough investigation to the problems and prospects for TEVT system and its functioning/ malfunctioning in Pakistan focusing public policies and governance aspects in relation with implementation strategies.

3.2 Research Design

A relationship of the TEVT system is under taken for the study population and subject area. The analysis of the TEVT system with regards to policies, plans, programs, stakeholders of TEVT and the functioning/malfunctioning of the institutions are carried out and the problems studied in perspective of the effectiveness of the level of technical & vocational training system and associated gaps determined.



The conceptual framework and relationship of the concepts is reflected below:



The operationalization of the research objectives leads to the contributing factors pertaining to TEVT system of the country considering the role of its stakeholders.

3.3 Population:

The population of the study is all education policies, development plans, reports, & publications with reference to TEVT in country. Further for primary data a case study of National Training Bureau (NTB) was conducted.

3.4 Location of the Project

Islamabad, Pakistan

3.5 Unit of Analysis

Individuals, experts, organizations

3.6 Research Design

3.6.1 Theoretical Framework of the Study

A system approach was followed in the study which presumes that the technical and vocation education has all the major attributes. The system consists of: input, process and output operating in a contextual environment with its own sub-systems. At the input level the attributes are: government, management of the centre/institute, trainees, operating governance policies and plans. The process of the system helps to convert the inputs into measurable as well as intangible output including teaching learning processes, trainees' evaluation process, staff development, training and managerial process. The output is in the form of trainees with the value added in terms of knowledge, skills & attitudes to perform as skilled worker contribute in the economic development of the society etc. However the study focused on the public policies and strategies applicable to TEVT in Pakistan and its challenges.

This is an in-depth study of policy plans and functioning or malfunctioning of TEVT system of Pakistan and look in to the areas of the governance capacity with reference to: policies/plans, legislative framework, management of the TEVT system, role of various stakeholders, standards of TEVT education, teaching methodology, autonomy and accountability, cooperation, participation/voice and responsiveness and adaptability & flexibility to change in new emerging technological era etc

3.6.2 Explanation of the Concepts

Policies & Plans

Relevant policies, plans and programs are considered for evaluating the TEVT system of the country taken into account.

Stakeholders of TEVT

The stakeholders are: the policy & planners, institutions and their management, trainers & trainees, experts and industry/employer.

Governance & Management

The management style means how the TEVT system is operating and does it utilizing its resources effectively and efficiently at the delivery level which is the institutional level. The level of optimum, productive and efficient utilization of the resources leads to the higher level of institutional capacity. The institutional capacity was assessed on the basis of management style in the organization in addition to its objectives. The contributing factors leading to its functioning or malfunctioning are of immense importance to address the research question.

3.7 Methodology (historical):

The methodology of the research is the historical approach to offer an in-depth insight of the organizational culture, trends, and future possibilities. The historical method of research applies effectively as it encompasses origins, development theories, development, crisis, etc. Both quantitative and qualitative variables can be applied in the collection of historical information.

Charles Busha and Stephen Harter (1980) elaborated various characteristic to follow historical research approach. This includes; a) recognition and identification of the issue through historical knowledge, b) collect the significant information with reference to the subject matter, c) development of tentative hypothesis to give details for the possible relationships between historical aspects, d) comparison, authentication and validation for the reliability of the information and its sources, e) comprehensive and organized analysis of the applicable evidences and extracting the conclusion, and f) documenting the conclusions in a sequence of events.

In order to address the research problem of the factors responsible for the functioning/malfunctioning of TEVT system, the concept of functioning/malfunctioning is thoroughly examined. The functioning referred to smooth operation of the system whereas the malfunctioning of any type in any systems badly affect the system and may lead to even the collapse of the whole system. Malfunctioning may be of any type such as embezzlement in funding, gaps between the targets and achievements, un-authorized use

of administrative/financial powers, employment of undeserving manpower or nonfunctioning of the institution(s) due to their inability to deliver their mandatory functions. The study of the system is important for determining the holistic view of the subject. Numbers of social scientist have given theories and opinions for adopting a system approach. Parson (1951)[118] and Checkland (1981)[119] considered it appropriate for the application of system theory as it fulfills the following conditions

- adoption of the vision for the provision of adequate knowledge and skills practicing effectively.
- determination of boundaries of TEVT at the multiple levels and integration with other education system.
- existence of structure, feedback mechanism, hierarchy, communication networks and development processes.
- possibility of the existence of the sub system, program of studies, performance of the institutions

The researcher obtained the data/information to ascertain the factors impeding or facilitating TEVT system through two sources. One is the primary source which is firsthand accounts of information. This approach involves assessing the primary data, logic, intuition, persistence, and common sense etc. The research question of the study emphasized on the contributing factors leads to the (mal) functioning of technical and vocational education system in Pakistan.

(Fox and Ventura, 1983: Prescott and Soeken, 1989)[120] sees that the case study enable researcher to test their ideas: evaluate and identify the problems or benefits. The researcher Robert K. Yin defines the case study research method as an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used (Yin, 1984)[121].

In this research the case study of NTB is the primary source of generating data through personal meetings, organized information gathering through research instrument. The research instrument (questionnaire/interviews) for the respondent(s) to record their voice was developed. The variables are determined through the response of the respondents and response received from the population sample. The summary of response of total population is analyzed. Consequently the contributing factors leading to functioning or malfunctioning of the system identified on the basis of data analysis.

The secondary resources of the study are reliable reports, documents etc which are very useful in giving the researcher a grasp on a subject and provided extensive bibliographic information for delving further into a research topic.

[118] Parsons, T. (1951), The Social System, Free Press, New York, NY.

[119] Checkland, P. (1981), Systems Thinking, Systems Practice, Wiley, Chichester.

[120] Fox, R.N., & Ventura, M.R. (1983). Small-scale administration of instruments and procedures. Nursing Research, 32, p. 122-125.

[121] Yin, R. K. (1984). Case study research: Design and methods. Newbury Park, CA: Sage, , p. 23.

Primary and Secondary Data Collected

Data that collected from first-hand-experience is known as primary data which has not been published yet and is more reliable, authentic and objective. The primary data for my research was carried out through survey which consists of; questionnaire, interviews and observations. The data collected from the respondents (management, planners, master trainers, trainees, administrators) through informal and formal meetings and documented the respective responses on the prescribed questionnaires. Sixteen research sessions were held in addition to at least 25 informal sessions to collect the information from various sources.

Data collected from a source that has already been published in any form is called as secondary data. The secondary data is also critical as some of the data to support my research question necessitates the provision of such data hence this data suffice to reveal much of the required information. The secondary data which considered researcher appropriate in addition to theories, journals material, published documents comprises of; constitution of the country, eight national policies, eleven mid-term plans, provincial technical and vocational education authorities documents (4 in nos), education statistics of Pakistan, Ministry of Education, and four legislation instruments (ordinances). Further the project documents of NTB are also scanned form various files and even from old records through very hectic efforts and notes were taken for the relevant aspects.

3.8 Research Instrument:

Three data collection with the following techniques:

- observations through observation what is going on and record it.
- interviews (or questionnaires) to ask people questions and record the responses.
- examining records and documents.
- case study approach

All the three tools are applied in the research which proved very effective in addressing the R.Q.

The interviews and discussions are quite suitable instruments for collection of primary data and its standardization. Qualitative interviews may be used for data collection, in conjunction with observation, document analysis, or other techniques[122]. According to Bernard (2002)[123], the method of semi-structured interviews is effective when researcher collect data from particular individual(s). Patton (1990)[124] writes about three types of

[122] Bogdan, R. C., & Biklen, S. K. (1982). Qualitative research for education: An introduction to theory and methods. Boston: Allyn and Bacon, Inc.

[123] Bernard, Russell H. 2002 Research Methods in Anthropology: Qualitative and Quantitative Methods. Walnut Creek: AltaMira Press: Angrosino, Michael V. 2002 Doing Cultural Anthropology: Projects for Ethnographic Data Collection. Prospect Heights: Waveland Press: and Ervin, Alexander M. 2000 Applied Anthropology: Tools and Perspectives for Contemporary Practice. Boston: Allyn and Bacon.

[124] Patton, M. Q. (1990). Qualitative Evaluation and Research Methods (2nd ed.). Newbury Park, CA: Sage Publications, Inc.

qualitative interviewing: 1) informal, conversational interviews: 2) semi-structured interviews: and 3) standardized, open-ended interviews. The interviews[125] are normally a step in the research process to generate ideas/hypotheses about the subject being investigated so that these might be tested later. Such interviews are entirely informal and are not controlled by a specific set of detailed questions. Rather the interviewer is guided by a pre-defined list of issues. These interviews amount to a conversation about the subject. The respondent is encouraged to reveal everything that he/she feels and tell the story as thinks about these aspects. In this context to get the information and data, interviews were conducted through a series of meetings with the officials of NTB and other stakeholders which involves: representation of administration, financial, instructors/Principal, trainee and planners. The Delphi Technique[126] for the collection of qualitative data was also taken in to account.

During the interview, the researcher asks an interviewee questions based on a prepared written list of questions and topics. At the same time, the researcher encourages the interviewee to freely express ideas and provide information that the interviewee thinks is important. With this flexibility, the researcher obtains unexpected significant information as well as answers for prepared interview questions.

All the three instruments were applied in my research considering their utility. The interviews/questionnaire and observations are main methods to collect the primary data and other sources of my data were the information already available like: government publications, reports and previous research comes under secondary data. The choice of a particular method of data collection is important in itself for ensuring the quality of data and addressing the objective of the study.

[125] Dillon, W. R. Madden, T. J. and Firtle, N. H. (1994), Marketing Research in a Marketing Environment, 3rd edition, Irwin, p. 124-125 And . Welch, J. L. (1985). "Research Marketing Problems and Opportunities With Focus Groups", Industrial Marketing Management, 14, p. 247.

[126] Helmer, 1972, cited in Masser and Foley, 1987: 217-218

Chapter- 4: Technical and Vocational Education

4.1 Introduction

In 1966, Curl[127] conducted a study and concluded that there exists a close relationship between the country's priority in policy reforms towards educating its populace and the national development and the countries investing more in education get high rate of return in terms of economic development. Gordon (1971)[128] regarded education as a part of social system in order to improve society. Gordon further emphasized that the work-oriented education can act as an effective mean for catering the needs of the individual and employment. Education brings the social, technological and economically prosperity to any society and considered as the tool for socio-economic development. There is a very important role of education to empower people through their participation in the development process. The good governance practices in implementation of TEVT policies leads to a vibrant TEVT system. One of the policy issues in the developing countries is the provision of an effective structure legal governing framework with an efficient delivery mechanism in the education sector in general and technical education and vocational training (TEVT) in particular. The World Bank (2006)[129] advocated that the implementation of clear and balanced legislation in setting up institutions help in level playing field in TEVT system for the provision of the training.

4.2 TEVT Global Perspective

Different types of TEVT systems were identified through literature review: i) the liberal market-based model (e.g. in the United Kingdom), ii) the state-regulated or school model (e.g. in France) and the dual-corporate model (e.g. in Germany) etc. According to German model as described by Brand (1998)[130] and (Gill & Dar)[131], the system is based on dual system (public-private partnership) and developed in pursuance of 1969 law that mandates particular governance structure for TEVT. The main ingredients of the systems are delegation of responsibility for curriculum and assessment to a coalition of labor representatives, business and educators. The features of the German model include: i) a legislative framework that requires the enterprises to invest of new workers, ii) a funding mechanism through a combination of federal, regional and business spending, iii) the capacity to carry out job analysis and curriculum development, iv) local institutions that represent the interest of businesses and v) trained or professional instructors and

[127] Curl.A, 1966, Planning Education in Pakistan, Taristoch Publications, London, p.208

[128] Gordon, F.Law, 1971, Contemporary Concepts in Vocational Education, D.C, American Vocational Association, Washington, USA, p-20.

[129] Skill development in India the vocational education and training system, human development Unit South Asia Region, The World Bank, pp vii, January, 2006

[130] Brand, W. (1998), Change and consequences in vocational education and training: the case of Germany's dual system. In I. Finally, S. Niven & S. Young (Eds), changing vocational education & training: An international comparative perspective. London: Routledge.

[131] Gill, I.S. & Dar, A. (2000). Germany, In I.S.Gill, F.Fluitman & A.Dar (Eds), Vocational Education and training reform: Matching Skills to markets and budgets. Washington, D.C: The World Bank.

administrators. However Culpeper (2003)[132] argued that the dual system is effectively applicable in those countries where the companies consider that the participation is in their best interest.

Another model described by Kariya and Rosenbaum(2003)[133] and Rosenbaum(2002)[134] referred the case of Japan which is also relevant to USA as well which have a network of relationships with hiring managers that allow them to place their most accomplished students preferentially hence the system is based on a local social relationships and networking between educators and employers. This is more social oriented system. Grubb & Lazerson (2004) [135] affirmed that in Australia, Newzeland and South Korea the TEVT system developed the qualifications framework and accountability aspects and supported the communications at various tiers which helped in creating social partnership between all the actors and a sense of participation. In Dutch model the workplace learning is an important factor in the development of broad occupational competency (Onstenk, 2001, 2004)[136]. Several organizational models are developed to monitor and enhance the quality of workplace learning in Dutch TEVT, by schools, by national bodies and by support organizations. Workplace learning is an important way to concretize and "tailor" the new broad qualifications in Dutch TEVT system (Onstenk and Janmaat, 2006)[137]. Josh (2007)[138] stated that in Kazakhstan TEVT system was made more effective and employers oriented by improving the system level of governance and engaging social partners in planning for TEVT for effective fiscal management. The quality of education could be enhanced through curriculum, testing, educational standards and qualification framework. The TEVT curriculum is prescriptive and imposed, fixed outside the classroom and this is the significant difference between vocational and university curriculum (Bowers and Reid 2005)[139]. Toohey (1999)[140] suggests that the outcomes of a competency-structured curriculum help focus on performance of professional skills and transformation of established knowledge. Millmow (1997)[141] regarded TEVT curriculum

[132] Culpper, P.D.(2003), Creating cooperation: How states develop human capital in Europe, Ithaca, NY: Cornell University Press

[133] Kariya, T. & Rosenbaum, J.E (2003), Strafed incentives and life course behaviors in J.T.Mortimer & M.J.Shanahan (Eds), Handbook of the life course (pp. 51080), New York: Kluwer Academic/Plenum Publishers.

[134] College for all: Career paths for forgotten half, New York, NY: Russell Sage Foundation.

[135] Brubb, N.W, Lazerson, M. (2004), the education gospel: The economic power of schooling, Cambridge: Harvard University Press.

[136] Jeroen Onstenk, Franck Blokhuis, (2007) "Apprenticeship in The Netherlands: connecting school- and work-based learning", Education + Training, Vol. 49 Iss: 6, pp.489 – 499.

[137] Onstenk, J. and Janmaat, H. (2006), Samen werken aan leren op de werkplek: Op weg naar co-design en co-makership van scholen en bedrijven, Cinop EC, Den Bosch.

[138] Josh Hawley, Consultant, World Bank, Public Private Partnership in Vocational Education & Training: international Models, Washington, pp 1-19

[139] Bowers, H. and Reid, A. (2005) Delivering higher and vocational education: Can an institution's course management system be constructively aligned with a foot in both camps? In Brew, A. and Asmar, C. (Eds) Higher Education in a changing world: Research and Development in Higher Education, Volume 28, pps.42-49.

[140] Toohey, S. (1999) Designing Courses for Universities, Buckingham: Open University Press.

[141] Millmow, A. (1997) "To Eke Out a Marginal Subsistence: Economics in Business Schools", Economic Papers, 16(3), 88-96.

a very hands-on approach to teaching and learning. To observe quality standards to ensure the accountability of TEVT system the third party evaluation has also to be considered to test the trades which are also suitable for the informal sector. The accreditation from a formal recognition body competent to carry out specific tasks to assess compliance with the predefined objectives and permitting regular examination of progress made (Cedefop, 2003)[142]. Cedefop decided to focus on the issue of accreditation because of its importance for evidence-based policy and for accountability in the TEVT system.

4.3 TEVT South Asia

In most of the countries particularly in South Asia, the technical and vocational institutions are predominantly operated by the government/public sector. In Pakistan very limited investments have been done in this type of education and consequently very little room for these entities exists in the country. Hence the public policy, planning, priorities and the allocation of resources plays a major role for the functioning or malfunctioning of these institutions.

Ashton (1999)[143] and The World Bank (1993)[144] encouraged the concept of human resource development through government policy and the examples of Singapore and Malaysia (legislation in 1992 Act) were accounted. In Malaysia the TEVT system was restructured in 90's and the approach was to convert the vocational schools to technical schools as in the year 2000 there were over 70 technical schools and only 4 vocational schools for the country over a population of 20 million. All skills training related standards and certification were coordinated by the National Vocational Training Council (NVTC) which includes representation from the public and private sector. South Korea has historically a strong TEVT system which is largely government operated and has invested heavily through a comprehensive framework on various vocational and training programs. (Y.H Lee, 2004)[145]. Kim (2001)[146] explained that the Korean TEVT system which was reoriented through Qualification Act-1997, allowed certification of skills through qualifications promoted by the private sector as well as through standard qualifications by the public sector. After 1998 in Korea all firms regardless of their sizes were taxed between 0.1-0.7 percent of their total wages to be used for the training of manpower. In Philippines a vocational education act was passed in 1927 stating that the "controlling purpose of vocational education is to fit pupils (persons) for useful

[142] Cedefop. Quality in training, Glossary – November 2003. Available from Internet: http://libserver.cedefop.europa.eu/vetelib/eu/pub/cedefop/virtual/quality_glossary_2003.pdf [cited 29.6.2009].

[143] Ashton, D. Green, F. James, D., & Sung, J (1999), Education and training for development in East Asia: The political economy of skill formation in newly industrialized economies, London: Routledge.

[144] The World Bank(1993), East Asian miracle: Economic growth and public policy, Washington, D.C: The World Bank.

[145] Lee Y.H (2004), Employment trends and workforce policy in republic of Korea, Tokyo, Japan, Asian Development Bank Institute. Document Number.

[146] Kim, D. (2001), Qualification System in Korea, Seoul, Korea: Korea Research Institute for Vocational Education and Training. Document Number.

employment" (UNESCO, 1984)[147]. China had long emphasized vocational education in its school curriculum. After 1978, quite a number of government senior secondary schools were converted into vocational schools. Polytechnic institutions, vocational schools, institutes of technical education, and technical colleges figure prominently in the educational systems. Taiwan placed high priority on special vocational education at an early stage of industrialization process and the massive economic growth of the "Taiwan miracle" owes to its system of TEVT (Boyd and Lee, 1995, p. 195).

The National Education Commission in Bangladesh was appointed immediately after independence and recommended in 1972 for the diversification of secondary education from grade IX onwards. In Bangladesh the GDP share of education is 2.2% and remained low as compare to other countries however there exists a link between TEVT and other segments of the education. According to the proceedings and findings of a conference (2008)[148], the emphasis was laid down on the new models for an effective and high quality vocational and technical education which has to be responsive and adaptable according to the changing in market demands. In Bangladesh model the government focuses on policy-making, regulatory framework for standards, and overall planning to promote public-private collaboration. The recruitment and promotion rules have to be revisited for education administration, teachers and members of management committees, and enforced transparently and objectively.

In India, 53% of people are aged below 25 years and there are 310 million people aged 15-25 years but only 5% of them have any TEVT qualifications whereas the average in most Asian countries is 60%. Over ninety percent of India's workforce is employed in the non-formal sector[149]. The All-India Council for vocational training and Ministry of Human Resources Development are responsible for planning, coordinating at the national level for TEVT and state councils performs similar functions at the state level. The TEVT is institutional based and proportion of practical to theoretical is higher. There exists a linkage between the higher secondary school (which leads to higher level of education) and technical industrial arts & crafts schools (Class X), technical education (polytechnic diploma of 2-4 years), craftsmen training schemes (1-2 years for class VIII & X). In May 2008[150], the Ministry of Labor and Manpower, Government of India streamlined the governance of skills development nationally. It emphasized the expanding of TEVT in close coordination with the industry and community partners. In pursuance of the national policy on skills development at the implementation stage, the department of training and technical education (DTTE) for the national capital territory (NCT) in India implemented new TEVT strategies including up-gradation of institutions by providing the teaching and learning, and training more accessible to the thousands of unemployed/underemployed eligible young people in the region. The developments

[147] UNESCO (1984) Technical and Vocational Education: Country Studies. Bangkok: UNESCO Regional Office for Education in Asia and the Pacific, pp 5:6

[148] A Framework for Action on Education Governance Conclusions and Recommendations of the Conference on Governance in Education: Transparency, Accountability and Effectiveness (March 2-4, 2008), Dhaka, Bangladesh

[149] Technical and Vocational Education And Training In India, Perya Short, Education Counsellor (South Asia), November 2008, pp 5.

[150] Technical Education Community Outreach Scheme (TECOS)", Directorate of Training & and Technical Education, NCT New Delhi, 2008.

taking place are illustrative of what is happening in other parts of the country. Places available for training have increased 50% year on year by expanding class sizes, introducing night and weekend classes, and using India's national Education Satellite (EDUSAT) distance education systems to offer training through community centers including churches and mosques. New private technical institutes have been established affiliated to the Guru Gobind Singh Indraprastha University (a state level technical university) to offer diploma and degree level engineering and technical qualifications. A number of other institutes are under construction using public private partnership models as the NCT has worked closely with local industry to expand TEVT opportunities. Two of New Delhi's polytechnics were recently judged as the best in North India with one obtaining ISO9001 certification and Modular Employable Skills (MES) Programme, which was introduced for 211 courses to offer flexible study options to workers either without any formal qualifications or requiring advanced training[151].

In Sri Lanka, Wanigasekera (2009)[152] conducted an analysis and concluded that one of the vital benefits of technical vocational education and training is to minimize the unemployment problems of the university graduates. In Sri Lanka a huge expansion of the university education causes massive unemployment problems and addressing the issue, the government introduced junior university concept in late 1960s with a view to encourage technical vocational education in the country. The government also established a ministry for vocational and technical education arena. It was further observed that the government capacity in implementing micro level TEVT system leads to inefficiency and massive fiscal and management problems therefore the government policy needs direction to contracting out the providing of technical vocational education to non government agencies with the support of the government. The TEVT policies may allow the private operators to provide micro level services and the government perform the task relating to regulating and quality assurance of the system and further the TEVT policy research must provide good feedback to government for redesigning and refocusing policies to provide maximum benefits to the community. The quality of technical vocational education to be ensured by developing benchmarks for a variety of aspects as strategic policies of TEVT and operation of the TEVT programs and controls in relation to workplace competencies has to be catered by comparing standards at all levels. The cooperation and coordination between education providers is very much required for the effectiveness of TEVT system. Although TEVT system of Sri Lanka introduced competency based training (CBT) system but educators have not been trained for CBT style curriculum development, lesson delivery and assessment. The governance of micro level education is still in the hands of principals/administrators and parent teachers associations are not effective to govern the organizations.

Wijemanne (1978)[153] conducted a study in India and Sri Lanka and figured out that TEVT system of education is regarded for the poor and also the privileged and elite

[151] What are Modular Employable Skills", power point presentation for teachers, Directorate of Training & Technical Education, NCT New Delhi, June, 2008.

[152] Amicable Policy Changes Required In Technical Vocational Education In Sri Lanka, Edward Theophilus Wanigasekera – Head Of TEVT, The University Of Goroka In PNG, 2009.

[153] Wijemanne, E.L. (1978) Educational Reforms in Sri Lanka, Report Studies C. 70. Paris: Unesco and Vocational Education And Training In Asia, Jandhyala B G Tilak, National Institute of Educational Planning and Administration, pp 10: 11

community does not want that disadvantaged segments of the community may be given this type of education. The results of the study showed that the rural curriculum in Tamil Nadu in India and Handessa Rural Education scheme in the 1930s in Sri Lanka, were abandoned not only because there was no demand for such education, but also because they came to be viewed as conspiracy designed to keep the under-privileged away from the prestigious academic curriculum.

In all the countries of Asian region most of the development of technical and vocational education started in 1950s. However, the degree of attention on technical and vocational education was not accorded at the appropriate level. Although various goals were setup by a number of countries for technical and vocational education like China which had a goal of expanding vocational education at least fifty per cent of the enrolments in secondary education, India has a similar target of reaching 25 per cent etc However, the achievements are not promising in most of the countries. According to a study[154], out of 28 countries of Asia for their progress and performance of technical and vocational education, eighteen countries have experienced decline in the relative size of vocational education over the years, and only ten countries had made some progress. Pakistan is one of the country in which the enrolment in technical and vocational education as percentage of total enrolment in the secondary education is less than 2 percent. On the contrary there is an increase of enrolment for TEVT for the following countries, seventy percent for, Czech Republic, sixty percent for Austria, Belgium, Germanys, Italy, Netherlands and Switzerland, and fifty per cent in France, Denmark and Finland.

Asian Development Bank (ADB)[155] in 1991 studied various Asian countries with regards to the technical and vocational education systems in their respective countries. According to the findings of ADB, the countries are categorized as follows i) Korea as a leading example where government promoted an extensive TEVT-based school system, ii) Singapore developing comprehensive vocational training infrastructure by establishing strong linkages between education institutions and training agencies, iii) Indonesia, Malaysia, Philippines, Thailand and Sri Lanka progressing fairly to an extent in vocational and technical education systems (both in public and private schools), iv) the agrarian economies of Bangladesh, Nepal, Pakistan and Myanmar having weak TEVT systems. ADB (1999)[156] also conducted an impact study which indicates that the need to consolidate and strengthen existing TEVT institutions has adversely affected the implementation activities and among other constraints the absence of research and development activities remained predominant in responding to emerging market needs. The importance of research and development is also emphasized by UNESCO (1952)[157] stating that the narrow outlook and scope if the traditional form of educational research, investigating form a variety of disciplines should provide information problem oriented research. Furthermore the importance of the primary issue is to be highlighted which ascertains the extent of technical and vocational education facilities keeping pace with

[154] OECD (2000) Education at a Glance: OECD Indicators. Paris: Organization for Economic Co-operation and Development, p 146.

[155] Asian Development Bank (1991) Technical and Vocational Education and Training System-Asian Region, Manila, Philippines, pp. 53:55

[156] ADB. 1999. Impact Evaluation Study of the Technical and Vocational Education Projects in Malaysia, Pakistan, Papua New Guinea, and Sri Lanka. Manila.

[157] UNESCO, 1952, Education in a Technical and Logical Society, UNESCO, Paris. P.137

resnet and prospective needs of the country. In 2001, UNESCO[158] further pointed out that the opportunities for the technical and vocational initiation should be facilitated to those who wish to pursue it within the education system as well as at work places even at the community level.

The countries of the region have to take broad spectrum of TEVT system through effervescent institutions for the multiple level needs. The important aspects for a sustainable TEVT system are: legal coverage for the system, participatory public policies, compliance of the standards, institutional governing structure, linkages with the industry & higher education system, benchmarking, delegation of considerable authority & functions with an accountability system and allocation of the resources and their utilization through good governance parameters.

4.4 TEVT Pakistan's perspective

4.4.1 Colonial period (1800-1947)

The education system of Pakistan is basically inherited from the Britishers during colonial periods. The east Indian company was regarded as the entity taking up education of the sub-continent in the charter Act of 1813(clause 43) where they highlighted the need to promote and uplift oriental languages as well as literature and to increase the knowledge of western sciences among Indian population (Kumar, 1991)[159]. Shah (2004)[160] referred Nurah and Naik who classified the period in to six phases: i) 1800-1813, ii) 1817-1854, iii) 1854-1900, iv) 1901-1921, v) 1929-1947. Further Philip Hortog (1939)[161] highlighted various events occurring during the above periods & summarized as:

(1800-1813): The East Indian company acknowledged to allocate financial resources for the education of Indians, (1813-1854): Wood's education supported the western knowledge and science and to some extent encouragement to study traditional education, (1854-1900): creating of job market for the students trainees through western system and propagation of Indian education commission act, 1882 and introducing English as medium of instruction in higher education for continuing education, (1901-1921): promulgation of Indian university act 1904, (1921-1929): delegation of powers to the provinces to restructure education departments and advocating the quality of education against the quantity and a report was published by Hortog committee in 1929, (1929-1947): A central advisory board was established in 1935 for the policy formulation in education as recommended in Hertz committee of 1927.

The Hortog Committee (1929) recommended diversified courses in the schools to fulfill the requirements of industrial and commercial fields. The Sapru Committee

[158] Technical and Vocational Education and Training for 21st Century, 2001, Section for Technical and Vocational Education, p. 19, UNESCO, Paris.

[159] Kumar. K (1991). A political agenda of education: A study of colonist and nationalist ideas. New Delhi: Sage.

[160] Shah. I.Hussain(2004), Problems and prospects of technical education in Pakistan, University institute of education and research, University of Arid Agriculture, pp-21-22.

[161] Philip. H.S.(1939). Some aspects of Indian education, Oxford press, London, p. 273

(1934) suggested the introduction of vocational studies after eleven years of schooling. The central advisory board of education in 1938 approved the proposal submitted by Zakir Hussain committee to mold education in to craftsmanship and skills. Sargent's report of 1944 advocated raising the education department of India to the level of England and addressed all levels of education however the recommendations for the technical and vocation education and training are summarized by Ali (1998)[162] as:

i. establishment of technical high school with a system of linkage between technical and academic education system.

ii. the urban and rural requirements to be considered while developing the curricula of technical schools with need based approach.

iii. Identification of various categories of manpower including, senior executive and research worker, junior executive, foreman and assistants, skilled workers and semi and unskilled workers.

According to Ali (1990)[163], Pakistan education system which is basically a public based system is inherited from the British legacy stated in 18th century. The system had to adjust according to socio-economic and technical needs of the undivided India with flexibility to absorb socio-economic and industrial changes occurring in England. The system realized the importance of technical and vocational education and training in the education system in the post-war reconstruction and rebuilding period of 1945. Since 1854 various committees on education reforms considered the inclusion of technical and vocational education and the development of education in Pakistan. The post 1947 period was greatly influenced by the system developed in the colonial period.

4.4.2 1947 and Onwards (after independence)

At present Pakistan is a federation of four provinces (Punjab, Sindh, Khyber Pakhtunkhwa-KPK and Balochistan), each with a parliamentary system, and other territories under the direct administration of the federal government (Federally Administered Northern Areas (FANA), and Federally Administered Tribal Areas (FATA). The division of responsibilities between the provinces and the centre has been defined by the 1973 constitution. Pakistan's constitution (1973)[164] ensures equality and well-being of all citizens, and no discrimination on the basis of sex, caste, creed or race. Article 37 of the constitution indicates the responsibilities of the State with clear cut roles in specially promoting educational and economic interest of backward classes or areas, removal of illiteracy and provision of free and compulsory education in minimal time period and providing for the availability of technical and professional education to all subjects. A recent constitutional amendment (2010)[165]

[162] Ali, M.M. 1998. Miles stones, Progress technical education in Pakistan: 1947-1997. Sindh Board of technical education, Karachi. Pp. 4-5, 18-25, 36-44, 70-75, 94-95, 101-130, 165-196.

[163] Ali,M.M. Development of technical education in Pakistan: A critical case study of objectives and achievements, Department of education, University of Karachi, pp. 275.

[164] Constitution of Islamic Republic of Pakistan, 1973

[165] The 1973 Constitution (Eighteenth Amendment) Act, 2010, ACT NO. X of 2010, (April 19, 2010).

has abolished the concurrent lists which include education as well to transfer the subject to the respective provinces however the mechanism for the same will be worked out. Education has been and is primarily a provincial matter and the federal government continues to be the overall policy-making, coordinating, and advisory authority on education.

The founder of the country emphasized the role of technical education and vocational training and soon after the independence of the country in 1947 addressed the very first National Education Conference in 1948 stating the fact that the actual meaning of education as not being merely education, further stressing the need of providing for scientific and technical education to the masses for building the future economy, stressing the importance of acquirement of knowledge relating to science, commerce, trade ane establishment of well planned industries. In Pakistan the term technical and vocational education is also used synonymously but usually "technical education" refers to post secondary education and training for the technicians to be absorbed at middle level supervisory positions whereas the "vocational education" refers to the lower level of education & training required in various trades for semi skilled and skilled workers (Government of Pakistan, 1998-2010)[166]. Pakistan being a developing country takes the ingredients of education in pursuance of polices and development plans of the government of Pakistan reflecting socio-economic needs of the country through the respective governments as laid down in their manifestos. Due to the fact that the country faces many political challenges which have their impact on the development of the country. The political events and priorities observed in various periods consequently lead to different policies and plans for the youth of the country for the human development according to the need of time (Government of Pakistan, 1986)[167].

The importance of effective technical and vocational education was realized by Atta-ur-Rehman, et al. (2005)[168] where it was considered that the skills development has been the most neglected area of the education as Pakistan has neither been able to improve vocational and job skills nor could inculcate the creative and cognitive skills. It was further pointed out that the lack of focus on effective skills development in the respective institutions has resulted in loss of output, exports and employment. Various factors have contributed towards this neglect, which includes among other: management and governance structure, policies, less emphasis on quality products/service, focus on conventional technologies and methods and limited supply of productive skilled workers. (Shah, 2004)[169] also conducted a doctorate research which revealed that the overall physical facilities of TEVT are not satisfactory. The

[166] Government of Pakistan. 1998, National education policy, 1998-2010, Ministry of Education, Islamabad, pp-55-63

[167] Government of Pakistan, 1986. Quality of Input and output of technical education. Planning commission, Islamabad. P. 54

[168] Atta-ur-Rehman, A. R. Kemal, Rehana Siddiqui, Musleh-ud Din, Zafar Mueen Nasir (2005) Technology based Industrial Vision and Strategy for Pakistan's Socioeconomic Development (Draft), Pakistan Institute of Development Economics, Higher Education Commission, Government of Pakistan, Islamabad.

[169] Shah. I.H (2004), "Problems and Prospects of Tehncial education in Pakistan", University Institute of Education and Research, University of Arid Agriculture, Rawalpinid, Pakistan.

quality of teacher remains always critical in disseminating knowledge and skills, further it has been argued that for effective learning the teacher-student ratio may also be taken in to account and one of the main resources is teacher. According to Krueger (1996) [170] that students who attend schools with a lower pupil-teacher ratio and a better educated teaching staff and resources earn higher wages. In Pakistan the teachers are not abreast with the modern teaching techniques and technical education is not helpful in creating employment opportunities and the curriculum is outdated. The examination system is mostly theory oriented and does not evaluate the students in technical know-how and on-hand skills. The same was reported by Ali (1996)171 and Advisio (2003)172.

Sohail (2003)[173] acknowledged the lack of industrial experience of teachers (master trainers), skills orientation in curriculum and opportunity to get training from the advanced countries. A vibrant linkage of technical and vocational education with the Industry is also missing in the TEVT system of the country.

Hussain(2005)[174] is of the view that the TEVT in Pakistan has failed to keep pace with the emerging skill due to the fact that the system is highly disjointed and segmented hence created some intractable problems in the optimal utilization of human resources under the given labor market conditions. The same was further endorsed by Kemal (2006)[175] stating that the country is in a low-level skills trap and if it has to break this barrier then more investment in education sector particularly in technical and vocational education is required to enhance the social status of TEVT. The strategy has to be cost effective and demand driven through effective and efficient institutional structure.

Kazmi (2007)176 recognized that the diverse skills in Pakistan are imparted through polytechnic, vocational training centers and apprenticeship schemes. Various training and vocational institutions are operating under various ministries, departments, commercial training institutions and traditional (informal sector) system. A major part of the manufacturing and services sectors relies on informal training, on the traditional Ustad-Shagird (trainer & trainee) relationship to fulfill their needs. A study(1993)[177] on the self-employed in small-scale manufacturing showed that only 3

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[170] Card, David; Alan B. Krueger (1996). "School Quality and the Return to Education". In Gary Burtless. Does money matter?: the effect of school resources on student achievement and adult success. Washington, D.C.: Brookings Institution. pp. 118–119.

[171] Ali.M.M(1996), "Instrumental techniques self study manual for teachers, Kafayat academy, Karachi, pp. 25-28

[172] Advisio. F.B (2003), "Restructuring of technical education and vocational training system, ADB, TA number 4048-pak, Final report of government of Pakistan and Asian Development Bank, p. 196.

[173] Sohail Mehmood (2003), " An analysis of Good Governance Issues and the Musharraf Regime", Area Studies Centre for Africa, North & South America, Quaid-i-Azam University, Islamabad.

[174] Husain, I. 2005. Education, Employment and Economic Development in Pakistan. Available at http://www.sbp.org.pk/about/speech/human_development/2005/Edu_Emp_Dev_Apr_5.pdf

[175] A.R.Kemal, Ghayur. S(ed), "Skills Development for International Competitivness, Productivity, FDIs, Exports and Overseas Migration", Pakisatn Decent Employment Generation & Skills Developemnt, Labour and Manpower Division, Governemnt of Pakista, 2006.

[176] Syeda Wadiat Kazmi1, Staff Member of SAARC Human Resource Development Centre (SHRDC), SAARC Journal of Human Resource Development 2007, pp 105-117

[177] A.R. Kemal and Zafar Mehmood, "Labour Absorption in the Informal Sector and Economic Growth in

per cent of the self-employed in this sector had formal while 65 per cent had had informal training in their area of activity. The formal institutions produce a skilled workforce whose quality is not necessarily in accordance with the demands of the labor market. Although Government of Pakistan has undertaken number of sector reforms like allocations of resources, five year development programs, polices, rules and regulations etc to bring about some positive changes and improvements in various spheres of public management policies/programs however their impact seems lukewarm on civic values of the society. According to Pakistan Economic Survey (2009)[178] it is comprehended at the policy/plans level that the investment in terms of quantity and quality in education particularly at primary and secondary (including technical & vocational) is very much required through an effective and efficient mechanism which may lead to growth of the human capital and has the trickledown effect to reduce poverty in the society.

The above deliberations deduce that a comprehensive technical & vocational policy planning thorough an effective means plays a main role in developing technical vocational education system. The means are referred as institutions and other stakeholders responsible in disseminating the knowledge and skills therefore their capacity to perform their function is quite significant. The organization and composition of these institutions for the optimal utilization of the resources can only be achieved when a well coordinated, transparent, vocal, accountable framework is available to comply-with the policy planning and programs. The laws which give legal protection and skeleton for these policies and plans thus the investment in terms of quantity and quality in TEVT system has to be properly conceived and exercised. In the following section the mapping of the subsequent polices and plans have been studied in perspective of TEVT system in the country.

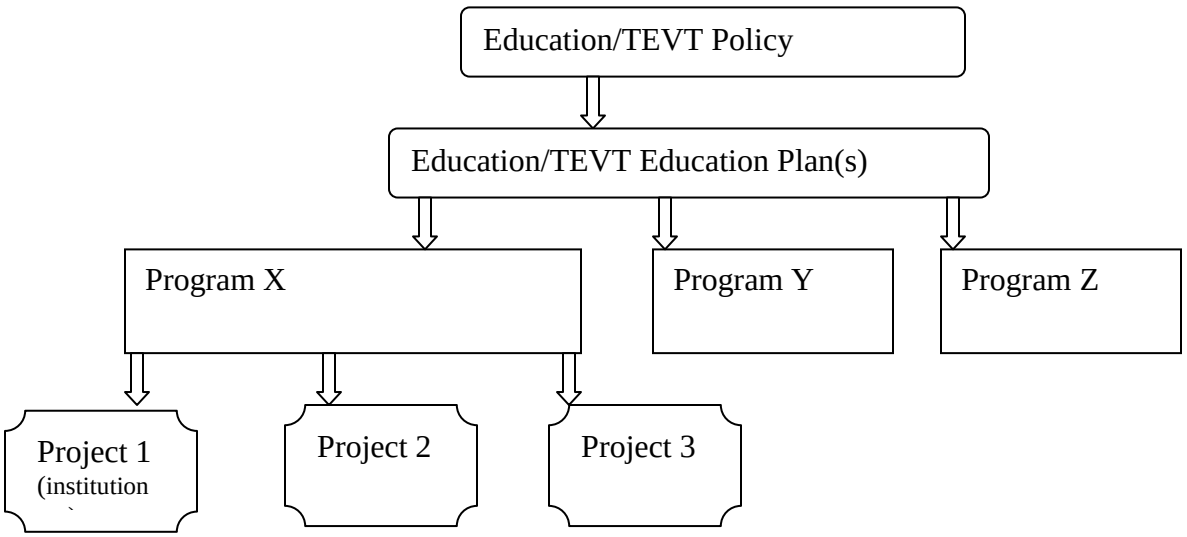
Pakistan", Friedrich Ebert Stiftung, Islamabad, 1993.

[178] Economic Survey of Pakistan, 2008-09, Chapter 10, Education, Ministry of Finance, Govt of Pakistan

4.5 Pakistan's TEVT System (Policies and Plans)

In Pakistan the TEVT system involves the following processes:

TEVT System: Policy, Plan, Program and Project Relationship



A review in the following section is made of all education policies and plans with emphasis on TEVT sub sector of education. The first landmark in the Education sector was laid down in the National Conference held in 1947 and subsequent policies were placed in the subsequent years listed below:

4.5.1 Policies and Commissions

1. Report of Commission on National Education 1959
2. Commission on student problems and welfare 1966.
3. The New Education Policy 1972-80
4. National Education Policy 1979
5. Prime Minister's Program in Education 1986-90
6. National Educational Policy 1992-2002
7. National Education Policy 1998-2010
8. Education Policy, 2009

4.5.2 Plans

It is argued earlier that polices referred to a stage by setting some principles for the purpose which is achieved through plans keeping in view the resources. Sequences of plans in Pakistan are as under:

1. Six years Plan (1951-57)

2. First five plan (1955-60)
3. Second five year plan (1960-65)
4. Third five year plan (1965-70)
5. Non plan period (1970-78)
6. Fifth five year plan (1978-83)
7. Sixth five year plan (1983-88)
8. Seventh five year plan (1988-93)
9. Eight five year plan (1993-98)
10. Medium Term Development Framework (2005-10)
11. Approach Paper for 10th Five Year Plan (2010-15)

The above policies and plans have been thoroughly studied with reference to the current research scope and the gaps associated with each one. A comprehensive picture is discussed below. The country inherited an extremely weak TEVT system in 1947 and to ascertain the situation a council of technical education was constituted for the expansion of TEVT system. In 1948 the council recommended establishing of three polytechnic institutes in the country. Later a plan was developed in 1951 for a period of five years for the socio-economic uplift of the country addressing the education sector. The plan was prepared in isolation and could not act as a concrete plan of action and it was regarded as wasteful exercise (Zaki, 1969)[179].

First Five Year Plan (1955-60)[180].

The plan was approved by National Economic Council (NEC) on April, 15, 1957 and emphasized to provide opportunities for technical education and training and earmarked 6% of the total expenditure in the education sector. The plan laid emphasis on the expansion facilities by establishing institutions in the technical, vocational, and professional fields in order to provide the skilled trained manpower required in all sectors of the development programs. The plan expected an annual output of 650 graduate engineers and 950 engineering technicians with a total allocation of Rs 27.8 millions, establishing three colleges and directorate of technical education. The major recommendations were to treat TEVT as an integral part of the educational system. Further the plan also highlighted the importance of the organization and management aspects of the system. The report on the commission on national education[181] stated that the aims of adult education requires the reorientation and reorganization of education system through trained manpower, occupational skills & competencies under competent leadership. The commission on the subject recommended a diversified TEVT, establishing network of schools, the polytechnic/nontechnical may offer evening classes, industry may bear substantial portion of the cost of training, council of technical education to be established, board of technical education for the administrative setup for

[179] Zaki.W.M (1969), Educational Development in Pakistan, West Pakistan Publishing Company Limited, Islamabad, p 24.

[180] Government of Pakistan, National Planning Board, First Five Year Plan: 1955-60

[181] Govt of Pakistan, Ministry of Education, Report of the Commission on national Education, 1959

TEVT to be established and the salary and scales of the staff of TEVT to be reviewed for their attraction.

Second Five Year Plan: 1960-65[182]**.**

The second plan also contained the education policy of 1959 advocating building up of national character through a change process by acquisition of new knowledge and skills. The second plan evaluated the first plan and highlighted that the achievements in the first plan periods was not encouraging as no significant improvements were made in the quality of TEVT and there was a need for strengthening of directorate of technical education, introduction of new technologies and up-gradation of existing technical institutes to polytechnic level with a financial outlay of Rs 79 Million. During the plan five polytechnic institutions were established.

In 1962 a manual[183] for polytechnics was also developed by the technical education standardization committee, education reform unit, Ministry of Education. The manual included: curricula and courses/staff requirements and qualifications, training logistics, laboratory and workshops equipments, specifications, standard quantities of supplies and equipments, layout of equipments, size of workshops, model class schedules and administrative and operating policies to facilitate efficient operation and supervision of TEVT system in the country.

Third Five Year Plan: 1965-70[184]

The evaluation of the second plan suggested that increase of the allocation to education by five-folds in the second plan as compared to the first one was a positive aspect. However the main problems of education at the trade and craft level were dispersed among many agencies. Although steps had been taken during the second plan to co-ordinate and systematize some of the training, but the issues reflected for TEVT were the variability types and standards, little comparability of qualifications, no relationship between national manpower requirements and training carried by various agencies. Further the manual developed in the 2nd plan was not implemented. In the third plan, efforts were made to streamline the administrative framework responsible for TEVT training. The programme of instructions in the evening was also introduced and the concept of mobile workshops (on wheels or in boats) was floated to provide informal (which accounts about 73% of the technical and vocational training)[185] of or on-the-job training to the rural community to cater the needs of the larger community. The plan envisaged to raise the intake from 4000 to 14000, establishment of 13 new polytechnics, expansion of eight polytechnics and one monotechnic with a financial allocation of Rs 61.7 million.

The fourth five year plan (1970-75) did not mature due to war and other political turmoil in the country however the stress was to uplift the social stature of the products of TEVT

[182] Govt of Pakistan, Planning Commission Second Five year plan: 1960-65

[183] Government of Pakistan, 1962, Manual for Standards of TEVT institutions, Report of Technical Education Standardization Committee, Ministry of Education, Karachi, p. 235

[184] Government of Pakistan, Planning Commission, Third Five Year Plan, 1965-70.

[185] Report on Employment & Income Distribution through Skill Training, R&D Section, Technical Education & Vocational Training Authority, Govt of Punjab, Lahore.

system i.e. skilled workers and the longstanding demand of polytechnic students to seek higher degree education was also recognized. Further six polytechnic colleges were established and upgrading of seven to offer bachelor degree in technical education and first time introducing matriculation (10^{th} grade) with specialization in technology was also introduced however it was discontinued later.

The Education Policy[186], 1970

The Education, Policy 1970 recommended a shift to scientific, technical and vocational education for middle level skilled worker with diversification of secondary education and further prescribed the guidelines of rules and regulation for the private institution to address the quality issue. However the policy was not implemented on account of war with India and secession of East Pakistan.

Education Policy 1972-80[187]

The education policy 1972-80 acknowledged the concept of dignity of labor by advocating the training of the human resources in different vocational trades. Under this policy, vocational education and training workshops were established at the middle level in schools where vocational training was offered in various disciplines. The policy also recommended for upgrading the polytechnic institutes into technical colleges. After completing three-year diploma courses in different technical trades, students were encouraged to undergo two-three years of industrial training experience for which opportunities were also provided. For diploma holders, a one-year additional course, leading to the degree of Bachelor of Technology (B.tech) was also introduced.

Fifth Five Year Plan[188] 1978-83

The number of polytechnic institutes at the beginning of the plan were 25 including 7 colleges for technology offering B.Tech degree courses and total enrolment reached to 13500 with annual intake of 5271 and output 3550.

The strategy in the fifth plan for the TEVT was aimed towards making the training more relevant to the job market. The enrollment was to increase from 13,500 to 17,500 and to raise annual intake to 6400 and output 4925 and the plan provided Rs. 766.8 million which was about 8% of the development outlay for education. The TEVT was considered as the responsibility of federal ministry of manpower division and the labor department of the respective provincial governments. The manpower division was supposed to undertake re-organization and expansion of the TEVT training arrangements and establishing institutions coordinating the federal and provincial governments and other departments, developing of curricula, formulation of standards of skill training, evaluation and testing etc. The problems identified in the plan were the imbalance between demand and supply due to insufficient use of manpower forecasting in planning the education system, lack of effective coordination, lack of conformity of training program to the requirements of the employer/industry.

[186] Government of Pakistan, Ministry of Education & Scientific Research, The new education policy, 1970.

[187] Government of Pakistan, Ministry of Education, The Education Policy, 1972.

[188] Government of Pakistan, Planning Commission, Fifth Five Year Plan: 1978-83

National Education Policy[189], 1979

The 1979 education policy was launched after the fifth five year plan and the policy presented a 12-points implementation strategy which included a four tier approach of education system i.e. primary, secondary by three tier system of elementary, secondary and university, TEVT to be made production oriented, provision of one thousand village workshop for the rural vocational training, establishment of national technical teachers training college for the master trainers and standardization of the curriculum, board of education as a research body and the four tier of education. The involvement of private sector by establishing skill development councils was also highlighted in TEVT. The importance of the institutional, organizational and administrative arrangements was again recognized. At the implementation[190] side the Ministry of Education observed to carry out activities pertaining to: i) appointment of advisory committees for technical institutes, ii) restructuring boards and directorate of technical education, iii) production units to be attached with some of the institutes, iv) evening shifts for the training program to be undertaken, v) standardized modular based training, vi) respective boards of the institutions to work out training levels, vii) linkage of technical and engineering graduates and viii) translation of the books/training modules in to local languages for better understanding of the trainees.

The commitment of the government with regards to financial and administrative aspects in TEVT was not achieved.

Sixth Five Year Plan[191] (1983-88)

The sixth plan gave a significant importance to TEVT and formation of a network of these institutions which was to be established throughout the country. It was estimated that about 50,000 skilled workers were to be trained annually. The system of training of skilled workers through private, non-formal system was encouraged. It was planned to ensure that these training programs were to be evaluated and standardized with the assistance of the National Training Board. At the beginning of sixth plan there were 18 polytechnics, 7 monotechnic and seven colleges of technical education in the country with an enrolment capacity of 18000. The plan foresaw for the establishment of six new polytechnics for men and three for women and also 15 monotechnics in far-flung areas of the country. The plan estimated annual intake of 5950 in the polytechnics and the allocation for TEVT for the sixth plan was Rs 2.3 billion as compared to 0.7 billion for the fifth plan thus an increase of 283%.

Seventh Five Year Plan[192] (1988-93)

It was estimated that 81 per cent of matriculates (10th grade) go on for higher education. Of these, one-fourth is enrolled in technical and vocational institutions while three-fourths seek admission in the arts & science colleges. The plan did not support the

[189] Government of Pakistan, Ministry of Education, National Education Policy and implementation program, 1979.

[190] Government of Pakistan, 1979, National education policy and implementation program, Ministry of Education, Islamabad, pp. 38-41.

[191] Government of Pakistan, Planning Commission, Sixth Five Year Plan, 1983-88

[192] Government of Pakistan, Planning Commission, Seventh Five Year Plan, 1988-93

informal education. The total intake in TEVT was: 17000, 35000, and 56000 and for arts and since it was: 68000, 95000, 125000 and 175000 for the year 1973, 1978, 1983 and 1988 respectively. The analysis reflects that the percentage of the intake of students opting for TEVT education (after grade 10th grade) was 20%, 27%, 25% and 24% to the total annual intake of the education system. This further showed that the enrolment in the technical and vocational education was not increased in proportion to the increase in enrolment of the general education. The plan was to increase the share of students going to technical and vocational institutions over 33 per cent. For this purpose the public sector was to set up 42 poly/monotechnics, 4 commercial colleges and 50 vocational training centers, 2 elementary teachers training colleges and one agriculture extension institute. The private sector was encouraged setting up technical schools and to provide incentives, including tax exemption on donations/income and credit facilities from the small business finance corporation (SBFC). The plan targeted to increase the intake capacity to 19,000 trainees for the existing 9000. Considering the lack in coordinating efforts the plan proposed to set up council of technical education and the allocation of Rs 2000 million was earmarked for technical and vocational sector of the country.

However the plan lacked specific strategy and delivery mechanism and allocation of the resources for achieving the ambitious targets.

National Education Policy[193] 1992

The policy outlined the restructuring the 1959, 1972 and 1979 policies. The restructuring reforms contained four areas: educational, social, economic and institutional. It was also proposed that non-governmental organizations may be involved for the capacity building of human resource and innovation factor may add to achieve the excellence in TEVT. 1992 policy expected a total of 99 institutions by 2002 with an enrolment of 60000. A tenfold increase in educational facilities but the limiting factors identified by (Bengali, 1999)[194] was: financial resources, poor appreciation of educational priorities and above all inadequate and mismanaged delivery mechanism.

Eight Five Year Plan[195]: 1993-98

The plan document underlined the importance of improving the relevancy of curricula, reforming the examination system and enhancing the quality of TEVT system. The plan started with sixty polytechnic institutions and colleges of technology, (13 for female). The plan proposed to establish at least one polytechnic/monotechnic for men in each district (113 in numbers)[196] and one woman polytechnic in each division (twenty six in numbers). This would raise the intake to 18000 with 8% increase in the overall enrolment and expected to reach 39000. However the effective coordinated responsibility amongst various actors was not defined for the operation and management of TEVT system.

[193] Government of Pakistan, Ministry of Education, National Education Policy, 1992.

[194] Kaiser Bengali, History of Educational Policy Making and Planning in Pakistan, Serial No: 40, 1999.

[195] Government of Pakistan, Planning Commission, Eight Five Year Plan: 1993-98

[196] Population Census Organization, Govt of Pakistan: has 26 Divisions, 113 Districts, 420 Tehsils and 48344 villages

National Education Policy[197]: 1998-2010

The policy acknowledged that education is recognized in a global perspective through factors like: moral, political and socio-economic development. The policy supported the non-formal education and advocated that the non-formal learning concepts of today are a comprehensive answer to the identified needs and the concept is based on integral educational philosophy instead of a piece meal. However the strategy to propagate the non-formal education was missing.

National Reconstruction Bureau (NRB) Local Government Ordinance, 2001[198]

In pursuance of NRB ordinance 2001 of the federal government, the local government ordinances were issued by each of the provinces (Punjab, Sindh, KPK/NWFP and Sindh) for a period of eight years to be ratified by the provincial legislative assemblies on the expiry of the period. The provincial governments had established district governments, which were responsible for the management and control of offices of the departments at the district level. The concept of the new system was to decentralize the powers at the grass root level so that the district governments shall exercise such authority within their districts in pursuance of legal framework. Under the ordinance, education up to the college level including technical and vocational (except professional colleges) was devolved to the districts. However the legislation was not continued beyond December, 2009 due to the reservations of the respective provincial governments that the local government (LG) system was developed by the non-elected military government and constitutionally it has to be done by the provinces in the best interest of their people consequently now the responsibility rests on the provincial governments to chalk out the comprehensive strategy for the devolution of powers to the real stakeholders under a legal framework.

Medium Term Development Framework (MTDF)[199] 2005-10

According to MTDF (2005-10) the existing technical and vocational training system is not meeting the requirements of trade and industry and in order to focus on industrialization and to moving towards high-tech industries, the workforce would need to be highly skilled and adaptable. The key features of the MTDF strategy for skill and vocational development were: need oriented, multi skill and flexible training to meet the changing needs of local industry, overseas employment and self employment: setting minimum standards of training, trade testing and certification: operational and financial autonomy to institutions: and enhancement of public-private partnerships. The plan highlighted that TEVT system has not been able to cater to the challenges posed by the new work environment due to: low productivity low skills, low enrolments (105,000, with another 115,000 engaged in tertiary level diploma and certificate programmes. In comparison, 326,000 are enrolled in bachelors programs while 250,000 are enrolled at the masters' level and higher levels), teachers' shortage (currently 7042 teachers (19 percent women) work in 624 TEVT institutions with an enrolment of 105,000, of whom 13

[197] Government of Pakistan, Ministry of Education, National Education Policy, 1998-2010.

[198] NRB Ordinance, 2001, National Reconstruction Bureau, Govt of Pakistan

[199] Medium Term Development Framework (MTTDF), Planning Commission, Government of Pakistan, 2005

percent are women), globalization and new emerging environments (systems set-up in sixties and seventies), overlapping and duplication of training programmes (administered by various departments and organizations hence no standardization), changing requirements for overseas employment, data and statistics (absence of a credible and legitimate database to monitor the outcomes). The specific initiatives proposed in the plan was to increase the annual intake for skills and technical education to 0.4 million including 0.33 million in public institutions, while the remainder are expected to be part of private sector involvement by 2010. It was further proposed to introduce the skills and technology stream in 2000 high schools (equally divided among boys and girls) will allow 0.24 million children of age group 14 – 15 to enter the programme each year, aiming a reasonable degree of proficiency in 2009-10, requiring a further 6 months for proper accreditation after high school. New polytechnics, technical and vocational institutes to be established at least two in every district (of which one will be for women). It was further realized that for an effective and coordinated frame of functioning of TEVT system in the country, National Technical Education and Vocational Training Commission (NAVTEC) to be constituted which may undertake training needs assessments, forecast technical changes and demands, national planning, curriculum development, standardization of technical education, training of trainers, national accreditation of private polytechnics and institutes and develop strong linkages with the industrial end users in conjunction with the provincial counterpart technical education and vocational training authorities (TEVTAs). In the plan it was first time realized that any of the socio-economic development is hard to achieve without the principles of good governance. The plan consider six indicators to determine the situation of education system (including TEVT) in the country which includes: level of participation, preparation, completion, affordability, benefits and alternative pathways. Good governance was considered as one of the most critical factors for successful achievement of the strategic thrust, policies, programmes and targets enshrined in the MTDF for the TEVT system. According to MTDF the governance may be defined as the manner in which power is exercised in the management of a country's economic and social resources for development. This concept is concerned directly with the management of development process, involving both the public and private sector. Good governance was also related to a pluralistic and holistic view where responsibility is jointly shared by players in public sector, the corporate private sector, and civil society by considering the aspects of: accountability, transparency, participation, openness, rule of law and predictability for the sustainability of any social system including TEVT.

According to midterm review (2005-10)[200] conducted by the government of Pakistan, educational market of Pakistan is profoundly complex and destabilized in TEVT due to policies issues with regards to: i) weak linkages with other education sectors and labor market, ii) quality of supplied skills and above all iii) deficiencies in the governance of the sector and capacity utilization. Technical Education and Vocational Training Authority (TEVTA)[201], Punjab has surrendered Rs 500 million over the non-utilization of development funds in the first half of the financial year due to the inability of the institution to utilize it in pursuance of the schemes earmarked during the fiscal year.

[200] Mid Term Review (2005-10), Planning Commission, Govt of Pakistan.

[201] Daily Times, February, 2010.

Education Policy[202], 2009

Education Policy[203] (2009) of Pakistan stated that there is a large population and therefore a comparative advantage in labor costs is vital. However the low skill levels dampen the potential of the labor force to significantly contribute to economic growth. The deficit permeates all sectors: industry, agriculture, services, commerce. Improvements in the skill levels of the human capital will increase efficiency and competitiveness of the local industry, attract international investment and allow overseas employment of Pakistanis generating a flow of foreign remittances. The policy addresses three principal problems faced by the TEVT sector: (i) its weak linkages with other education sectors and the labor market, (ii) deficiencies in the governance of the sector: and (iii) the need to expand supply of technical skills of good quality. The problem of a fragmented structure of governance, endemic to the education sector, also plagues the technical and vocational sub-sector. Many institutions and jurisdictions are involved in governance of this field without a clear demarcation of their respective responsibilities. There is no focal point for coherent planning for the sector hence a coordination mechanism between higher education, school education and technical, vocational education has to be developed. Further national qualifications framework (NQF) shall be established in consultation with professional bodies and government shall develop a suitable framework for TEVT with close involvement of chambers of commerce and industry, business sector by supporting public private partnership. A regular tracking system shall be instituted for graduates of TEVT to get feedback on relevancy and a university of technology shall be established at the national level to integrate the system at the higher level of education. The policy supports the strategic options developed by NAVTEC to the implementation process.

The Approach Paper of 10th Five Year Plan (2010-15)

The 10th five year plan is in the process of brainstorming sessions however in its approach paper the emphasis is on the public-private partnership for the development of TEVT in the country. Further the area of information & communication technology (ICT) was considered as focus discipline of TEVT. However the challenges associated with it is the quality related issues. The proposed plan strategy for the technical/vocational skills training in ICT's is the international certification and automated workflow. According to a study conducted by Pakistan Council of Science & Technology[204] about 2.5 million people will be required in information technology (IT) and telecom sector out of which 1.8 million will be technical jobs which are about 72.3% of total work force employment in the sector. The draft plan also stressed the need of research & development in TEVT in the country.

[202] Government of Pakistan, Ministry of Education, National Education Policy,2009

[203] Govt of Pakistan, Ministry of Education, National education Policy, 2009.

[204] Labour market trends in Pakistan, Pakistan Council for Science & Technology, Islamabad, 2005-06

4.6 Role of TEVT Institutions

The main institutions involved and their scope with regards to provide the technical and vocational education in the country are discussed below:

4.6.1 Role of National Vocational & Technical Education Commission (NAVTEC)

In November 2006, the government of Pakistan established the national vocational and technical education Commission[205] (NAVTEC) with the objective to facilitate, regulate, and provide policy direction for technical education and vocational training to meet national and international demand for skilled man and women power. The National Vocational and Technical Education Commission (NAVTEC) aims to develop the knowledge economy during the implementation period of MTDF. The public sector was expected to spend Rs. 333 billion (16 percent of the GDP) to achieve the objective of knowledge based economy. Private sector contribution was of Rs. 40 billion in addition. Technical and vocational enrolment in the country which was around 1.3 percent (in 2005) of the total enrolment in 11-17 age groups was planned to increase to 7 percent by 2015. NAVTEC has been entrusted with the work of policy formulation, vocational training and skills development coordination with provincial and local governments for execution of national plan and policies on technical and vocational training.

4.6.2 Provincial Technical Education and Vocational Training Authority (PTEVTA)

Autonomous bodies like: technical education and vocational training authorities (TEVTA's) in each province. The organizational structure of these bodies conceived was to be headed by professional technologists and engineers and governed with the representation of major stakeholders from industry, government and academia. Its main task to ensure quality of training and standards set by NAVTEC in these chartered institutions. Punjab and KPK have already started trials of "coordinating different departments under a single umbrella body": while Sindh and Balochistan have a system that different departments have different responsibilities. Linkages between the government and TEVT schools and the private sector are yet to be strengthened.

According to Asian Development Bank, TEVTA focuses on enhancing enrolments, instead of providing good quality relevant training. It is generally perceived that technical and vocational training in Pakistan has little relevance to the demands of industry. The technical institutions and training centers lack the required machinery and equipment for training skilled workers. In the majority of the cases, teachers are not qualified in the areas of their specialization and lack practical knowledge.

[205] National Vocational and Technical Education Commission (NAVTEC): Pakistan Needs Vocational Training to Boost Economic Growth, Ministry of Commerce. Available at http://www.commerce.gov.pk/ read.asp?newsID=214

4.7 Framework of TEVT[206]:

The Vocational institutes offer one-year certificate and two-year diploma courses in various trades. Commerce education to train manpower for the business sector is provided in commercial training institutes, which offer one-year certificate in commerce (C.Com) and two-year diploma in Commerce (D.Com) programmes. The Technical education through Mono/polytechnic institutes and colleges of technology (including private sector institutes) offers three-year diploma programmes (associate engineer) in over twenty technologies. The details of the Vocational Education and Skill Development (VESD) programmes in Pakistan being undertaken by various agencies at different levels are summarized below:

Key Players in Pakistan for TEVT System[207] (Table-1)

Agency/ Organization	Type of Institute	No of Institutes/ Centers
Federal	NAVTEC	policy planning, coordination, developing frameworks etc
	Ministry of Labor & Manpower(NTB) Ministry of Education, Ministry of Science & Technology and Private centers	4 montechnic/ polytechnic and 52 vocational institutions
Punjab	Technical Education and Vocational Training Authority (TEVTA), Punjab Vocational Training Council (PVTC)-	113 montechnic/ polytechnic and 1373 vocational institutions
Sindh	Technical and Vocational Training Authority (TEVTA)	53montechnic/ polytechnic and 411 vocational institutions
NWFP	Directorate of Technical Education & Manpower Training (DMT)	27 montechnic/ polytechnic and 716 vocational institutions
Balochistan	Directorate of Manpower Training	2 montechnic/ polytechnic and 47 vocational institutions
Skill Development Council	(public-private model)	contractual Basis, 5 in nos one in Islamabad and one in each province (4) however they have further given affiliation to number of private sectors institutes

TEVTA = Technical Education and Vocational Training Authority, DMT = Directorate of Manpower, TE = Technical Education, VT = Vocational Training, Source: Asian Development Bank-ADB.

[206] Asia-Pacific Programme of Education for All (APPEAL). *National studies: Pakistan*. Bangkok, UNESCO Principal Regional Office for Asia and the Pacific, 1991

[207] Report on Employment & Income Distribution through Skill Training, R&D Section, Technical Education & Vocational Training Authority, Govt of Punjab, Lahore and Pakistan Education Statistics, Academy of Education Planning & Management, Ministry of Education, for the year 2004-2008

At present technical education and vocational training programmes are administered by a number of federal, provincial and private agencies. Many higher secondary students improve their qualifications for diplomas and certificates by enrolling in private and government degree awarding institutes in selected activities such as IT, network administration, graphics and fashion design, or accountancy.

A comparative look of the above mentioned organizations reveals that a strong agency at federal and one each at the provincial level should be solely responsible for policy, plan development, promotion, up-gradation and standardization of technical education and vocational training with an integrated approach to meet the changing needs of the economy.

4.8 TEVT DATA[208]

(institutions, gender, enrolment, teachers & province wise)

The table-2 and Figure-1 shows the growth of public and private sector institution for a period from 2004 to 2008 and this growth shows a disparity between public and private sector. Further it also reflects that before 2004 the role of privet sector institutions in TEVT is almost negligible which shows low level of participation. This also articulates that the trend and actual data is in contradiction with the plans discussed above and far behind in respect of institutional quantity as almost the same remained unchanged by and large in three years on the contrary the population growth remained more than 2% per year thus adding about more than 1 million youth adding annually in 35 million youth of a population of more than 170 million.

TEVT Institutions in public and private sector (in nos) (table-2)

Year	Public	Private	Total
2004-05	747	0	747
2005-06	2,835	224	3,059
2006-07	925	2165	3,090
2007-08	936	2189	3,125

[208] Pakistan Education Statistics, Academy of Education Planning & Management, Ministry of Education, for the year 2004-2008.

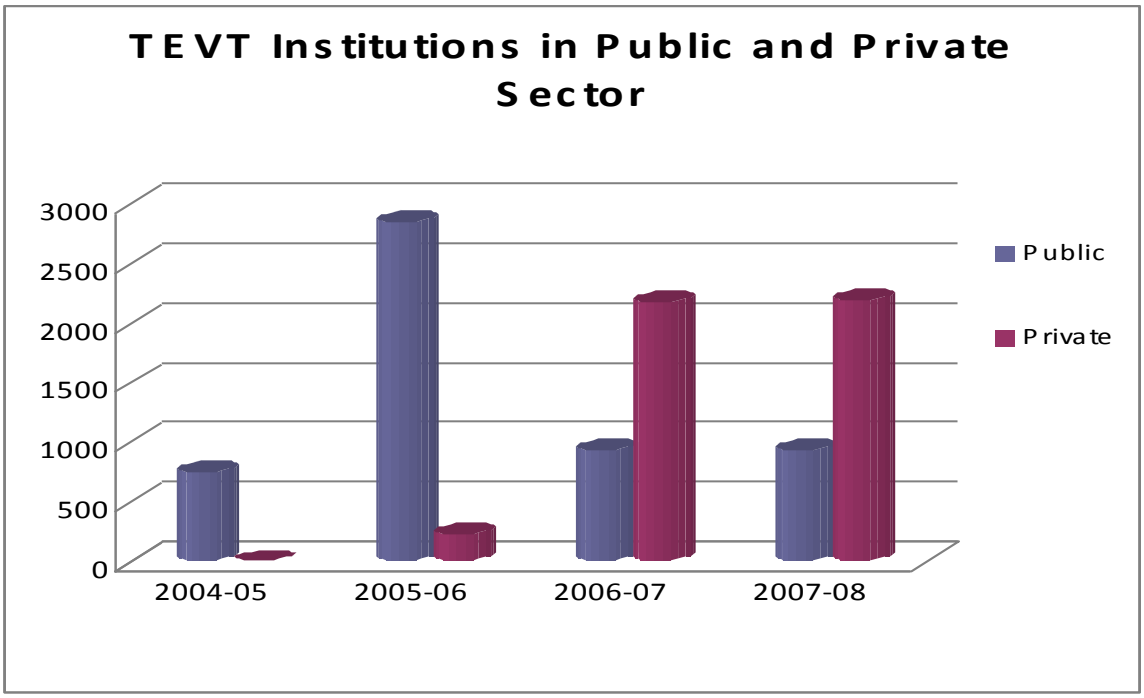


Figure 1

The table-3 and Figure 2-3 shows that there exist a gender disparity between males and females for their participation in TEVT education. The data indicates that in three years the enrolment remained stagnant and so the disparity between males and females which is at the ratio of 63%:37% (males: females). This is again in contradiction the policy of the government to reduce disparity & in contrast with the present gender ratio of 1.07 male(s)/female.

TEVT Enrolment Gender and Year Wise in Public and Private (table-3)

Year	Male	Female	Total
2005-06			
Public	53945	28189	82134
Other Public	12564	9054	21618
Total Public	66509	37243	103752
Private	82532	52403	134935
Grand Total (Public + Private)	149041	89646	238687
2006-07			
Public	56642	29598	86240
Other Public	13192	9507	22699
Total Public	69834	39105	108939
Private	86659	55025	141684
Grand Total (Public + Private)	156493	94130	250623

2007-08			
Public	54927	33039	87966
Other Public	14457	8696	23153
Total Public	69384	41735	111119
Private	90239	54278	144517
Grand Total (Public + Private)	159623	96013	255636

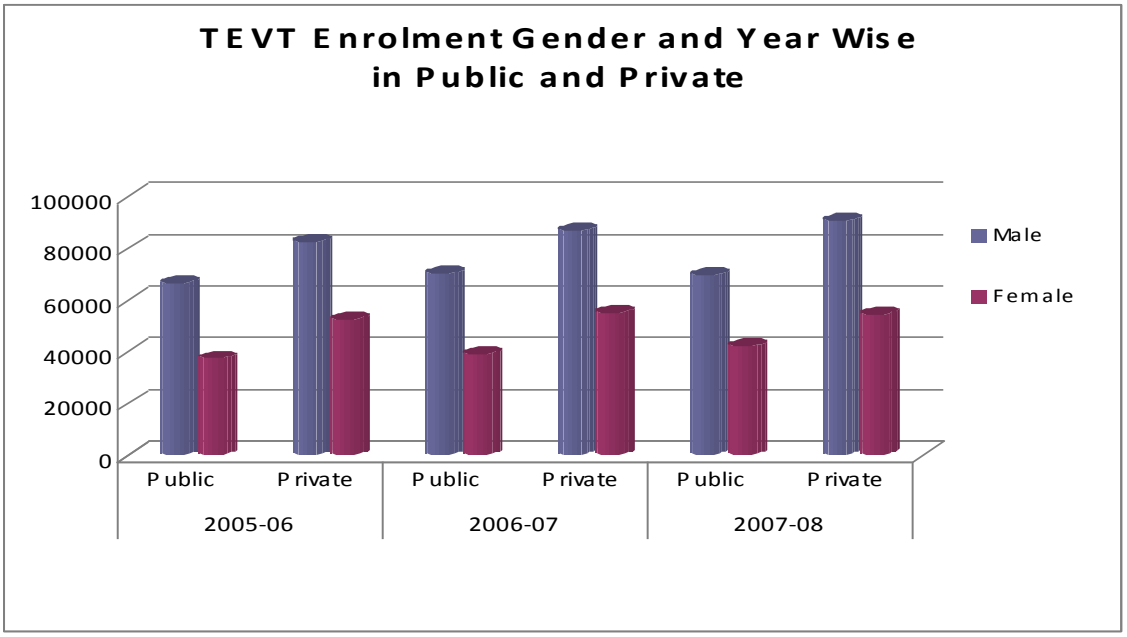


Figure 2

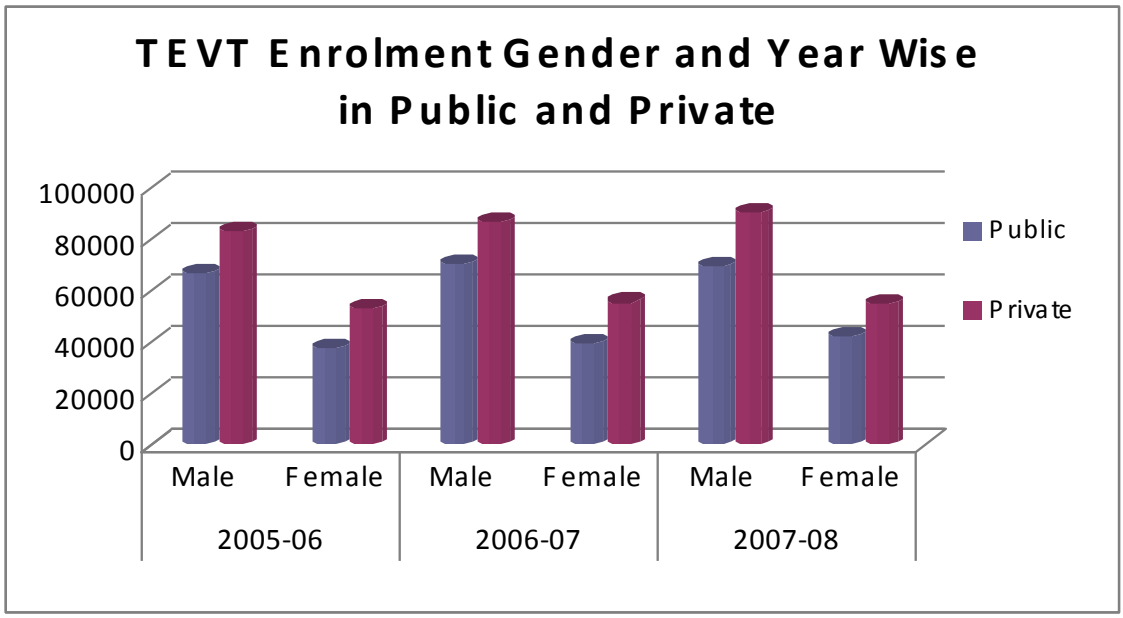


Figure 3

The table-4 and Figure-4 shows that the female teacher is almost 50% less than male's teachers and there is very little increase in the teacher in three years which shows a stagnancy situation.

Teachers (gender-wise) in technical and vocational education institutions (in Nos) (table-4)

Year	Male	Female	Total
2005-06			
Public	4060	1847	5907
Other Public	924	494	1418
Total Public	4984	2341	7325
Private	4923	2317	7240
Grand Total	9907	4658	14565
2006-07			
Public	4076	1854	5930
Other Public	928	496	1424
Total Public	5004	2350	7354
Private	4942	2326	7268
Grand Total	9946	4676	14622
2007-08			
Public	4114	1934	6048
Other Public	988	465	1453
Total Public	5102	2399	7501
Private	5042	2371	7413
Grand Total (Public + Private)	10144	4770	14914

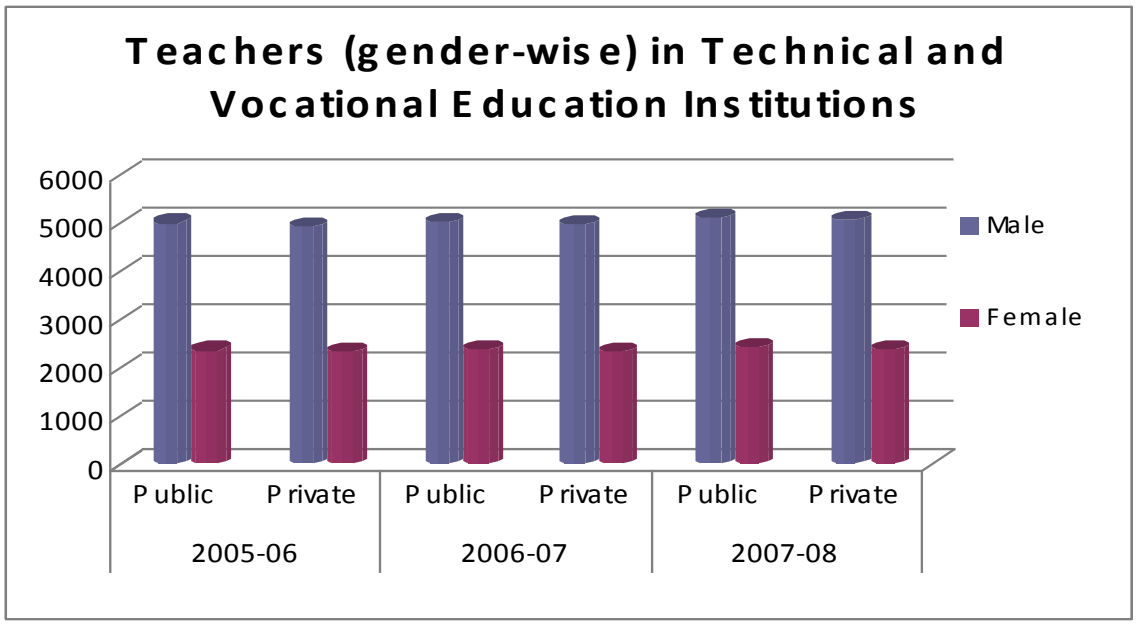


Figure 4

Province wise technical & vocational institutions (enrolment-gender-wise), and teachers (2007-08) (table-5)

Province	Institutions				Enrolment			Teacher		
	Male	Female	Mixed	Total	Male	Female	Total	Male	Female	Total
Punjab	284	761	441	**1486**	79482	45196	**124678**	5219	2452	**7671**
Sindh	75	165	223	**464**	35662	19876	**55537**	1917	778	**2695**
NWFP/KPK	281	296	166	**743**	35877	15897	**51774**	2208	774	**2982**
Balochistan	21	12	16	**49**	3114	1746	**4860**	340	109	**449**
AJK	12	69	21	**102**	1905	3499	**5404**	190	251	**441**
FATA	12	153	25	**190**	1211	6676	**7887**	82	196	**278**
Baltistan	8	28	0	**38**	690	938	**1628**	86	51	**137**
Federal	4	23	28	**55**	1682	2186	**3868**	102	159	**261**
Pakistan	698	1607	920	**3126**	159623	96013	**255636**	10144	4770	**14914**

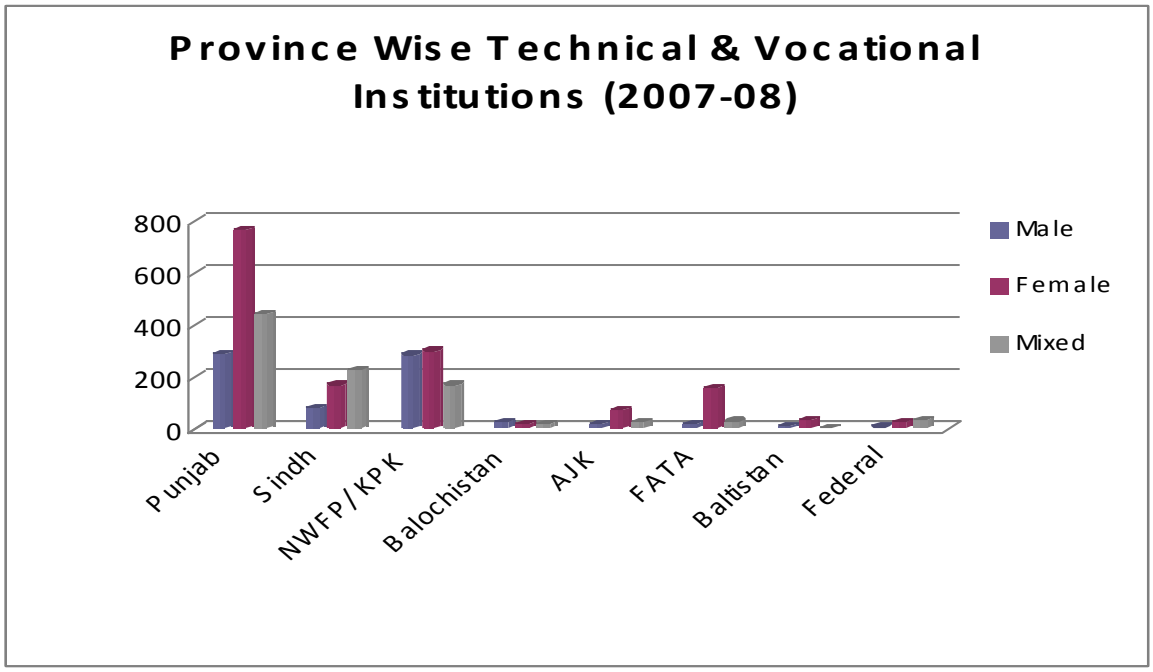


Figure 5-a

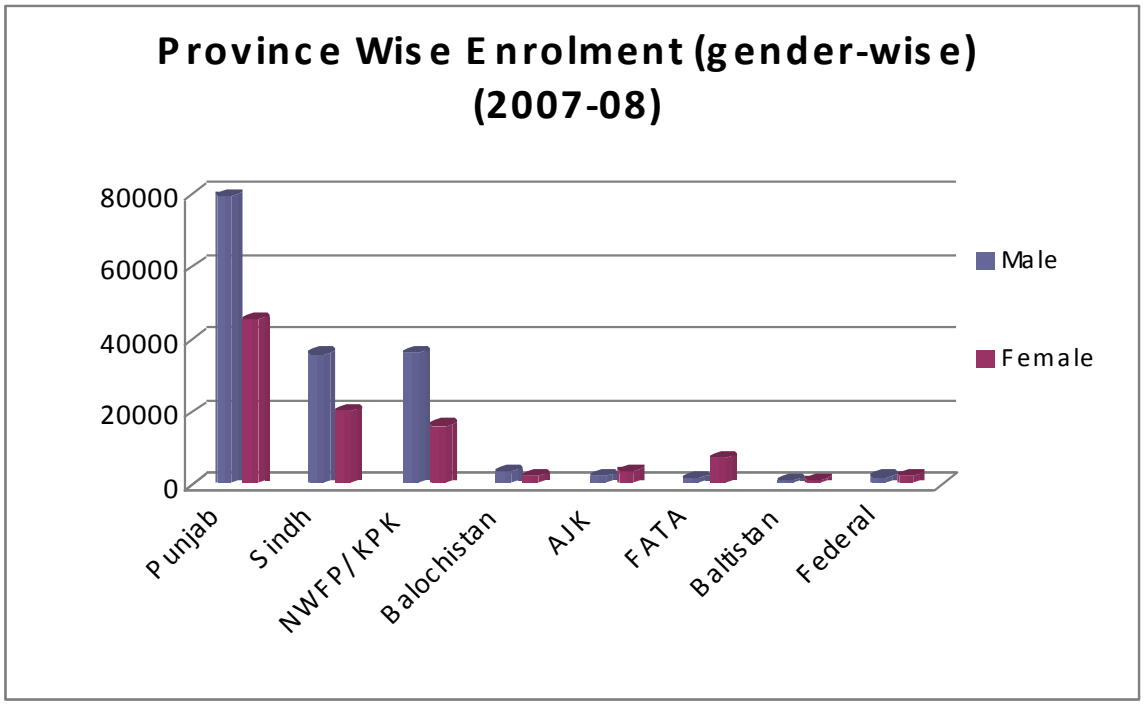


Figure 5-b

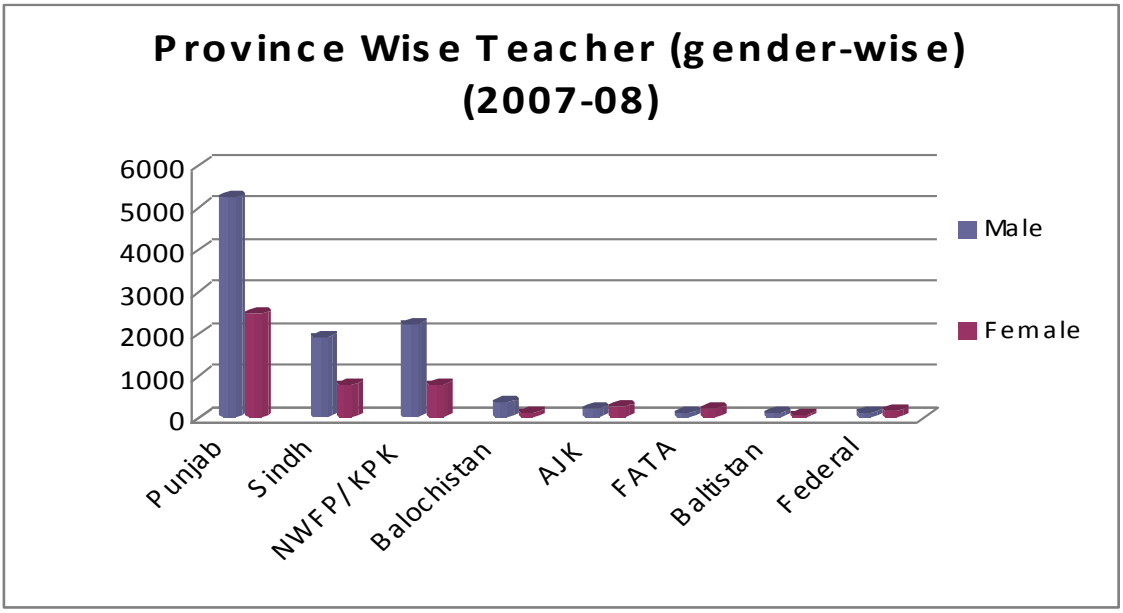


Figure 5-c

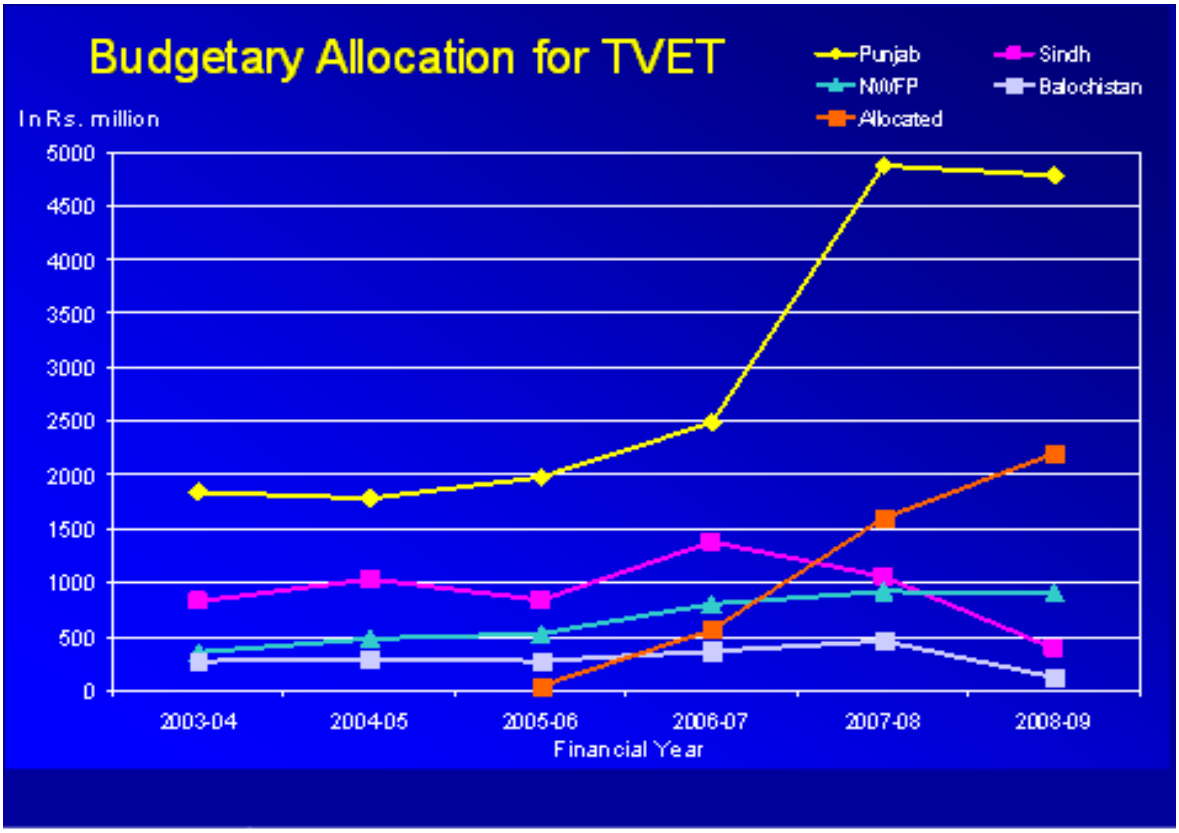
The above table 2 to 5 (Figure 1- 5) depicts that although the country has the potential of more than 35 million young people trying to enter into the labor market (domestic and international) and on the other hand even number of such institutions and their capacity to accommodate this segment is even less than 1% to utilize this enormous human resource. There are total 3125 TEVT Institutions in the country out of which 936(30%) are in the public sector, whereas 2189 (70%) are in the private secretor. The total enrolment in these institutions is 255,636 of which 111,119(43%) is in the public sector, whereas 144,517 (57%) is in the private sector. The total male enrolment is 159,623 (62%), whereas the female enrolment is 96,013 (38%). The total teachers are 14,914 out of which 7,501(50%) in the public and 7,413 (50%) in the private sector. There are 10,144 (68%) male teachers and 4770 (32%) female teachers. It clearly indicated there are lot of disparity with regards to the number of institutions between various provinces, enrolment and teacher ratios. The gender disparity is also visible in the above parameters.

4.9 Funds Position in TEVT

Allocation of Funds and Expenditure in TEVT[209] (Table-6) **Rs in Million**

Plan	TEVT Sector		Total Education	
	Allocation	Expenditure	Allocation	Expenditure
6th Plan(1983-88)	1315	857.95	18840	16606.02
7th Plan(1988-93)	2000	943.17	22684.8	20232.97
8th Plan(1993-98)	2447	2373.32	69031.7	38367.49
9th Plan(1998-2003)	5000	4320	133500	124500

[209] National Education Policy, Government of Pakistan, 1998-2003



Budget allocation for TEVT province wise (2003-2009) (Figure-6)

The table-6 (Fig-6) which described the allocation of the funds and expenditure gives an idea about the priority of the government in TEVT policy. The funds allocation and expenditure reflect aspects that the share of TEVT is on an average 6%, 8%, 3% and 4% during the 6th, 7th, 8th and 9th plan of the total of education which is quite meager. The same was not increased as proportion to increase in the other sub-sector of education. This means the allocation of TEVT was increased from Rs 1315 million to Rs 5000 million from 1983 to 2003 (in twenty years) whereas for education as whole it was increased from Rs 1830 Million to 133.50 Billion which shows a great deal of disparity. Further the utilization of funds in education sector as whole and TEVT in particular also shows that the institutional utilization is lacking. The Fig-1 shows that the provincial allocation of the funds for the period 2003 to 2009 further reflects that the allocated funds are constant from the preceding years or at a downward trends, further the disparities between the provinces is quite visible.

Box 3

In global perspective various models are observed in TEVT system however the common factors consist of; participatory polices, legislative framework, funding mechanism, qualifications skeleton, standards, institutional governing structure, linkages with the industry and engaging social partners to deliver the knowledge and skills formally and informally.

In Pakistan the TEVT system to some extends is inherited from colonial period comprises of six phases however the formal system is developed in post independence period. It may be affirmed that various steps were undertaken by the successive governments in Pakistan for developing an effective TEVT system in the country which includes: national education conference at the time of independence, two commissions report, five education policies, nine five year plans and other schemes and programs. The common feature of all the policies, plans, programs and schemes highlighting the importance of TEVT, however it look that each policy commenced a lament of the failure of the previous one and interestingly proceeding to another one. Further each plan reviewed the performance of the previous plan and speaks out the failure to achieve its targets. The implementation strategies on the prescribed public document reproduce the justifications of the programs in terms of the failure of the past schemes. The overall outcome reflects that there exists an insufficient implementation capacity of education policies and plans which may be regarded as major hurdles in the development of TEVT system in the country. The practice of extending the time period for the incomplete targets of previous policies/plans can also be seen at various stages. The thrust articulated in Pakistan's perspective plan is mostly on quantitative expansion of the TEVT, despite the projected surplus of its graduates over industry needs however the substantial quality gap has not taken in to account. Further the policy framework never developed for the larger informal sector of the country for the employment in the job market. The framework for the implementation process with well coordinated efforts is also missing. This situation indicates that there is need of co-relation between the rational policies and plans and adequate system for their implementation through effective delivery mechanism.

The data revels that; i) no single agency in the respective provinces and other area govts exists to coordinate and standardized the education, ii) institutional growth is not compatible with population growth, iii) women disparity exist in enrolment, teachers, iv) allocation of financial resources are either meager in relation to education sector or not distributed judiciously or underutilized which shows the limited intuitional capacity.

Therefore the researcher is of the opinion that the malfunctioning of TEVT system is causing a great deal of inconsistency due to gaps in; legislations, policies, plans, programs and formulation of the projects without considering the implementation capacity of the respective institutions. Further these instruments for the change have been developed generally in divorce from overall education policy and planning. TEVT system in practice has its inability to function in terms of; quality of education and skills of trainees and trainers, relevance of the trades, national/international standards, mismatch financial grants, poor linkage with the industry, not addressing the viable and tangible informal sector, minimal role of private sector, social value of the education, limited institutional growth, mismatched of financial resources and their effective utilizations, women disparity at all levels, non adoption of new technological tools and coordination between stakeholders. This has results a threat for an effective and efficient functioning of TEVT system of the country which is in low level of educations and skills within an outside in context with productivity and competitiveness. It is worth mentioning that the public polices articulation, governance and management did not receive the specific attention it deserved in concretized terms, which clearly delineating the roles of various tiers of government in governance and management of education and skills and consequently caused malfunctioning of the TEVT system. It is also a fact that no focal entity exist for a coherent policy planning for TEVT system to achieve the implementation goals set in different legal documents which has adversely effected due to the system of governance which has created disparity at multiple levels. The malfunctioning of the system is also visible due to the fact that resources either are inequitable or wasted because of ill conceived TEVT programs/projects and lack of ownership by the managers at ground levels.

Chapter-5: Case Study of National Training Bureau (Technical and Vocational Education), Ministry of Labor and Manpower, Government of Pakistan

5.1 Introduction

The case study research method is an effective tool to examine contemporary real-life situations and provide the basis for the application of ideas and extension of methods. In order to find out in-depth answers of the research question in perspective of historical background, theories, literature reviewed, observations, surveys/interviews, the researcher applied the method of case study technique for functioning/malfunctioning working in everyday practice focusing technical and vocational education system. This methodology added the strength to what is already known through the research reflecting numerous factors impeding the effectiveness of TEVT system pertaining to polices, plans/programs, legislations, quality of knowledge, skills, standards and implementation capacity. Further the contextual analysis of an institution for number of aspects and their relationships which are critical for a vibrant TEVT system gives the advantage to provide much more detailed information of a particular situation and allow the researcher to present data collected from multiple methods to provide a complete story.

In order to test the idea of the current research, case study of National Training Bureau (NTB) has been undertaken due to the fact that NTB is one of the oldest institutions of the country and carried out its activities within the umbrella of legal coverage and polices/plans of the government. Further as the institute is located in Islamabad it was easy and convenient to make frequent visits to collect documented data as well as conduct interviews with the relevant officials at NTB. In the following sections the researcher tried to determine whether the malfunctioning/functioning is prevailing in the NTB? If malfunctioning prevails than what is its level and intensity and how it is affecting the functioning of the whole system of NTB in perspective of government policies and plans.

5.2 The NTB

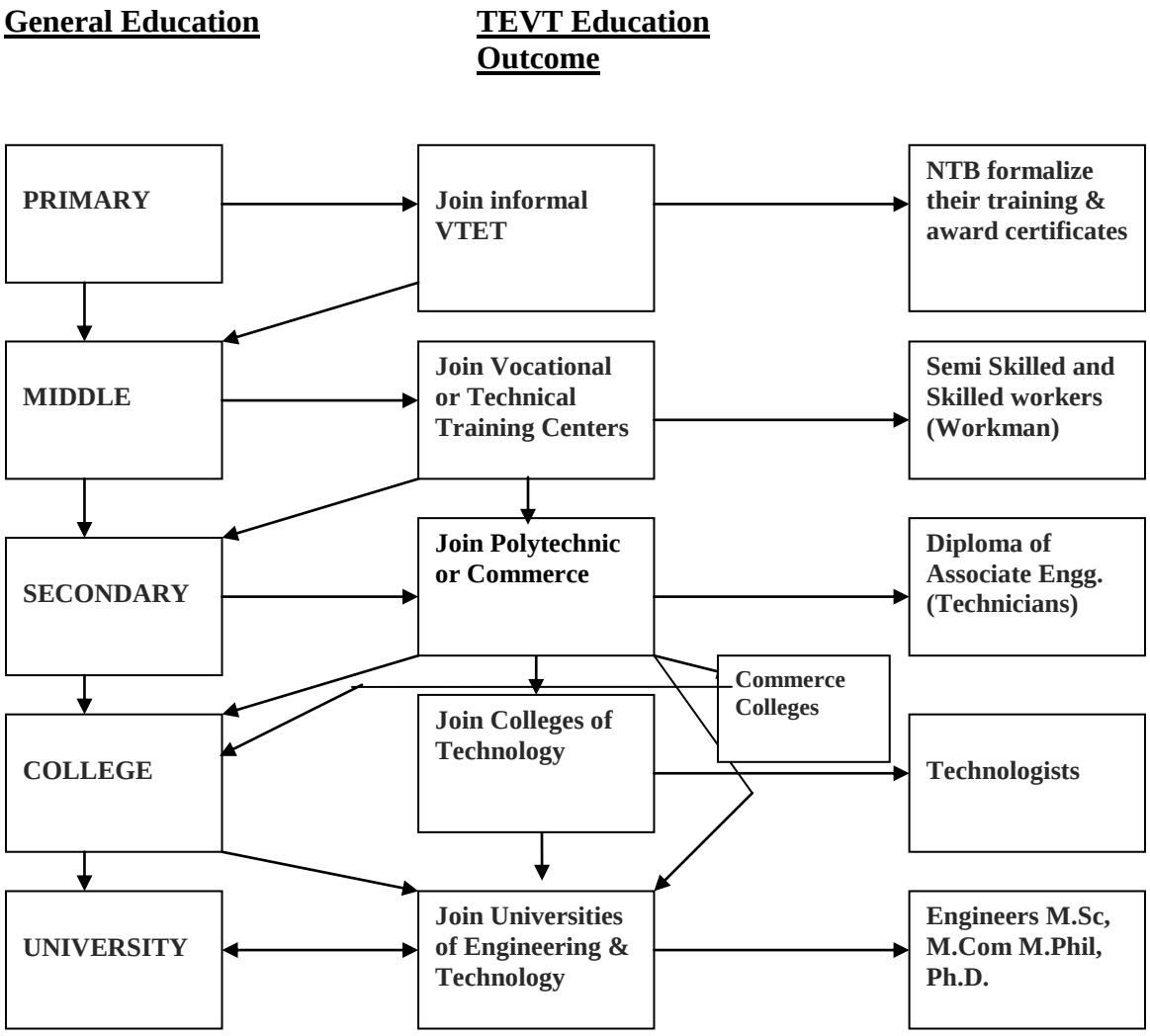
National Training Bureau (NTB) was established in 1976 through a resolution (1976)[i] as an attached department of Ministry of Labor and Manpower and Overseas Pakistanis, Government of Pakistan. The Bureau is functioning as secretariat of National Training Board after the promulgation of National Training Ordinance (1980)[ii] and amended in January 2002[iii] to implement the activities and functions[iv] entrusted under the ordinances. The total strength of NTB was 257 which constituted 27% of officers and staff of 73% but now it has only 107 staff. NTB being the federal body established a National Training System in the country with close coordination of the respective provincial training boards and the governments and international agencies for the growth of TEVT system in the country. The broad functions of National Training Board as per its ordinances (1980 and 2002) in context of TEVT are as under:-

- to asses existing and future needs, both local and foreign.
- systematically update the training programs and establish criteria of revaluating their programs and facilities.
- develop training syllabi and establish and specify national training standards and trade tests without affecting any provincial training programs of foreign collaboration.
- prepare national training plans, programs and projects in view of the local as well as foreign market.
- organize and conduct seminars and workshops for various types of personnel associated training activities.
- collect and compile statistics related to training activities.
- coordinate the working with provincial boards.
- review existing and proposed: legislation on vocational training and recommend necessary legislative provision with the concurrence of provincial Boards.
- to ensure horizontal and vertical mobility in training
- to monitor the implementation of National Training Programs and projects.
- assist and establish institutions in collaboration with private sector to promote technical, vocational and in-plant training and skill development.
- undertake registration and licensing of all establishments, organizations or institutions which are offering or providing vocational training.
- develop system and conduct trade testing certification of skilled workers who have received vocational training.

NTB being the premier institutions with a wider mandate in developing technical and vocational system in the country hence its role and linkage with other forms of the system may specify its position. The figure-7 illustrates the same:

Figure 7

Arrangements of TEVT education and its relation with General Education and placement of NTB in the TEVT System

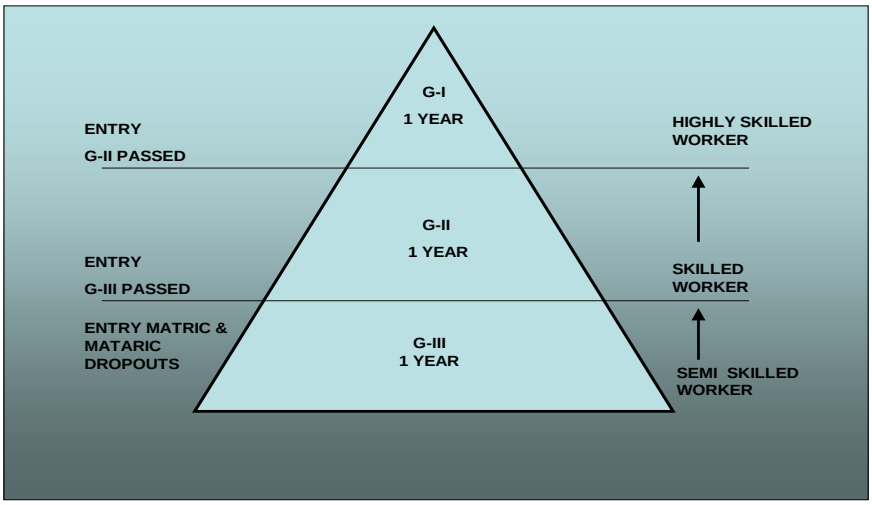


The figure 8 shows various tiers of education and their linkages between primary education (up to grade v), middle & secondary (up to grade viii-x), college (grade xii), university (bachelors, masters and PhD). The figure also shows that technical and vocational education falls under secondary education level which produces semi/skilled work force in the country through certificate, diploma courses. Apparently it shows that there is a link in between technical or vocational education with the college and university level, but practically technical education has been and is considered as a separate stream in the education system of Pakistan. Only few seats are reserved for technical and vocational educationists in the universities of the country which shows discretion between technical/vocational education and other segments of education even at the policy level.

The Vocational Training System introduced by NTB in the country is illustrated in the Figure-8:

Figure-8

VOCATIONAL TRAINING SYSTEM INTRDUCED BY NTB



The Figure-3 explains three levels of the training system introduced by NTB in which is: one year training is meant for semi skilled labor, two years for skilled labor and three years is for the highly skilled labor. The matriculation means 10 year of schooling or drop out means less than 10^{th} Grade. GIII, G-II and G-I are 1 year courses producing semi skilled, skilled and highly skilled workers respectively.

5.3 National Training Policy:

In view of the labor market requirements, NTB devised vocational training policy with salient features which involved improving quality, improving standards and increase numbers of workers trained under apprenticeship/on-job, streamlines and standards in public, private and informal sector, provide and enhance facilities for women in non-traditional trades, training facilities for instructional staff, change in existing training legislations**.**

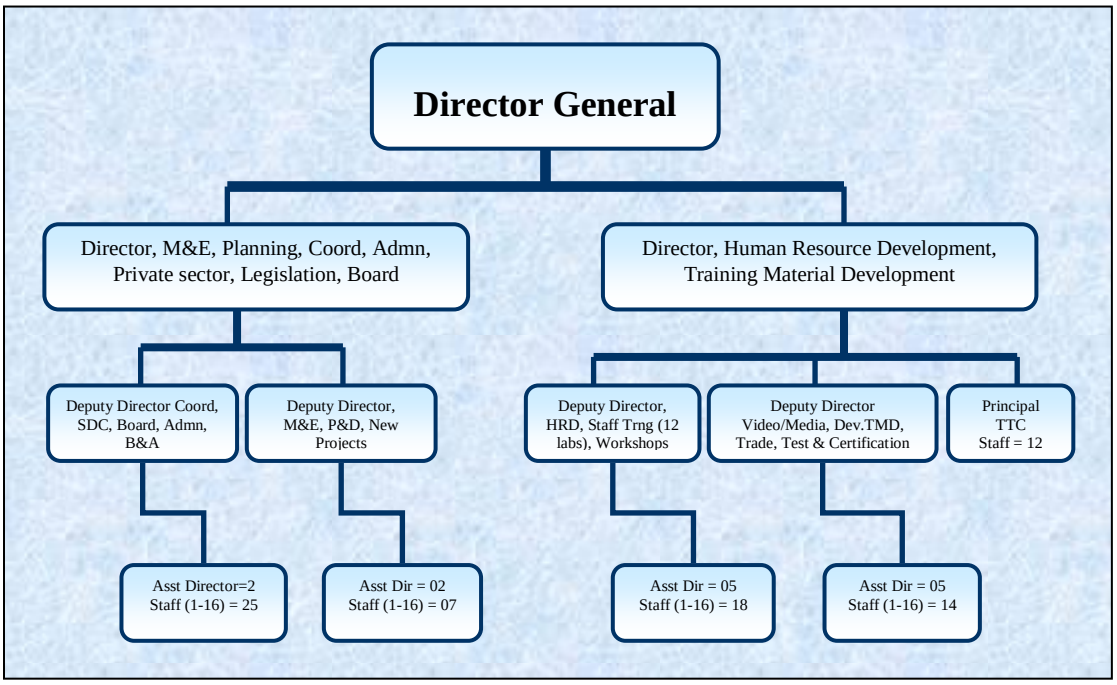
5.4 Apprenticeship Training Ordinance:

The federal government in June, 1962, promulgated the ordinance to develop, promote and regulate apprenticeship programs in the industries and to secure minimum standards of skills. The ordinance is applicable to all industrial establishments having five workers in any trade. These industries are required to train apprentices up to minimum of 20% of the total number of skilled workers employed in apprenticeship trade. The training was to be imparted through directorate of provincial labor/ industries departments under the ordinance. NTB is supposed to comply-with the training ordinance in the respective industries.

5.5 Organogram of NTB

Organgram of NTB is given in figure-4 which gives governance structure of NTB.

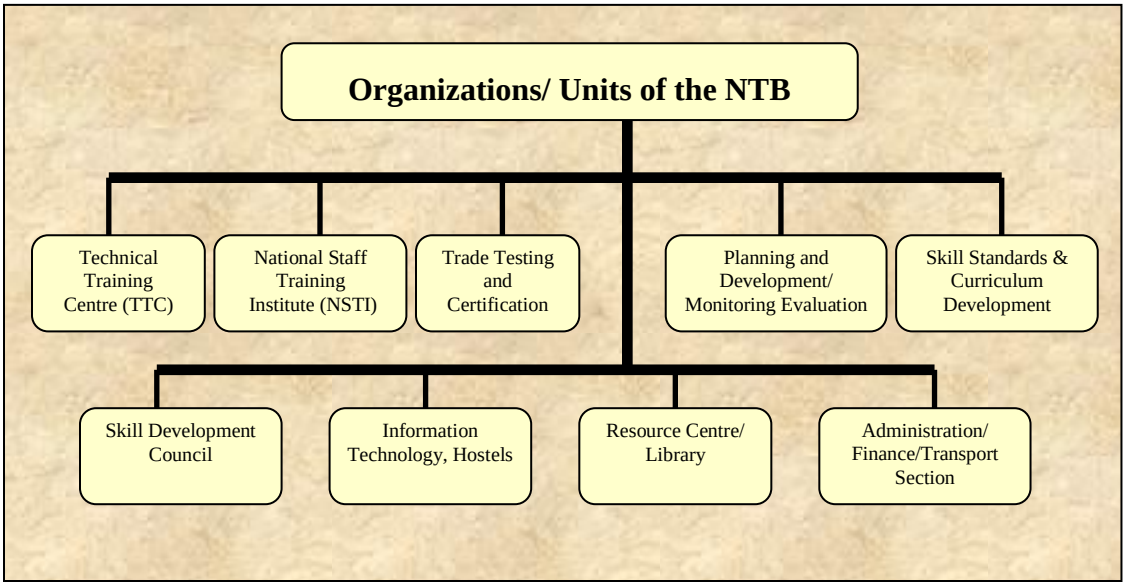
Figure-9



5.6 Organizations/ Units of the NTB:

The main units of NTB are given in Figure-10

Figure-10



The figure-10 depicts the units and sections responsible to carry out NTB activities which are: Technical Training Centre (TTC), National Staff Training Institute (NSTI), planning and development/monitoring evaluation, trade testing and certification, skill standards & curriculum development, skill development council, information technology, hostels, resource centre/library, administration/finance/transport section.

5.7 Areas of activities of NTB

- training (to impart the training to unskilled, semi skilled and skilled worker)
- setting occupational skills standards (devise the National Occupational Standards, development of curricula and training manuals).
- trade testing and certification (trade and testing certification of the trainees from formal and informal sector)
- expansion of technical training (affiliation of technical training institutes)
- public and private partnership (establishment of skills development council through participation of public and private sector).

Box: 4

The role of NTB is focal and historical in TEVT system of Pakistan. The institute was constituted through a legal instrument with a view to regulate and promote technical and vocational training activities and assess on continuing basis the existing and future training needs with the coordination of provinces. It also envisages systematizing the training programs, developing the database for policy planning, developing curricula, setting skills standards, concentrating informal sector, evaluating training methodology, establishing linkages with the industry, catering the needs of master trainers, promoting private sector, addressing the social acceptance in society, expanding the of delivery system, and organizing courses on different skills through its institutional capacity. Therefore these aspects have to be taken in to account in addition to the evaluation of its mega projects/programs.

5.8 Programs conducted by NTB

The major programs conducted by NTB in pursuance of its activities comprises of the followings:

a) Implemented crash training programme (1976-82) for overseas employment and trained 26300 persons.

b) Implemented federal programme for skill development and trained 230 instructors and 93 managers and provided equipment to 11 technical training centers in the country.

c) **National Vocational Training Project Phase –I (NVTP-I) (1981-86):**

This project approved by ECNEC[210] with a total cost of Rs 529 million including foreign component of US $ 25 million provided by the World Bank. Under this project following activities carried out through NTB:

Sr.No	Item	Location	Qty (Nos)
I	**Establishment of New Technical Training Centers**		
i	ATC/NTDI (federal)	Islamabad (federal)	1
ii	ATC (Punjab)	Lahore (Punjab)	1
iii	ATC (Punjab)	Sialkot (Punjab)	1
iv	ATC (Punjab)	Karachi (Sindh)	1
v	ATC (Punjab)	Hyderabad (Sindh)	1
vi	ATC (Punjab)	Mardan (KPK)	1
II	**Renovation and up gradation of existing centers**		
i	ATC/GVI/GVT (Punjab)	Ferizwala, Sheikupura, Gujranwala(2), Gujrat, Faisalabad(2), Sargodha, Jauhrabad, Jhang, Sahiwal, Multan, Khanewal, Bahwalpur, D.G.Khan, Jhelum	16
ii	ATC/TTC (Sindh)	Abdullah Haroon, Kotri, Sukkur	3
iii	TTC (NWFP/KPK)	Mardan, Khalabat	2
iv	TTC (Balochistan)	Quetta, Khuzdar	2
III	**Equipments Provided to the Technical and vocational Training Centers**		
i	ATC(federal)	Islamabad	1
ii	ATC/GVI/TTC (Punjab)	Lahore, Sialkot, Faisalabad (2), Ferizwala, Gujranwala (2), Bahawalpur, D.G.Khan, Gujrat, Jaurabad, Jhang, Jhelum, Khanewal, Multan, Sahiwal, Sargodha, Sheikhupura.	18
iii	ATC (Sindh)	Karachi(2), Sukkur, Hyderabad	4
iv	ATC/TTC (NWFP/KPK)	Mardan, Khalabad, D.I.Khan, Mingora	4
v	TTC (Balochistan)	Khuzdar	1

The progress and achievements of NVTP-I under each initiative which is summarized below for the evaluation purposes:

[210] Economic Coordination National Economic Council (ECNEC) is the highest body of Planning Commission, Government of Pakistan to approve the projects of larger scope with public funding for socio economic development of the country.

Sr. No	Item	Progress/Achievements/Area of activities.
I	Establishment of National Training Development Institute (NTDI) at NTB.	The institute was established, national occupational skills standards, trade test methodologies, curricula and trainee manuals were developed in the trades of: carpenter, mason, electrical, machinist, turner, refrigerator/air-conditioning, motor vehicle/auto(light-heavy), automotive electrician, welder(gas/arc), bench fitter, tractor mechanic, armature winder, radio/TV mechanic, draughtsman (civil/mechanical), plumber, sheet metal worker/denter, textile fitter, carpenter(sports goods), instrument mechanic, tailoring, surgical equipments-mechanic-forging-heat treatments-electroplating, leather work, painter, shuttering, steel fixer, auto body spray painter, construction machine operator(engine/chaises etc).
II	Instructors Training	495 old and new instructors were trained
III	Apprenticeship/In-plant training	400 in-plant managers have been trained in various courses who have trained several thousands supervisors within industry.
IV	Apprenticeship Training Centre, Islamabad	To address the demand of the industry in Islamabad, training provided at G-III level in the trades of: electrical, welding, filter, machinist, auto machine, carpentry, turner, sheet metal, draughtsman (civil/mechanical), in the evening shift the apprentices from the industry also admitted for institutional training under apprenticeship ordinance 1962.

d) National Vocational Training Project Phase -II (NVTP-P-II) (1987-96)-NVTP-P-II

NVTP-P-II was launched with the objectives: to expand the training in the industry in a systematic way, to carry out training to cater the need of rural and urban population and initialization of training to women in nontraditional sector of industrial trades. The project was approved by ECNEC in 1987 for duration of 8 years with a cost of Rs.2882.19 million including foreign exchange component of various donor agencies like World Bank, UNDP(United Nation Development Program), GTZ(German technical Assistance) and CIDA (Canadian International Donor Agency). Under this project following activities were to be undertaken through NTB:

Sr.No	Item	Location	Qty (Nos)
I	**Establishment of New Vocational Training Centers**		
i.	National Staff Training Institute (NSTI)	Islamabad	1
ii.	VTC//WTTC/TTC(Punjab)	Okara, Vehari, Muzafargarh, Attock, Jaranwala, Toba Tek Singh, Multan, Rawalpindi, Rahim Yar Khan	9
iii.	VTC/WTTC(Sindh)	Khairpur, Shikarpur, Noshero Feroz, Sanghar, Hyderabad	5
iv.	VTC/WTTC (NWFP/KPK)	Hangu, Abbottabad, Peshawar	3
v.	VTC/WTTC (Balochistan)	Dera Murad Jamali, Gawadar, Quetta	3
vi.	ATC (Punjab)	Mardan (KPK)	1
II	**Re-equipping of existing training centers**		
i.	TTC(Punjab)	Lahore(2), Multan, Rahim Yar Khan, Sargodha, Mianwali, Kasur, Bawalnagar, Depalpur, Pindighab, Sahiwal, Gujar Khan, Ferozwala, Faisalabad, Gujranwala	15
ii.	TTC (Sindh)	Karachi, Kotri, Sukkur	3
iii.	TTC (NWFP/KPK)	Peshawar	1
iv.	TTC (Balochistan)	Quetta	1
III	**Establishment of Women Technical Training**[211]		
i.	Women training and employment unit-NTB	Islamabad	2
ii.	Women technical training centers (WTTC) and women employment cells established.	Punjab (Rawalpindi) Sindh = Hyderabad NWFP/KPK = Peshawar Balochistan = Quetta	8

The progress ascertained by the researcher of NVTP-II project is summarized as below:

Sr.No	Item	Progress/achievements/Area of activities.
I	Established 5 Skill Development Councils (SDC), One in each province and	The aim of these councils was to involve private sector in training management and administration and to address training needs of industry to utilize the public and private sector facilities. The main features of SDC's are that they are autonomous, trip-orate and employee lead bodies. The composition governance structure

[211] Pilot project with capacity to train 840 women in non traditional trades like: secretariat services, hair & skin, embroidery knitting, dress making, telephone operator, audio visual aid, photography, computer operator, architecture, appliances repairs.

	Islamabad through public-private partnership approach.	of these bodies is: Employers = 40%, Employees = 10% and Government representatives = 50%. The funding mechanism is seed money provided by NTB and other sources are fees charged to conduct various courses and donations/grants form national and international organizations.
II	National Occupational Skill Standards	Developed national occupational skill standards (NOSSs) in 46 trades, curricula in 28 trades, trainee manuals in 22 trades and instructor manuals in 20 trades for one year while curricula in 14 trades and trainee manuals in 5 trades for two year courses.

e) Current Projects in Hand

Sr.No	Project	Activity
1	Training of Trainers (TOT)	In order to cope up with the non availability of adequate trained staff, shortage of experienced and skilled instructors, a 3 years project on Training of Trainers (TOT) was launched with a total cost of Rs.62.457 million. The project envisages training of 770 trainees in various skills in 36 months. About 457 instructors have been trained so far and the project activities are in progress.
2	Trade Testing & Certification of Trainees and Skilled Workers.	A 2 ½ years project was launched with a total cost of Rs.18.089 million. Main objective of the project is to assume the function of the National Training Board and start trade testing & certifications of the trainees, the trainees from different centers/institutions as well as those skilled workers who gained skills and knowledge through sector. 5400 skilled workers will be trade tested during project period, whereas 9255 were already tested and certified.
3	Certificate on Gardening	Keeping in view the dire need of technically trained human resource in the field of gardening, the National Training Bureau has launched a three years project with a total cost of Rs.15.064 million. Total 1800 gardeners will be trained, whereas, 88 have already been trained and 400 are under training.
4	Construction of Hostel Building for 100 Persons	A two years project of Rs.161.325 million was launched to construct a hostel for 100 persons keeping in view to facilitate trainees. The work was stated from January 2009 and it is expected that 50% work will be completed in the year 2009-2010. An amount of Rs.70 million is released for him fiscal year 2009-10.
5	Training in Construction training Institute	A 2 ½ years project with a cost of Rs.70 million was launched at Training Institute National Logistic Cell (NLC) Mandra. It is planned that about 1600 trainees will be trained in different trades of constructions, whereas 6620 trainees have already been trained.
6	Establishment of Vocational Training Centre	A 2 ½ years project of Rs.36.020 million was launched at Kashmore Sindh in the year 2006. Work is in progress with funds provided by the federal government through NTB. The center will provide the training in 5 trades.

Box 5

Section 5.8 represents the major programs carried out by NTB, the in-depth analysis of 5.8 (c & d) is carried out which pertains to National Vocational Training Program spreads in to two phases and approved by the highest forum of Govt of Pakistan with an international assistance. The data was collected through recording notes obtained through discussions, consulting official documents, files and reports etc to evaluate the programs/projects. Primarily this program gave a immense break-through to NTB in terms of evolving a comprehensive TEVT system in the country. The program gives an outlay of the expansion of TEVT training centers either through establishment of new centers or through up-gradation of the existing ones. It further covered the aspects like, instructors training, apprenticeship training, establishment of skill development councils, national occupational skills standards etc. Some other projects of NTB are also reflected related to training of trainers, trade testing & certification etc. The details of achievements, underachievement or failure are discussed in 5.9 and 5.10. The section 5.11 is an in-depth analysis of the researcher for NVTP (being the premier program of NTB) programs which actually help in determining the factors responsible for malfunctioning of the institute.

5.9 Training Institutes-NTB

Following institutes are located in Islamabad and operated directly by NTB, their contribution is listed below:

i) National Staff Training Institute (NSTI) under NVTP-Phase-II

NSTI started its activities in Technical Training Centre (TTC) on shift basis in 1991-92 and a full fledged building was built up for an areas of 30,000 Sq. feet functioning in 1997. The equipments were provided by the GTZ (German Aid). The total estimated cost was Rs 158.556 Million. The aim of the project was to provide staff training to improve the quality of the instructors in pursuance of National and Vocational Policy 1995. Since 1987 under National Vocational Training Project (NVTP) phase-II, 2241 persons were trained in the areas of: institutional staff (964), officers and staff of Ministry of Labor and Manpower (174), skill development and entrepreneurship of NGO's (300), IT/automotive (30), specialized course on High Tech (773). Some of the quantitative data to carry out the training courses for master trainer, upgrading the existing skills of the skilled workers and advance training respectively under NSTI during various periods shown below (a-d):

a) Basis instructors training Course:

S.No.	Course	Period	[212]PC-I Target (No of Participants)	Target Achieved
1.	1st Training course	15-05-2006 to 14-09-2006	70	54
2.	2nd Training course	02-07-2007 to 18-12-2007	70	40
TOTAL			**140**	**94**

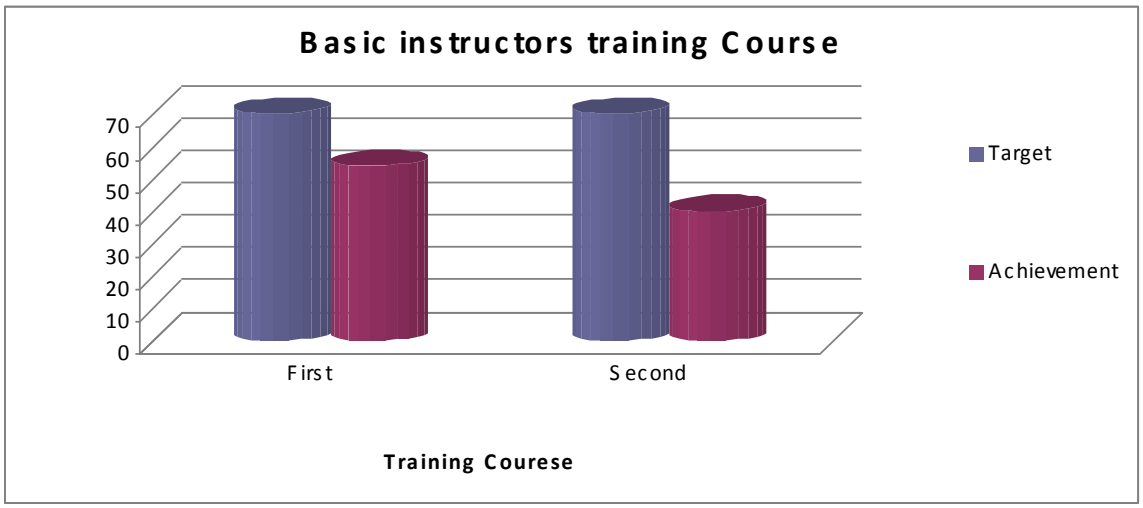


Figure 11

b) Three months skill Up-gradation Training Courses

S.No.	Course	Period	PC-I Target (No of Participants)	Target Achieved
1.	1st Training course	01-12-2006 to 28-02-2007	70	51
2.	2nd Training course	15-03-2007 to 14-06-2007	70	55
3.	3rd Training course	22-01-2008 to 21-04-2008	70	50
4.	4th Training course	19-05-2008 to 18-08-2008	70	50
TOTAL			**280**	**206**

[212] Planning Commission Performa-1(PC-1) of Government of Pakistan under which all public sector projects including TEVT projects are developed, targets are earmarked along-with the resource allocations.

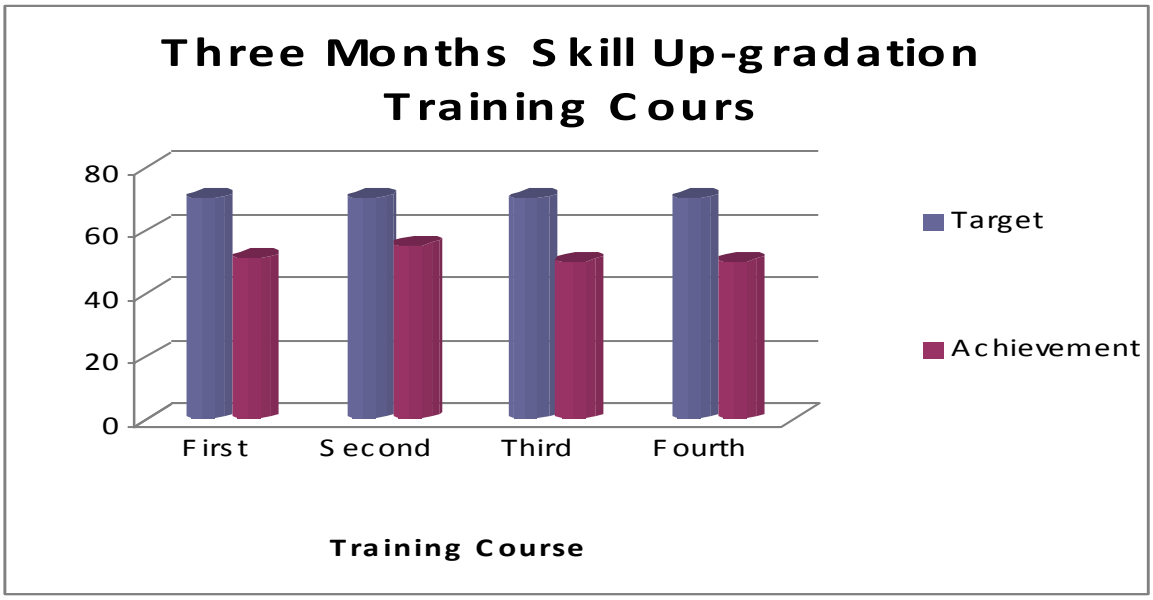


Figure 12

c) One month advanced Training Courses

S. No.	Course	Period	PC-I Target (No of Participants)	Target Achieved
1.	1st Training course	13-10-2008 to 12-11-2008	70	**47**
2.	2nd Training course	22-12-2008 to 21-01-2009	70	**42**
3.	3rd Training course	09-02-2009 to 10-03-2009	70	**34**
4.	4th Training course	06-04-2009 to 05-05-2009	70	**20**
Total			**280**	**143**

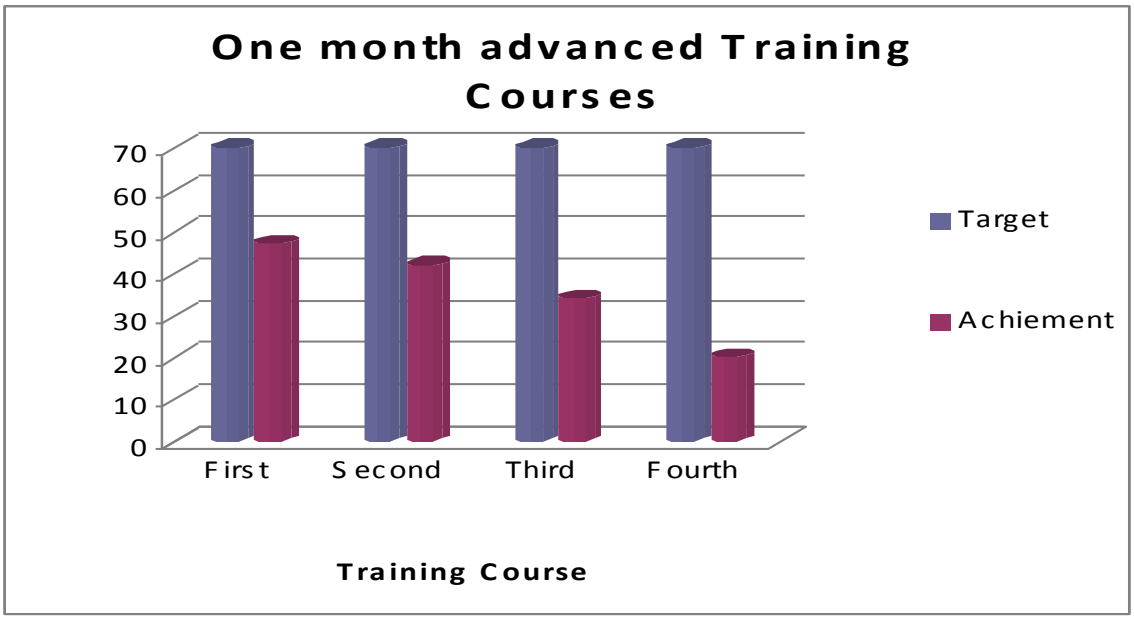


Figure 13

d) Three months Skill Up-gradation Training Courses

S. No.	Course	Period	PC-I Target (No of Participants)	Target Achieved
1	5th Training Course	1-10-2009 to 31-12-2009	70	51

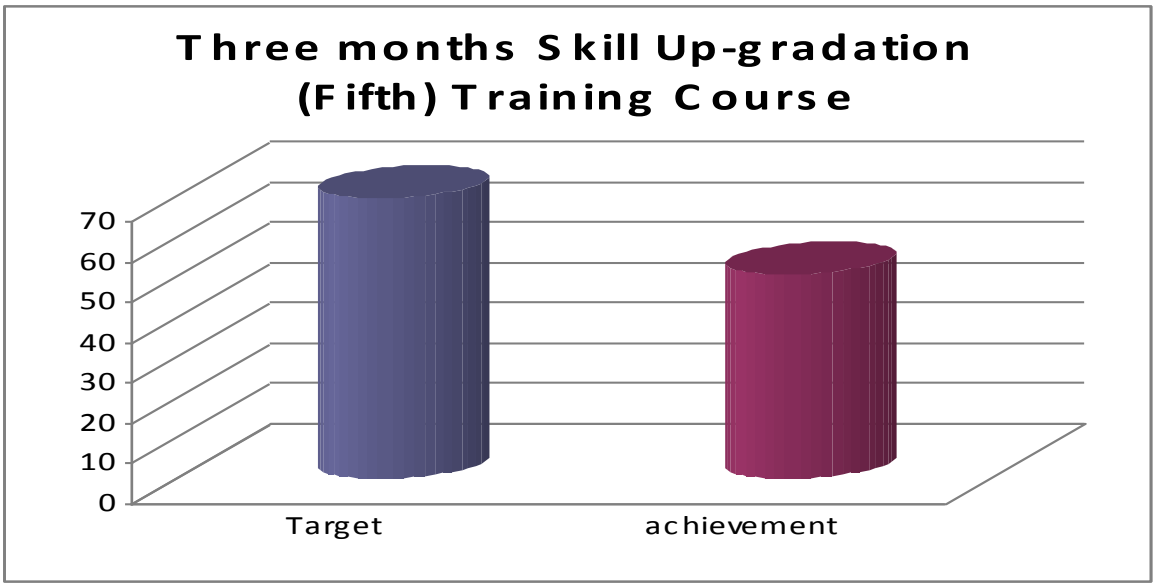


Figure 14

Box 6

The overall physical achievements in term of participation for a, b, c and d (Fig: 11-14) for the above are: 67%, 73%, 51% and 72% respectively. This clearly indicates that the efficiency of the delivery system of the institution to carry out the knowledge and skill development courses for master trainers as well as trainees is on an average only 65% of the desired goals set during planning and conducting the courses of various levels. The same also articulates that the system is 35% less efficient to meet the desired targets. Therefore due to the intuitional capacity the purpose of the program was not achieved optimally. This also means that although the programs were planned, resources were allocated for conducting these courses but the same was not utilized effectively which clearly leads to the conclusion that their existed a malfunctioning in the delivery system which has not allowed to achieve the desired targets. This deviation supports Deming theory that variation leads to malfunctioning of the system. Similarly the level of effectiveness is pleaded by various global partners like Asian Development Bank in its report which is discussed in literature review and also the mismatched reflected in national polices and plans in Pakistan's perspective. Consequently the case study of NTB seconds the malfunctioning.

ii) National Training Development Institute (NTDI)

The institute was established in 1985 under NVTP phase-I which was responsible to develop and upgrade vocational training in the country by performing functions like structuring various types of training curricula/manuals for trainee/trainers, establishing and upgrading national occupations skill standards, establish trade testing and certification system for institutional training and marketing the worker in the industry etc. As far as the progress of the project is concerned, 46 National Occupational Skills Standards (NOSS) were developed for various trades. Similarly training material for 32 trades were also developed and tested. Further 20 institutions were awarded affiliation with NTB for trade testing process in addition to establish liaison with various international agencies.

iii) Technical Training Centre (TTC)

TTC was established in 1986 under the National Vocational Training Project Phase-I. Regular training courses according to G-III and G-II Level of National Occupational Skill Standard (NOSS) establishing by National Training Board in the following trade areas exist in this Centre. The Training Capacity of these workshops is as under:

i.	Electrical	25
ii.	Auto Mechanic	25
iii.	Turner/Machinist	25
iv.	Civil Draughtsman	25
v.	Mechanical Draughtsman	25
vi.	Welding (Arc & Gas)	25
vii.	Computer (Basic & Advanced)	50
	Total Capacity	**200**

At present Technical Training Centre is providing the facility to get technical education under 3 Months Short Duration Training Courses in the following trades:-

1. Computer Applications
2. Auto CAD
3. Draughtsman Civil
4. Draughtsman Mechanical
5. Quantity Surveyor
6. Electrician
7. Welding (Arc & Gas)
8. Turner/Machinist
9. Auto Mechanic

For above said courses more than 200 trainees are registered in every session. Admission notice in these trades is announced through advertisement in daily newspapers and through electronic media. The resources available with this centre i.e. training facilities and expertise/assistance provide skilled and semi skilled workers to public, private sector and self job opportunities to reduce unemployment in the country.

iv) Apprenticeship Training Centre (ATC)/Technical Training Centre (TTC)

ATC/TC was established under NVTP phase-1 in 1987 to meet the training requirements of skilled workers of Islamabad /Rawalpindi in various technical and vocational trades. The centre imparted various training programs of different durations and 2016 trainees have been trained in different IT related fields and about 1648 were trained in the mechanical/electrical/civil disciplines.

Box 7

The above programs/projects (5.8 and 5.9) of NTB indicates that the strength of NTB on which the institute has been developed is based on the establishment of various centers and their function within NTB are in pursuance of two mega projects i.e. NVTP-Phase-I and NVTP Phase-II therefore considering the scope of the case study the evaluation of these projects is critical. The rest of projects/activities are minor in nature with short duration. Hence the effectiveness of both of the projects is determined considering their objectives and achievements will reflect the functioning or malfunctioning of NTB. The following section will carry out in-depth analysis of the research considering NVTP-I&II programs of NTB.

5.10 NVTP-Phase-I and NVTP-Phase-II

The area of concern of the research is the effectiveness of NTB through evaluation of NVTP-Phase-I and Phase-II. Therefore the researcher worked out the indicators keeping in view the scope of the project and the study objectives. An extensive exercise was carried out by consulting various project documents like project proposals, files,

quarterly/annual plans and even digging information through discussions with the officials of NTB.

The evaluation is carried out by taking in to account the quantitative and qualitative aspects. The Tables from 1 to 4 reflects the project operation, implementation (delivery) province/region-wise details:

i) Quantitative Data (Key Indicators):

a) Project operation:

Table-7

Aspect	Enrolments (targets)	Actual (achievements)
Existing Centers	17000	11162
Instructors training	2000	1180
Trade testing cells (no targets established)	No target established)	50000 number tested
SDCs and CMCs*	No target established	1579 persons trained in 64 short courses
New Centers	3040	Not fully operationalized

* Skill Development Council (SDC)/ Central management committee (CMC)

Box 8

Table-7 gives the profile of the project which is divided in to the categories of: existing/new centers, instructors training, SDC and trade testing cells. The variation is interesting as in the first two aspects the negative variation is about 35% and 40% with respect to the designed goals. In trade testing no targets earmarked hence the evaluation is difficult which is more questionable in terms to determine its delivery effectiveness, whereas the operationalization remained a challenge in new centers. These aspects advocate the factors of miss-governance of the system as the capacity deficit existed in the institution which has caused the inability to address these critical aspects. The aspect of the non operation of the new institutions also shows that a serious issues of planning existed in project management.

b) Project implementation:

Table-8

Key implementation indicator	Estimated Targets	Actual completed	Remarks
Developing New Training Centers			
Centre-buildings	19	4	1 dropped, 3 transferred to govt financing, being completed
Supply of equipments	19	18	All equipments supplied
Developing women training centers			
Centers buildings	5	2	3 being progressed
Equipments	5	2	Government to procure equipments for 3.
Developing Instructors Training Institute			
For instructors	1 new at national level and 3 at provincial level	All four completed	-
Existing centers			
Equipments supply	20	20	All supplied
Consumable materials			60% targets achieved at the end of the project
Training abroad	10 per year	21 persons per year (62 persons)	
Skill Development Councils (SDCs)	4	2	
Central management t committees (CMCs)	20	11	
Monitoring and evaluation	5	5	
Trade testing cells	4	4	

Box 9

The Table-8 indicates the implementation parameters like: infrastructure development, provision of equipments/supplies, training, constitution of SDCs/CMCs, monitoring and evaluation system and trade testing cells.

The target of each parameter and its achievements shows that six out of twelve indicators are lacking in respect of its achievements as per its schedule. The project implementation is lacking in respect of its delivery mechanism to comply-with the earmarked goals. This supports the arguments that the resources are not optimally utilized which is pre-requite for an effective and efficient functioning of the system. Although the monitoring and evaluation units were established as per its designed but their viability is questionable as the same has not been able to improve the on-going system. Similarly the Centre Management Committees which are supposed to govern the system are functional to only 55% of the total which consequently hampered the project implementation strategy thus causing under implementation of the project.

c) Key indicators provinces wise:

Table-9

Project aspect	Punjab	Sindh	NWFP (KPK)	Balochistan
Apprenticeship training intake: start/end of project within 10 years (in Nos)	3368/5762	1337/2558	720/1010	63/124
Enrolment progression in existing VTCs start/end of project within six years (in Nos)	5405/7696	861/639	1032/1823	520/882
Enrolment capacity utilization percentages start/end of project within eight years(in percentage)	71/78	33/29	68/138	103/151
No of centers running broad-based curriculum (in Nos)	4	3	1	1
No. of CMCs established/functional	4/4	9/5	4/3	3/3
No of persons trade and certified including candidates from informal sector within three years (Nos)	10994/11608	7155/2692	980/1301	1011/843
Implementation of National Training Policy	Planning yet to started	Planning yet to start	Planning yet to start	Planning yet to start
No. of SDCs established and functioning (in Nos)	1/1	1/1	0	0
Percentage of untrained instructors (%)	35	38	54	47
Average provision of training materials budget against the norm of Rs 150 per trainee per month	Rs 70	Rs 80	Rs 75	Rs 175
No of new centers establishment under provincial financing outside the project	2	12	3	6
Revenue generated through short courses	Rs 0.105 M	Rs 0.505 Million	RS 0.200 Million	Rs 3.528 Million
Number of new trades started in existing centers/trainees enrolled start/end of project	11/861	6/162	3/245	5/410

Box 10

Table-9 indicates provincial wise statistics on the aspects of enrolment, SDCs/CMCs, untrained trainers, introduction of new trades, revenues etc. The various indicators with regards to the implementation of the projects depicts that; i) the yearly apprenticeship training intake in the provinces of Punjab, Sindh, KPK and Balochistan increased to only 7%, 9%, 6% and 10 % respectively in 10 years, ii) enrolment of the existing VTCs in six years shows an yearly increase/decrease of 7%, -6%, 13% and 9% respectively in these provinces, iii) the provincial enrolment capacity utilization in eight years also remains in low trap to an yearly increase/decrease of 1.25%, -1.5%, 12% and 6%, iii) the persons from informal sector trained/tested on yearly basis in three years illustrate to an increase/decrease to 2%,-0.067%, 11% and -7% for each province respectively, iv) the new trades started in one year are 11, 6, 3, 5 in which the trainees enrolled to about 861, 162, 245 and 410 for the above provinces, v) the functionality of CMCs is an issue in province of Sindh whereas SDCs in KPK and Balochistan have not been established and disparity existed as well as for the budget provision, vi) the quality of instructors can be judged through the fact that on an average 45% of the instructors were untrained, vii) the financial resources mobilization to generate own funds for the sustainability of the respective institution is also negligible, viii) The implementation to National Training Policy has not been implemented in any of the province and only in Punjab the planning aspects has been addressed on the contrary in other provinces the planting has yet to start.

These specific indicators conclude that the system is faulty in term of delivery and the pace of work which is quite slow and even moving in the negative direction which is counterproductive in addition to disparity within the system and between the provinces. This means the policy is not implemented and planning not carried out in accordance with the resources which truly effect the functioning of the system. Thus deviation was observed which resulted in malfunctioning of the implementation phase.

d) Data on Turnover of Chairman/Secretaries of NTB/PTBs during 10 years-Table-10

Table-10

Post	**Office**	**No of Changes during project**
Federal Minister of Labor, Manpower and Overseas Pakistanis	Chairman, NTB	7
Federal Secretary of Labor, Manpower and Overseas Pakistanis	Alternate Chairman, NTB in absence of the Minister	7
Director General, NTB	Secretary, NTB	4
Secretary, Labor, Punjab	Chairman, PTB, Punjab	10
Director of Manpower & Training, Punjab	Secretary, PTB, Punjab	6
Secretary, Labor, Sindh	Chairman, PTB, Sindh	8
Director of Manpower & Training, Sindh	Secretary, PTB, Sindh	7
Secretary, Labor NWFP/KPK	Chairman, PTB, NWFP/KPK	7
Director Manpower training NWFP/KPK	Secretary, PTB, NWFP/KPK	4
Secretary of Labor, Balochistan	Chairman, PTB, Balochistan	12
Director of Manpower & Training, Balochistan	Secretary, PTB, Balochistan	10
Total Changes		82

Box 11

Table-10 explains the changes occurred in the governing structure of NTB/PTB which is about 82 times in ten years and on an average more than 8 times per year. It is very unusual that the leadership of the main governing bodies of TEVT system were replaced on and off. This also reveals that a harmonized policy has not observed at federal and provincial level and the coordination among the stakeholders is very much weak. Such changes always effect the functioning of the system in term of policy-planning and programs/project execution. The situation portrays that while selecting or appointing the heads of these eminent bodies, legal coverage was not provided to ensure their term of appointments nor the same was assignment based rather all action were taken unilaterally through an administrative orders instead of consultancy and professional approach. Non consistency in policy is very much obvious.

e) Schedule of Instructor-Trainee Ratio-Table-11

Table-11

Provinces	Year 1			Year 2			Year 3			Remarks
	Enrolled trainees	No of instructor	Ratio	Enrolled trainees	No of instructors	Ratio	Enrolled trainees	No of instructors	Ratio	
Punjab	7476	1029	1:7	7526	1029	1:7	10353	1252	1:8	Improved
Sindh	1019	166	1:6	1117	152	1:7	2070	152	1:13	Improved
NWFP/ KPK	2071	302	1:6	2184	339	1:6	2272	339	1:6	Static
Balochistan	1011	252	1:4	763	252	1:3	830	216	1:3	Slightly improved
Federal	134	19	1:7	138	18	1:7	119	18	1:6	Erratic

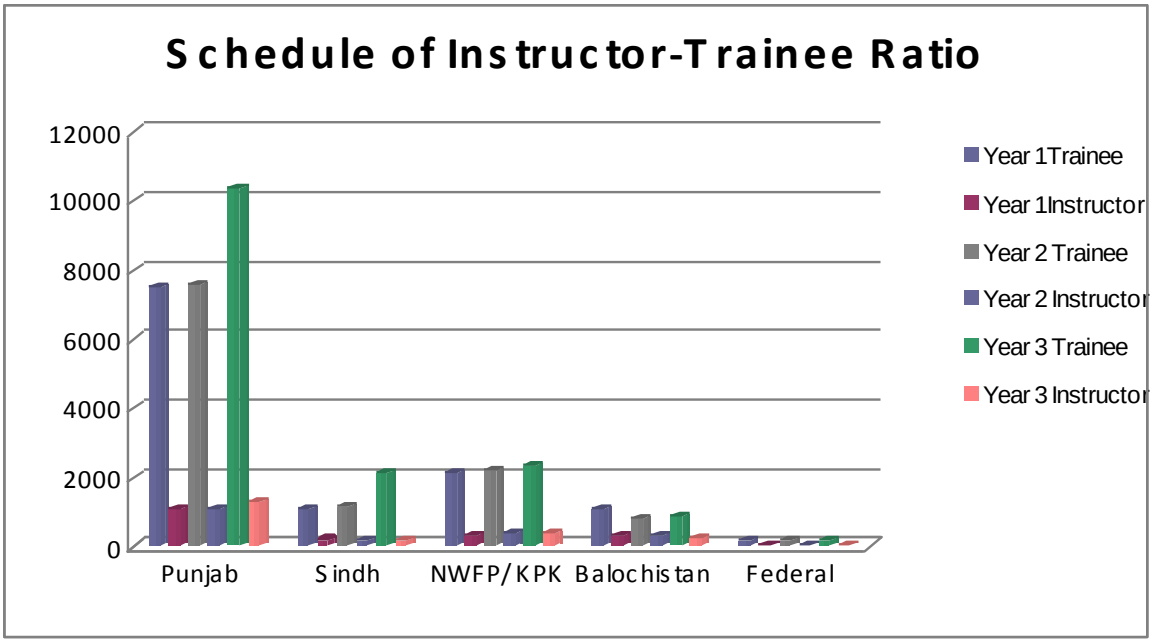


Figure 15

Box 12

Table-11(Figure-15) is the instructor-trainee (teacher-student) ratio comparison of three years of each province. This aspect is very critical for the quality of education and skills in TEVT system. From the table it is evident that in Punjab, Sindh and Balochistan the same has improved, whereas for KPK province it remained static and for the federal area it has declined. This depicts an interesting scenario if the same is compared in terms of trainees and instructors perspective. i) For trainees enrolment; there is an increase of 38%, 103%, 10% for the province of Punjab, Sindh and KPK respectively and a decline of 18% and 12% for Balochistan and Federal area. ii) For instructors, the increase of 22%, 8% and 12 % observed in Punjab, Sindh and KPK respectively and decrease of 14% and 5% for Balochistan and Federal Area. This shows an abnormal trend of the ratio (trainee-trainer) has hampered the effective functioning of the system.

c) ii) Project Performance over the Project Life:

During the study the project documents have been thoroughly examined to ascertain the projects performance considering the aspects associated with it and on the basis of each objective categorized on the basis of functioning of various aspect in to three categories; i) achievements, ii) under achievements and iii) failure. The illustrations of these categories in pursuance of the respective project objective are illustrated below:

a) Objective I: To improve the quality of the National Vocational Training System:

Achievements	
Aspect	**Achievements**
New Equipments for VTCs	$ 16 Million to 20 existing vocational training centers (VTC's) and worth about $10 million to 11 new VTC's
National and provincial training infrastructure of institutional staff	Established with increase in annual training capacity for 60 to 300 and an output of 1902 trained instructors
Curriculum	Preparation and initial implementation of a broad based, multi-skill and modular training curriculum in 12 VTC's.
Women technical training	Planning and delivering of women technical training programs in 5 non-traditional, income generation/wage employment skill trades on successful, pilot basis.
Establishing formal Forums through demand led training	Setting up formal mechanism, forums and prototypes (CMCs, SDC's, trade testing cells, standing national committees in instructor training and apprenticeship training) for employers, initiating participation in demand-led training planning, delivery and evaluation. The SDC located in Sindh(Karachi) as a public-private model is working better due to the ownership by the employer.
System efficiency	Provision of new equipments worth instituting monitoring and evaluation processes at the federal and the provincial levels to assess internal and external system efficiencies.
Flexible Training	Shortening on a selective basis overall training duration and introduction of short, flexible and market-oriented training courses, based on training based surveys.
Restructuring	Undertook the restructuring-wide implications including 50% reduction in number of VTC's form 31 to 16. Reconstitution of NTB and the provincial training boards with 50% representation of employers.

Training Policy	issuance of rational and far-reaching national training policy
Management and monitoring & evaluation	Addition of 76 management and M&E staff in the National Training Bureau (NTB) and provincial Directorate of Manpower & Training (DMT's).
Women training	Establishing women training and employment cells at the federal and provincial levels.
Consultancy service	Provision of 66.5 man-years pf consultancy services extended by German aid and Canadian international development agency. 21.3 man-years of foreign fellowship and 426.5 man-years of local fellowship training compared respectively with provision of 34.6 staff years and 416.5 staff years.
Underachievement	
Aspect	**Under Achievements**
Acceptance by the Provinces-Curriculum	Reluctance among the provinces to fully accept and implement new curricula and only 12 existing VTCs accepted out of 86 and non of the new 16 VTC's.
SDC's	Only two out of 4 SDCs established with only one (Karachi) of the two being fully functional.
CMC's	Only 9 of the 20 established CMCs being fully functional.
M&E	Faltering use of M&E data in decision-making.
National training policy	Inadequate follow-up on the provision of the national training policy among several training providers
project studies	Delays in the completion of 3 out of five project studies and lack of action on related convents.
Training legislations	Interminable delays in amending the current training legislations
Failure	
Aspect	**Failure**
Operational and maintenance budget for training	Inadequate and very meager budget for the operation and maintenance expenditures, particularly on consumable training materials.
Decentralization of functions	Persisting constraints in the effective decentralization of administrative and financial powers to the VTCs/CMCs resulting delayed or inappropriate recruitment of instructional staff, inflexibility in the use of resources, enduing rigidity in training programs and political interventions in day to day decision making.

Coordination	Non-maturation of the NTB and PTB's as effective normative and training coordination bodies with independent resource outside governmental control.

b) Objective II: To improve the capacity of National Vocational Training system (NVTS) to meet skilled and semi skilled manpower requirements for the industrial and agriculture/rural sectors:

Achievements	
Aspect	**Achievements**
Enrolments	Gradual increase in enrolments capacity in VTCs for 9913 to 15644 within seven years
Building and equipments	Provision of building and equipments to 11 new VTC's in agricultural/rural districts and 4 women technical training centers (WTTC's) in major urban centers.
Women training	Fully operationalized of 2 new WTTC's in governmental donated buildings and graduation of 921 women trainees in 6 non-traditional, modern skilled trade areas.
Institutional building	Provision of buildings and equipments for National Staff Training Institute (NSTI) at NTB and 3 provincial training institutes
Apprenticeship support	Strengthening and in-plant training services through provision of additional staff, vehicles and technical assistance, apprenticeship training capacity increased form 5601 to 8709 within five years
Trades introduction	Addition of 7 new trades in 20 existing VTC's with an additional capacity of 2592 trainees
Support to formal forums	Operation of 64 short, intensive and market oriented courses through CMCs and SDCs with an output of 1579 trainees for wage employment/job up gradation.
Study (total targeted 5 only two completed)	Completion of study on cost recovery and financing the vocational training and financial compensation schemes & training in private enterprises".
Underachievement	
Aspect	**Under Achievements**
Curriculum	Long delays in the operationalization in new VTC's with only 12 completed VTC's likely to run broad based courses.
Women training	Non-operationalizaion of 3 new WTTC's during project life
Legislation	Delayed amendments in apprenticeship training legislations

Failure	
Aspect	**Failure**
Mobile training	Non-mobilization of mobile training services in support f the informal sector
NTB effectiveness	Lack of success of NTB/PTB's in mounting meaningful intervention towards molding the supply-driven vocational training programs and institutions among several public sector training providers of ministry of education.
Public sector support to private sector	Non-mobilization of publics sector support to private sector training institution
Study (3 incomplete)	The study on women training was not started and two studies on rural apprenticeship training and survey of industrial needs were partially completed.

c) Objective III: To assist government in establishing a clear policy for cost recovery on training:

Achievements	
Aspect	**Achievements**
Cost recovery	Modest cost recovery through custom-built short courses run through CMC's and SDC's
Province persuasion	Imposition in some provinces of training materials and trades testing fee/funds to be charged to trainees.
Study	Completion of study on "cost recovery"
Failure	
Aspect	**Failure**
Fees structure	Non enhancement of fee charges to trainees in existing VTC's
Influencing decision making	Very slow recognition by the decisions maker of the need and rationale of cost recovery
Stipend based training	Subsidizing and providing stipends and financial assistance in some provinces to stimulate artificial demand for vocational training

5.11 Component-wise project performance:

The researcher further synthesized the project components considering the data at [5.10 i (a, b, c, d, e) & ii (a, b, c)] to determine the performance of the project. The researcher took in to account the objectives/targets of the project, its achievement and the gaps (under achievements/failure) in determining the factors of functioning or malfunctioning of NTB. The detail ed valuation of each component is described below:

a) Up-gradation of existing centers:

The component aimed to upgrade 20 existing VTCs through provision of new equipments, introduction of new trades and development of National Skills Standards and Curricula for semi skilled (G-III) and Skilled (G-II) workers and additional enrolment of trainees in double shifts. The equipments were purchased and twenty five new trades were introduced in 20 existing centers. Evening shift programs were introduced in the existing VTCs. Additional instructor staff were provided to meet the requirement of the enhanced enrolments in the existing and new trades. The enrolment increased form 7818 to 11040.

b) Establishment of New Centers:

This component was addressed to meet the requirement of skilled/semi-skilled manpower in rural/agricultural districts. Originally, 31 new VTCs were to be developed under this component, but according to the market signals, the restructured project reduced this number to 19. By the project closed new buildings had been built for only 4 centers, while the remaining were in varying stages of progress. The scope of the new centers was limited to 4 broad-based trades with modest, need-based buildings and scaled-down complement of equipment. Each new VTC was designed with a capacity of 16 trainees in each of the two shifts in each trade. A broad-based curriculum was developed and master trainers were trained to equip instructors with skills of administering broad-based, modular curriculum. The delayed construction of buildings and procurement of equipments did not allow the incomplete centers to be operationalized before the project closed. Even the 4 completed centers were not operationalized.

c) **Apprenticeship Training:**

To strengthen the apprenticeship services including oversight and professional help in the industrial sector, this component provided additional staff, raised their salary status, improved their mobility and created for them opportunities of formal training, seminars and workshops. As a result of these inputs a steady increase was maintained in the number of apprentices from 5488 at the start of the project to 9454 at its closure, thus meeting the capacity targets: however ascent on legal enforcement of the apprenticeship law prevented full mobilization of the capacity of this program. Accordingly draft legislation was prepared to introduce greater voluntaries in to the program and to extend the net to larger number of employers. However till the closure of the project, the proposed revision in the legislation could not be legislated.

d) Instructor Training:

This component had both quantitative and qualitative objectives and comprised the conversion of the existing NTDI in to NSTI and creating additional instructor training

capacity in the provinces. Under the restructured program, the NTDI was kept intact and a separate NSTI was established along-with new buildings and provision of the equipments. Three STIs were also established in the provinces. The instructors training capacity was increased form 60 to 260. A consensus was developed that modular structure would be implemented with the basic module being administrated in the STIs and advance module in the NSTI. While this arrangement had accelerated the coverage of un-trained instructors, it was not problem-free. The main difficulty was the un-willingness of the provincial trainees to benefit from NSTI training because this dislocated their domestic life. Another possible difficulty was realized in the post-project period of budgetary constraints of provincial governments in meeting the expenses of the prospective instructor trainees.

e) Women Training: the women training component got a head-start when the provincial governments of NWFP/KPK and Balochistan agreed to provide the premises for WTTCs in Quetta and Peshawar. The non-traditional training courses in Beauty Culture, Secretarial Trades including Computers, Draftsperson-ship and Dress-making were started in these centers and the response from female trainees continues to be positive. Although the job market context for the trained output was not well defined, opportunities of both wage and self-employment have emerged with the passage of time. Adequate back-up support has been provided to these centers by the Women Employment and Training Units (WETUs) established in Islamabad and the four provinces. Of the 5 WTTCs planned, new buildings for the remaining 3 got delayed and so the procurement of equipment due to government procedures. This component met with qualified success in that it did establish the explicability potential of the experimental WTTCs, but did not achieve the planned physical target.

f) Management and Implementation: This has been the weakest aspect of the project due essentially to : (i) delayed recruitment of management staff abetted by further delays in staff development: (ii) delay in acquisition of sites: (iii) initial gaps in federal-provincial communication and coordination: (iv) continuing deficiencies in construction management and supervision: (v) resistance to decentralized modes of operation: (vi) bureaucratic delays in re-legislation of existing training laws: and (vii) massive turn-over of top managers and policy makers with 82 staff changes at both the federal and provincial levels. The implementation of physical component improved in the post-restructuring period, the normative work of the training boards remained largely stalled. Factors that contributed to the lack of performance by the boards included: (i) lack of empowerment: (ii) key staff changes: (iii) lack of interest on the part of employer, iv) slow decentralization and (v) infrequent meetings of the boards.

g) Monitoring and Evaluation: Five monitoring & Evaluation (M&E) units have been established under this component and they have been staffed and equipped after some initial delayed. Information-gathering formats have been developed to collect center census data annually. To assess external efficiency of the training centers, tracer studies have occasionally been conducted, which reflect an employment rate of 30 to 50%, depending on province, trade and the year of passing. The M&E units still lack staff expertise in assembling and updating reliable labor market information. There is need for assembling and updating reliable labor market information.

h) Studies: Of the 5 project studies, 2 have been completed in the areas: (a) cost recovery and the financing of the vocational training: and (b) financial compensation schemes and training in private enterprises. The study on Women Training remained un-commissioned. The remaining two studies on rural apprenticeship program and survey of industrial sector needs and the demand of advanced (G-1) vocational training have been partially completed. While going through the findings of these studies, much is left. Moreover, the government is in default on the covenanted actions that were to follow in using the results of the studies. These actions constituted (i) introducing a system under which an increasing proportion of training cost could be recovered from the beneficiaries: (ii) implementing a pilot program of rural apprenticeship training: and (iii) introducing advanced vocational training (G-1) courses in selected institutions. Despite meeting success in realizing user charges under the training programs run by CMCs and SDCs, the full potential of partial cost recovery from the trainees of regular programs remains on un-accomplished task. All in all, disappointing progress has been made on the completion of studies and no follow-up action has been initiated on the outcomes of the completed studies.

i) Impact of Project: The software developed under the project including a national training policy and a board-based curriculum has yet to find a wide acceptance within and outside the NVTS. However, there is evidence to believe that internal and external demands on the useful instructor training and trade testing infrastructure developed under the project are going to increase. Similarly, the project has met with some success in bringing the public sector training providers and employers closer than before and the prognosis for an increased interaction between them in future is good. On the other hand the normative charter of the training boards remains unaccomplished and resultantly there is little abatement in the supply-driven orientation of policy planners. In the short and medium run shortages and surpluses of trained manpower are going to co-exist unless training planners and providers learn to establish and benefit from a continually update labor market information system. The employers-led training structures created under the project do not constitute a critical mass for the needed transformation in fostering a partnership between the public and the private sectors but nonetheless they provide an important beginning. In particular one of the two SDCs located in Karachi has a bright future in terms of sustainability, as it is currently reaching out to external professional bodies and other donors to build on the sound foundation and demonstrating the potential of cost recovery and harnessing the full cooperation of the employers.

j) Project Sustainability: Increased budgetary constraints make it unlikely that adequate Operation and Maintenance (O&M) resources would be available to service the expanded infrastructure unless supported by a policy of partial cost recovery. Without empowering the NTB and the PTBs through amended legislation, their continued existence as sinecure structures will be of questionable value. Unless the existing legislation on apprenticeship training is revised to make it less coercive and more voluntary and incentive-based, this mode of training is unlikely to achieve its full potential. Similarly the sustainability of the SDCs and the CMCs is also un-assured without continued public sector support for some more time and without a decisive move towards decentralized management. On the other hand the instructor training infrastructure, the trade testing mechanisms and various national standing committees have developed the intrinsic strength to survive and remain productive. Women training

in the non traditional trades are gradually developing firm roots and it possesses a good potential for replication.

k) Summary of the Performance: The project achieved mixed results. The new VTCs could not be operationalized by project closure due to delayed construction, but the existing VTCs increased their enrolment capacity increased about 45% through provision of new equipments, introduction of additional trades and extension of second shift programs. The instructor training capacity quadrupled but the backlog of untrained instructors could be reduced by only 40%. The apprenticeship training capacity increased by 70 %, but its full potential could not be achieved due to delay in promulgation of revised legislation. The training boards were restructured but without legislated empowerment they failed to deliver their normative character. A new national training policy and a broad based training curriculum were developed, but their implementation remained slow. New employer led councils and committees were created to centralized and diversify training provision but their sustainability is unsure. Although women training pilot in income-generating skills commenced in only two of the five planned WTTCs, it acceptance and success have enhanced the potential of its reliability. The planned support to the informal sector through mobile training did not materialized, but in-service workers benefited extremely through trade testing through mobile training did not set up to under the project. A monitoring and evaluation infrastructure was established but it has to develop full capacity for assembling and updating labor market information. Short, market oriented courses launched by the Skills Development Councils (SDCs) and Central Management Committees (CMCs) eminently established the potential for cost recovery, but this successful experience was not transferred to regular, full time training programs. Substantial technical assistance resources were invested to management and staff development, but frequent changes in top decision makers have inhibited adequate returns to the planning. Policy-making and managerial processes remain slow for National Vocational Training system (NVTS). On balance, in addition to significant capacity building in the physical and qualitative terms the project has laid a foundation for sectoral reforms but full realization lies in developing an effective and efficient system.

5.12 Summary of the Assessment:

Achievements of Objectives	Substantial (X)	Partial (X)	Negligible (X)
Sector Policies		X	
Financial Objectives			X
Institutional Development		X	
Physical Objectives		X	
Gender Issues		X	
Social Objectives			X
Public Sector Management		X	
Private Sector Development		X	
New Technologies		X	
Project Sustainability			X

Box 13

The above evaluation of the project indicates that the projects have not brought any tangible radical change in improving the TEVT system in the country or making NTB as a vibrant institution for technical and vocational training in the country. The factors responsible for the malfunctioning of the projects which leads to the malfunctioning of NTB as well includes under utilization of the capacity of NTB to fulfill the requirements of the program in pursuance of its design. The factors are related to; sector polices, financials, institutional development, physical objective, legislations, gender issues, social objectives, management & governance issues, private sector role in TEVT, new technologies and the sustainability aspects.

5.13 Data Collection through Interviews Technique:

The overall effectiveness of NTB is also determined by generating primary data to support the arguments discussed in theories, literature review, TEVT polices, plans and programs in addressing the subject of TEVT. The issues and aspects indicated in tables: 7-11 are also based on the various conclusions drawn while evaluating NVTP program of NTB. The methodology followed for the collection of primary data is series of hectic interviews and formal/informal discussions with the officials, master trainers, managements, trainees associated with NTB. This is basically testing the theories, literature and programs/projects of NTB by getting first hand information from the real world of the person(s) associated with the operation of NTB. The aspects mentioned in the following tables are very critical as these indicators are leading to address the R.Q of the researcher.

Open discussion/interviews on various issues related to NTB

Respondents (Series of meetings were carried out with the following officials and trainees by adopting government procedure for the permission and their availability/convenience):

i) Deputy Director (Administration and Finance)

ii) Deputy Director (Testing and Certification)

iii) Deputy Director (Training).

iv) Master Trainer/Instructor.

v) Principal

***Respondent**: DDA = Deputy Director (Adm/Finance), DDT = Deputy Director Training, MT – Master Trainer, PR = Principal, DDC = Deputy Director Certification, TR1/TR2/TR3/TR4/TR5/TR6 = TRAINEE (1, 2, 3, 4, 5 AND 6)*

***VOICES: SA**= Strongly Agreed, **A**= Agreed, **U**= Un-Decided, **D**= Disagreed, **SD** = Strongly Disagreed*

The following tables 12-25 gives the voices of the above persons on various aspects of technical and vocational education system and the role of NTB.

Table-12

Role Played by NTB in Developing TEVT System

Sr. #	Aspect	VOICESS					
		DDA	**DDT**	**ADF**	**MT**	**PR**	**DDC**
1	Does the objectives achieved by NTB (legislations, policy reforms, programs etc)	U	D	U	D	SD	SD
2	Physical facilities like labs, computers, transport, building and hostels are satisfactory	A	U	SD	D	SD	D
3	Books, journals and on-line literature are available	SD	SD	SD	SD	SD	SD
4	Sufficient budget allocations	D	D	SD	D	D	SD
5	Role of various actors in TEVT system are defined.						
6	The role of NTB is quite limited for the placement of trained manpower in local and international market	A	A	SA	SA	A	SA
7	NTB has done serious efforts to establish a link between employer and trained personal from NTB	A	U	A	U	D	A
8	NTB has done some initiatives to introduce distance learning.	SD	SD	SD	SD	SD	SD
9	NTB considered to upgrade the institution and vision for establishing a University of technical and vocational education	D	D	D	D	D	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Does the objectives achieved by NTB (legislations, policy reforms, programs etc)	SD	SD	D	D	D	U
2	Physical facilities like labs, computers, transport, building and hostels are satisfactory	U	U	A	U	D	D
3	Books, journals and on-line literature are available	SD	SD	SD	SD	SD	SD
4	Sufficient budget allocations	D	D	D	SD	D	SD
5	Role of various actors in TEVT system are defined.	D	D	U	D	U	D
6	The role of NTB is quite limited for the placement of trained manpower in local	A	SA	A	SA	SA	SA

	and international market						
7	NTB has done serious efforts to establish a link between employer and trained personal from NTB	A	D	D	A	U	D
8	Distance learning is an effective tool.	SD	SD	SD	SD	SD	SD
9	Technical and vocational university can play an important role to promote the education.	SA	SA	SA	SA	SA	SA

In Table-12 it has been emphasized by the above respondents with their voices, indicating various reasons of malfunctioning prevailing in NTB which is a federal government organization with the mandate for the policy legislature, coordination with the provincial governments for conducting TEVT programs and projects, standardization of trade quality standards, certificates, and developing modules and keep liaison with international agencies, for TEVT system. First ordinance was promulgated in 1980 to give legal coverage for the system in the country and the same was amended in 2002. NTB completed number of projects to upgrade the TEVT system like: establishment of training development boards at federal level, provincial level, assisted provincial governments by building various training centers and handed over to them, developed curriculum, setting standards for skill training, establishment of Skill Development Council (SDCs) and Centre Management Committees (CMCs). The SDC meant to conduct training programs on public-private model whereas CMC was a platform with the representation from employer (40%), workers unions (10%) and government representatives (50%), with the aim to advise the management to carry out the activities pertaining to skill training on the basis of market need and cost recovery/self finance.

The above primary data shows that the issue faced by NTB is the lacking of the compliance of its charter. There are number of organizations departments dealing the same subject at federal and provincial and local level. The main organizations involved at the federal level are: Ministry of Education, Ministry of Labor and Manpower, National Vocational and Technical Education Commission (NAVTEC). At the provincial levels the departments engaged are: Industry Department (Dept), local Government and Rural Development, Agriculture, Labor Dept, Commerce Dept, Technical Education and Vocational Training Authorities (TEVTA's). It is endorsed by the respondents that although the subject is provincial or local in nature but the federal government is involved in number of aspects like conducting training programs by itself and holding much of the financial resources which leads to the duplication of the work and creating mistrust amongst provinces and above all the resources are not properly utilized. The implementation stage has to be dealt at the provincial or local level and at the federal level only policy and facilitating the framework for operating the TEVT system is to be undertaken through NTB. Further it has been observed that the effectiveness of the system has not been achieved due to: i) involvement of the Ministry of Labor and Manpower in the autonomy of NTB with a bureaucratic approach instead a professional one, ii) NTB was involved in implementation process (job of the provinces or local government), iii) very little scope for the accountability mechanism for various activities, iv) resource constraints, vi) limited facilities which are mandatory for the operation of

TEVT system, v) non-consistence in policies i.e. it reflects that NTB has to be strengthen as an apex body on TEVT but later on created new organization National Vocational Technical Education Commission (NAVTEC) with the same objective, functions and roles as entrusted to NTB.

Box 14

Table 12 concludes that clear demarcation of the respective roles to be played by NTB in coordination with the federal government/provincial government, industry, and private sector is missing. Further the main aspect of the acceptance of the training in the local/international market is the role of the respective industry which is also not prominent. The concept of split-training was not chalked out effectively so that trainee may take theory classes at NTB and practical skill at the Industry (employer) through a mix training module. This means that to make training acceptable, the training may be imparted on the available on NTB machines (comparatively old one) and some of the training on the latest machines available in the Industry; this aspect gives the ownership and acceptability to each actor. Although laws and ordinances were enacted and so the policies and programs but the problem rested on the implementation stage as it seems that the linkage between the legislation, policies and programs at the implementation stage is quite lacking at the institutional level due to capacity constraints. The argument is supported through literature review above by the researchers like Robinson (on page 4) in his research outcome of Framework for Ocean Governance that the concept of good government is necessary in relation to policy formulation and the policies which actually are pursed. Further international donor agencies like World Bank & Asian Development Bank (pages: 18, 20 & 21 above) are of the view that effectiveness and efficiency are important aspect for public service delivery and effectiveness can only be determined through formal laws and rules in operation. In case of determining the mega program of NTB under objective-II (p/84) relates to the evaluation of national vocational training system it is concluded that due to ineffective provincial training boards and to pursue supply-driven training programs desired success was not achieved.

These factors contributed in malfunctioning of NTB and consequently the effective role to be played by the institute in pursuance of its mandate remained unsatisfactory.

Table-13

Relevance of the training with Labor market

Sr. #	Aspect	VOICES					
		DDA	DAT	ADF	MT	PR	DDC
1	Research and Development exists	D	D	D	D	D	D
2	Market Information System developed	D	D	SD	SD	D	SD
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Research and Development exists	SD	SD	D	D	D	D
2	Market Information System developed	D	D	D	D	D	SD

Table-13 the voices and opinions of the stakeholders of NTB indicates that at the moment in NTB there is no market information system existing on the basis of which the training needs of the present and future may be worked out on some strong database. In the past, six to seven studies were conducted by NTB which concluded that the federal government must consider building up the capacity of NTB by providing adequate resources to upgrade the capacity of the organization and further to develop market information system which may be linked with the operational side of NTB. However no research and development section has been constituted. Hence the trends of the market are not followed and conventional ways of imparting training is underway. Due to low commitment level and resource constraints, no regular linkages with industry and market exist. There is no role of NTB in the local/overseas placement and no such studies carried out to figure out the employability. The employer required working experience and for them it doesn't whether matter either the work force has or not undergone formal or informal training.

Box 15

The employability in table-16 is critical and the same depends on R&D by applying I.T tools for developing a well informed market information system. The market information is a pre-requisite for effective employability which has been augmented by McNabb (page/8) as well as highlighted by Sohail (page/4) for establishing a reliable database for establishing a vibrant market links with training needs. In various development plans of the government like 5th plan (page/49) and MTDF (page/52) emphasized the need for domestic and overseas market according to the employability. Ali at p/41-42 advocated the Need based relevant training.

In case of NVTP project evaluation, it has been observed that the studies targeted were not carried out to develop the research capacity of the institute.

In any vibrant TEVT system the Labor Market Information Systems (LMIS) and other survey and database instruments are important. The function of a labor market information system is to collect, process and make employment projections from information gathered from various sources to enhance the employability according to market and customized training in accordance of market trends.

These deficiencies are not accounted for the operation of TEVT system of NTB thus causing the malfunctioning of the institute.

Table 14

Quantity, Quality and Relevance of the training

Sr. #	Aspect	VOICES					
		DDA	DAT	ADF	MT	PR	DDC
1	In the early stage of its establishment NTB played its due role	A	A	A	A	A	A
2	NTB applied the system approach in handling various aspects of training.	A	U	D	D	A	D

3	NTB playing the role as quality regulator	D	D	D	D	U	D
4	NTB developed trade standards first time in Pakistan	SA	A	SA	A	A	SA
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	In the early stage of its establishment NTB played its due role	A	A	U	A	U	A
2	NTB applied the system approach in handling various aspects of training.	U	D	D	D	U	D
3	NTB playing the role as quality regulator	D	D	D	D	D	U
4	NTB developed trade standards first time in Pakistan	A	A	A	A	A	A

Table-14, the voices and comments given in discussion shows that the achievements of NTB have to be taken in the historical perspective as well. In the period earlier than 1976 (establishment of NTB) there were very few schools which existed to impart the training. NTB took initiative and started operating as well upgrading the capacities of the respective training schools in all the provinces in terms of their equipments, buildings infrastructure, training standards, curricula, training of the master trainers and testing and certification etc. However there existed a serious flaw in project planning stage i.e. the up-gradation was considered as one time activity and stopped with the project financial life. In post project period the operation and maintenance of the project activities was not accounted for which had to be considered at the preliminary planning stage therefore the system approach was not followed to update the knowledge, technology and methods. The NTB has to act as regulator and as a watchdog to observe the quality standards of TEVT system, for the adoption of best national and international practices. The quality standards have to be comply-with through an in-built mechanism of monitoring and continuous evaluation but a feedback system was not developed. At the federal level it is a feeling that the attitude from the provinces is desirous of more autonomy rather than following a policy for uniformity at national level and quality regulation parameters to be observed. Actually the efforts undertaken in handling these aspects proved a fragmented strategy instead of a holistic approach based on some policy guidelines through a comprehensive governance mechanism.

Box 16

NTB is considered as the central institute as at the time no other institute of similar scope exists. The advantages of the institute are; legal framework, secretariat for the respective training boards, expansion of the training at multiple levels, policy formulation, setting occupational standards, developing curricula, certification and above all establishing a national training system in consultation with the provinces and other stakeholders. However, despite of its comprehensive mandate the targets and objective are not achieved in its real perspective which indicates a variation in the system. NTB doest not considered the system approach which is considered to be an important aspect for sustainable development. Joost (page-15) considered the non existence of the institutional approach for unsustainable development of any process. Therefore a system approach has to be followed taking in to account all the attributes of the system which is also endorsed by Parson and Checkland at p/32 for the application of system theory in case of the present study.

One of the main areas of concern within the system is the Quality standards of the whole value chain of knowledge and skill. Wagner (page-7) regarded quality of learning as prerequisite for effective TEVT. Similarly Onstenk and Franck (page 8) point out that it is imperative that the quality of the connection between workplace and school-based learning is established and the same was supported by Billett that the integration of both aspects is critical. Ramirez (page-13) considered that quality could be increased as a result of investment in human resources. Further, all the policy and planning documents of government of Pakistan emphasized the quality of knowledge and skills in TEVT system. However the challenges to observe quality standards are of significance in nature. Almas (pages 15-16) commented that the quality of institutions remains a challenge. Similarly Bo Rothstein (page-18) regarded that the quality of governance is important for any system to function and the effectiveness and efficiency are the important aspects of the governance. Further while discussing the Bangladesh model of TEVT (page-38), it is revealed that focus on policy-making, regulatory framework and public-private collaboration are important features to observe the quality standards. The international donor agencies like Asian Development pointed out (page-55) that TEVTAs (Technical and Vocational Training Authorities in the provinces of Pakistan) are focusing on the enhancing the enrolments, instead of providing good quality of relevant training.

Within the perspective of NTB (page-64), the national training policy of NTB comprises of improve quality and standards. In addition to this, the evaluation of the objective-1(to improve the quality of the national vocational training system) of NVTP-NTB (page-82), the underachievement and failure involves; curriculum acceptability, private sector role in TEVT, effective monitoring & evaluation system, national training policy development and implementation , required training legislations, adequate O&M budget for training, decentralization and efficient coordination.

The above deliberations lead to the argument that the key factors involved in the malfunctioning of NTB consists of; variation in the system, non compliance of the quality standards at the training as well as at the institutional level. These quality standards have not been given due consideration neither at the policy-planning stage nor at the delivery level, therefore NTB which has the mandatory role to view quality standards has not effectively achieved. On the whole comprehensive system approach is missing at multiple levels which hammered the significant functioning of NTB.

Table 15

Curriculum and Trade testing

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	Present Curriculum fulfils the individual needs	A	D	D	D	D	D
2	Curriculum fulfils the International standards	D	SD	SD	D	D	D
3	Contents of Curricula achieve course objectives	A	U	D	D	D	D
4	The medium of instruction easily understandable by trainees	D	U	D	D	D	D
5	Theory and Practical are separately completed	D	D	D	U	D	D
6	Trade standards developed by NTB were updated according to international standards	D	D	D	D	D	D
7	Training modules of NTB are developed according to the needs of the market	D	A	D	D	D	D
8	Modern learning tools like internet, on-line learning, Video lectures etc is practiced in NTB	D	D	D	D	D	D
9	NTB has developed a plan for getting international recognition like ISO-9000 etc	D	D	D	D	D	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Present Curriculum fulfils the individual needs	D	U	U	D	D	D
2	Curriculum fulfils the International standards	D	D	D	D	U	SD
3	Contents of Curricula achieve course objectives	U	A	D	D	D	D
4	The medium of instruction easily understandable by trainees	A	D	D	D	D	U
5	Theory and Practical are separately completed	D	D	D	D	D	D
6	Trade standards developed by NTB were updated according to international standards	SD	SD	SD	SD	D	D
7	Training modules of NTB are developed according to the needs of the market	A	A	D	U	A	D
8	Modern learning tools like internet, on-line learning, Video lectures etc is practiced in NTB	D	D	D	D	SD	SD
9	International affiliation with Standards bodies can add value to the skills and knowledge achieved from NTB	SA	SA	SA	SA	SA	SA

Table-15 is related to various aspects of curriculum and testing, the opinion of the stakeholders is that: NTB had developed national standards for the 46 trades. The national standards were not updated as at present there are more than 300 trades that have been practiced globally and even in 46 trades the quality of the standards was lacking. The same was not undertaken due to various constraints like financial, non-continuity, lack of coordination and low level of commitment and priority. The modules of the training are outdated as for instance still following the modules of 1988 for general training however some changes had been made.

There exists a very bleak picture of the reorganization of TEVT system through national or international accreditation process. No steps has taken so far to establish TEVT national accreditation council to certify the skill trainings and undertaking steps to recognized the same by international bodies. One of the grey area of TEVT system since it inception is that there is no link for the system with the main education system rather it is operating in parallel without integrating with higher education and even any integration of technical and vocational system is also missing.

Box 17

Curriculum has to be the focal point of any training programs conducting by the organization. Hence its attributes remained one of the main functions of NTB and to make it assure that the same is transmitted with quality assurance. This aspect has been highlighted by various scholars researcher in a broader (knowledge) as well as narrow spectrum (technical and vocational) perspective. ASCD, Dall'Alba, Reid/Loxton and Young (on pages: 12-13) consider curriculum as the specific knowledge and skills that trainee learn with focus on quality aspect to accommodate varied learning styles. Bowers, Toohey and Millmow (on page-37) suggested that the TEVT curriculum is a more than the classroom activity and is competency based with a hands-on structured approach focuses on performance of professional skills. Similarly the trade testing and certification is necessary for the quality learning to ensure uniformity of education & training standards. Cedefop (page-37) stressed the need for the accreditation of TEVT system through some professional body observes its accountability. The aspects of curriculum, trade testing and National Qualification Framework are clearly indicated in the policies and plans as well in the obligatory functions of NTB. Table 7 (page-75) the trade testing has no targets earmarked by NTB hence the evaluation which is uncertain to determine its achievements. Researcher conducted the evaluation on pages: 82-83 of objective1, which pertains to improve the quality of the national vocational training system under NTB and it was ascertained that consensus has not been developed amongst provinces to accept the curricula and standards of teaching the knowledge and skills.

The curriculum describes the learning process in a much more comprehensive and complex fashion than is possible. The effectiveness of a training system, dependant on attract the young generation into the occupation of the future and skills which employers need, to cope with new challenges and to abreast them with new technologies and methods and further to accredit such training modules which remains challenges for NTB. The present course of action of NTB has little connection with the outside world and lacks in terms of new training methodologies in accordance with the quality assurance system. This further means that all the inputs to gear the system and the process supposed to achieve the aims of curriculum, trade testing and certification has not been achieved for the required output which created malfunctioning factors of NTB.

Table 16

Role of Federal Govt and Monitoring System in NTB

Sr. #	Aspect	VOICES					
		DDA	DAT	ADF	MT	PR	DDC
1	Feed back mechanism and monitoring and evaluation system being followed by NTB	D	D	D	D	U	U
2	The federal government played its due role in developing the capacity of NTB	D	D	D	SD	SD	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Feed back mechanism and monitoring and evaluation system being followed by NTB	U	D	D	U	D	U
2	The federal government played its due role in developing the capacity of NTB	D	D	D	D	U	U

In Table-16 the aspect of Federal Government has been covered by the respondents. The role of NTB was to develop, establish and handover training infrastructure to the provinces and put in place a comprehensive monitoring and evaluation system.

The real issues emerged when the funding was stopped due to project life but the activities became the regular feature of such training centers/institutes, in this scenario the role of NTB becomes irrelevant. This is primarily on the basis of the fact that no sustainable mechanism for the feed back and monitoring and evaluation system was developed besides other behavioral factors on the part of the provinces. There is an urgent need that NTB should act as a quality regulatory body for all such activities operated at various locations and provide necessary regular feed back with regards to standards, certifications, curricula, skills required nationally and internationally through best practices for future planning.

Box 18

For the effective processes of learning the assessment has to be determined through monitoring and evaluated by considering the performance of the organization through a sustained feedback mechanism. The identification of weaknesses through the evaluation process leads to development of improvement measures. These are implemented and monitored, as part of a new cycle of the assessment.

Tsang (page-2-3) referred the theory of learning (Stromsforfer) explained that the technology of vocational training encompasses in addition to other factors included management and monitoring procedures. Whereas in the System Theory (page-22) is of the point view that if a feedback in legislative decision is missing and the non compliance exists than there will be weak monitoring of programs/projects and ineffective control will be observed., Parson and Checkland (page-32) while highlighting the system theory its parameters also included feedback mechanism. On page-82 and 87 the aspects which lead to affect the system efficiency of NTB included the non availability of effective monitoring and evaluation system.

It is also to mention that NTB being the public sector organization of the Federal Govt hence the role of federal government has to be visible and proactive which seems quite weak. The provision of TEVT is lacking in coherence which required devolution of authority to NTB for its effective functioning. The M&E system has to evolve on the new market dynamics through tracer studies. Professional monitoring and evaluation staff with institutional capacity to identify and diagnoses the grey areas to improve NTB. These aspects which at present are quite weak and fragmented in NTB perspective are the sources of the malfunctioning of the institute.

Table 17

National Plans/programs/projects

Sr. #	Aspect	VOICES					
		DDA	DAT	ADF	MT	PR	DDC
1	New national plans were developed by NTB	A	A	U	A	A	A
2	Approaches were developed to train the human resources according to new trades through some projects.	A	A	A	U	U	A
3	TEVT policies/plans were consistent for sustainable development	D	D	D	D	U	D
4	NTB programs developed in pursuance of national polices and plans	A	D	A	U	D	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	New national plans were developed by NTB	U	U	U	A	D	U
2	Approaches were developed to train the human resources according to new trades through some projects.	U	U	U	D	U	U
3	TEVT policies/plans were consistent for sustainable development.	D	U	D	U	D	U
4	NTB programs developed in pursuance of national polices and plans	D	U	U	D	D	U

In table-17 polices and plans of TEVT system in accordance with the role of NTB have been highlighted. The need of NTB arouse in late 70's when there was a construction boom in the Gulf States and a huge amount of skilled work force was required in various trades in the respective markets. Under these programs about 30,000 human resources were trained and equipped with skills required for the international market. These productive human resources provided a potential segment for contributing in the socio-economic development of the country by sending the foreign exchange to their home which helped in breaking the vicious cycle of the poverty. There was need to explore new markets and avenues for our human resources. A feasibility study was conducted during 1979-80 in collaboration with international development agencies for exporting more human resources in the respective markets but was not materialized nor implemented. The sustained developments of the programs were not undertaken due to the rapid change in the policy, priority, financial resources availability and leadership role. The programs, projects of NTB are carried out in isolation without any relationship with the national polices or plans.

Box 19

TVET policy sets out the government's vision for skills development. In policy planning process the national policy framework with clear implementation guidelines and policy roles for the various actors as well as action plans for resource mobilization and allocation is important for a vibrant TEVT system.

Thomas, Peter, Clark (pages 22-23) System theory, Good, Chandrasekrana, Nwankwo, Zaki and Ghafffar described the concept of policy and plans focusing on laws, regulations, organized activities with adequate resources in organizational perspective for optimal use of the resources. The policy, plans and their implementations through programs and projects remains a challenge to govern TEVT system. The aspect was also explored in NTB environment which is reflected in table-20 (page 101).

World Bank (page-4) regarded good governance as a symbol of transparent policy-making. Peter referred governance too implement the public policy and Robinson regarded correlated governance with effective policy-formulation and its pursuance. Similarly at p/16, the degree of successful policy has two features one is effectiveness (implementation) and other is efficiency (output delivered relative to input). Asian Bank (page-21) considers that the effectiveness can only be determined through their formal laws, policies of operation. In TEVT aspects UNESCO on page-23 emphasized that the policy should be formulated in terms of structural and the qualitative improvement.

In Pakistan's perspective (pages: 21-22) the current education policy highlighted various aspects for the malfunctioning of TECVT system which included governing structure of TEVT system. Further on page-45, the economic survey it was realized that at the policy and plans level the investment in terms of quantity and quality in education is very much required which at present is missing.

While discussing the case of NTB, one of the indicators of concern on page-78(table 9) is the implementation of national training policy. The aspect was also evaluated in NVTP project of NTB on pages: 82(objective 1), 90(section 5.12), 88-89(k) concluded that in addition to other aspects, the factors causing failure of the program comprises of; non provisions of clear cut policy, inadequate follow-up, influencing institutional decision making, supply-driven approach of policy planners and the process of policy making remain very weak for National Vocational Training system. Thus, through literature review, second-degree data, government publications as well as primary data of NTB leads to the fact that key aspects at policy plans level are; the assessment of the existing TVET system, the linkage with other national policies and strategies, linkage with regional and international policies and world of work, funding and equipping TVET institutions and female participation in TVET

Thus, these factors lead to the malfunctioning of NTB in perspective of policy, plans and at their implementation at the programs/projects level.

Table 18

Informal Sector

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	Informal sector is much larger than formal sector	A	A	A	A	A	SA
2	NTB is catering the needs of Informal sector	D	D	D	SD	D	D
3	NTB is taking appropriate strategy to cater the need of informal sector particularly with reference to women customized training and their employability.	D	D	D	D	D	SD
4	Any connection of formal and informal sector of TEVT system.	SD	SD	SD	SD	SD	SD
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Informal sector is much larger than formal sector	SD	SD	SD	D	D	D
2	NTB is catering the needs of Informal sector	D	D	D	U	SD	D
3	NTB is taking appropriate strategy to cater the need of formal sector particularly with reference to women customized training and their employability	SD	SD	SD	SD	D	SD
4	Any connection of formal and informal sector of TEVT system.	SD	SD	SD	SD	SD	SD

Table-18 depicts the role of the informal sector in technical and vocational education. There is great potential to organize the informal sector of the country as it comprises of a larger segment than the formal one, but this potential had never been given due consideration and priority at any stage i.e. policy-planning-implementation. The Human resources of informal sector followed conventional techniques at their workplace and consequently the productivity was less.

NTB did not play any appropriate role in catering to the needs of the informal sector like developing some programs to cater the customized needs of each discipline of vocational enhancement or mobilizing this untapped resource to improve employability, craftsmanship and livelihood of the worker.

Box-20

The traditional apprenticeship is the leading opportunity for the acquisition of employable skills in the informal sector. In the informal sector the traditional apprenticeship, which is often for the economically disadvantaged segment of the society is usually marginalized, unregulated, and lacks government support and intervention despite of its huge potential.

The researchers; Nablil, Coase, Morison and Milmow (pages: 15, 16, 27, and 36) described the importance of informal sector in perception of; actions for the development process, role of the institutions for promoting informal sector, the organizational collective actions, trade testing to improve the employability.

In Pakistan's perspective (pages: 43, 44 and 46) the aspect is very important as a very large segment of the workforce is associated with the informal sector in number of skills and is more than the formal one therefore its needs are to be addressed in accordance with its potential which is missing. There is also an indication of the inconsistency of various policy plans in respect of the informal sector in the country.

At NTB level (pages: 62, 65, 66 and 78), the aspect is reflected in the policy and the area of activities pertains to support and trade testing of the informal sector including the disadvantage segment of society i.e. women. However in the analysis of NVTP program of NTB the objective-II, which is related to improve the capacity of technical vocational system (pages: 82-83) there are evidences of failure is non-mobilization of the training services of the informal sector.

The conceptual definition of TVET cuts across educational levels (post-primary, secondary, and even tertiary) and sectors (formal or school-based, non-formal or enterprise-based, and informal or traditional apprenticeship). It is therefore important to take into account the transversal and longitudinal nature of TVET in any strategic policy framework. The informal, non-wage employment sector is critical in nature and same has not been taken care while developing the national TVET policies and strategies nor at NTB level. The current governance structure does not promote effective coordination, sharing of resources, and articulation of informal system at NTB. Therefore the malfunctioning of NTB in relation to informal segment of the society and the empowerment of women is visible.

Table 19

Linkage of training with the Industry

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	NTB Ordinances of 1980 and 2002 were implemented in accordance these were envisioned.	A	D	D	D	D	A
2	Apprenticeship ordnance-1962 is effective focusing the role of Industry.	D	D	D	SD	SD	SD
3	Coordination is effective with Industry to reinforce practical learning.	D	D	D	D	SD	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	NTB Ordinances of 1980 and 2002 were implemented in accordance these were envisioned.	SD	SD	D	SD	SD	D
2	Apprenticeship ordnance-1962 is effective focusing the role of industry,	D	SD	SD	SD	SD	SD
3	Coordination is effective with Industry to reinforce practical learning.	SD	SD	SD	SD	D	SD

The linkage of the training with the industry has been covered in the interviews through Table-19. NTB ordinance 2002 and the apprenticeship rules 1966 framed in pursuance of the apprenticeship ordinance 1962, which supports that apprenticeship programs has to be executed through a mutual collaboration program between employer and the industry through cost sharing mechanism. A 20% contribution to be incurred by the industry on the trainees (apprentice) and 80% by the employer of the trainee (apprentice) for a period of three years to enhance their skills and to update their knowledge and skills. Since the training was to be imparted on fulltime basis hence a stipend was also admissible to the trainees**.**

The system did not work out due to the fact: i) the law was violated by some of the employers/industrialist due to their vested interests, ii) a bribery system was started that the people who were supposed to observe the compliance of the law established a close relationship with the industrial employer and watched their economic interests in order to save their contribution, iii) attitudinal problem as the industry owner thinks that he had invested on the equipments/machineries and accessories and if untrained/semi trained worker may be deputed on these highly prices equipments it may cause danger to these machines. Further it is the perception of the employer that the work of the trainees affects the regular productivity of the industrial products. There exists problems in establishing liaison with the industry even on occasional visits (1-2 visits industrial visits are required

fro each class) for the trainees, there is an attitudinal problem from the industrial stakeholders and their response is very lukewarm hence practically the linkage is non existent.

In order to implement the law in its true spirit, no efforts were undertaken to like to update the same and make it user friendly instead of forcefully so that an important stakeholder (industrial employer) who is supposed to implement the law in his/her premises may do it willingly and voluntarily basis. Some motivation is also required in this regard like: to giving some rebate/taxes exemption etc, by considering the fact that the training activities are closely linked with research and development area. If some industry employer may train about 20% of the work force and cost associated to it, he/she may take an advantage for some tax exemption incentives.

Box 21

The legal coverage through legislation is an effective instrument to enforce, regulate policy/plan and programs/project in accordance with its formulated design effectively.

The social scientist like Blunt (pages: 16-17) regarded legal and transparent framework as an essential tool for the good governance. The World Bank (page-35) is of the view that the implementation of any activity required a rational legislation at the institutional level which helps in creating a level playing field. Globally the legal legislation is very much evident in protecting TEVT system in various countries like Malaysia etc and in their success models the execution of their respective ordinances and legal instruments played a critical role.

In Pakistan's environment (pages: 8-9), the government introduced number of legal apparatus in the education sector in general and TEVT in particular but their impact remained a challenge. As far as the role of NTB (page: 61, 62 and 64) is judge, the factors identified for the malfunctioning of TEVT system pertaining to polices, plans/programs and effective legislations. Although NTB is the custodian of two ordinances and also to implement industrial ordinance of apprenticeship but at the compliance level i.e. employer/industry is not promising. This aspect was also taken in to account while assessing NVTP project of NTB (page: 83, 84 and 88-k), the factors of underachievement/ failure for the effective and quality vocational system in the country clearly indicates the aspect of inordinate delay delays in amending the current training legislations including apprenticeship legislation and to upgrade according to the new dynamics and also to give ownership to is stakeholders. Thus the factors of malfunctioning of NTB consist of effective, judicious, transparent and participatory legislation and its implementation.

Table 20

Data collection and future requirement

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	Research and Development Work carried out by NTB	A	D	D	D	D	U
2	Data base was developed by NTB for future planning	D	D	U	D	D	D
3	Role of provinces is reflected in R&D under national programs.	SD	SD	D	SD	D	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Research and Development Work carried out by NTB	D	D	D	D	U	D
2	Data base was developed by NTB for future planning	SD	SD	SD	SD	D	D
3	Role of provinces is reflected in R&D under national programs.	D	D	D	U	U	U

The Table-20 the aspect of Research & Development has been addressed. No systematic and sustainable research and development work was undertaken and it remained an issue to have a reliable, comparable and authentic data on which the various policies plans and programs/projects to be developed. For instance at the federal/provincial level no strategy is prevailing that where such TEVT institutions be developed or upgraded keeping in view the geographic distribution and indigenous resources of that particular area.

There are no specific guidelines are provided at the policy level and consequently the co-relation at the implementation stage does not existed.

Box 22

The concept of research in TEVT system is problematic. The application of the research and development (R&D) as a tool to improve the quality and effectiveness of the excellence of standards can not be over emphasized. This leads to an argument that TEVT governing structure must have perspective planning with the use of modern techniques of forecasting the specific requirement of the training through research and development activities.

On page-40, UNESCO emphasized that the research is the focal aspect for the future realistic needs and ADB observed that non availability of R&D system in TEVT system in some of the countries including Pakistan causes serious implementation issues.

At NTB side (pages: 83, 85, 87-h), while assessing NVTP program it is transpired that a disappointing progress experimented on the completion of the research studies and no follow-up action has been initiated on the outcomes of the completed studies.

In the absence of any R&D cell to process the data collection from various actors and sources through regular surveys in coordination with provinces is non existent. This means the benchmarks and guidelines for monitoring and evaluating the progress, outputs, and impact of TEVT activities based on a set of comprehensive indicators that linked with labor market information system (LMIS) is also missing which are the aspects of malfunctioning of NTB to operate an effective TEVT system.

Table 21

Coordination and Legislation

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	The same subject is being dealt at various levels and leading to duplication.	A	A	A	A	A	A
2	Effective Coordination exists between federal govt, provincial govt and other stakeholders of TEVT system	D	D	D	D	D	D
3	Lot of duplication work with respect to legislations, programs, projects and organization exist in TEVT system	A	A	A	U	U	A
4	Due to duplication of work the resources are not utilized effectively and efficiently	A	A	A	A	A	A
5	NAVTEC is now main policy coordinating body at the federal govt and has taken the role of NTB	A	A	U	U	A	A
6	Provincial TEVTA's are closely linked with NTB	D	D	U	U	A	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	The same subject is being dealt at various levels and leading to duplication	SA	SA	SA	SA	SA	SA
2	Effective Coordination exists between federal govt, provincial govt and other stakeholders of TEVT system	D	D	D	U	D	SD
3	Lot of duplication work with respect to legislations, programs, projects and organization exist in TEVT system	A	A	A	A	A	U
4	Due to duplication of work the resources are not utilized effectively and efficiently	SA	SA	SA	A	A	A
5	NAVTEC is now main policy coordinating body at the federal govt and has taken the role of NTB	SA	SA	SA	SA	A	A
6	Provincial TEVTA's are closely linked with NTB	D	D	D	U	U	U

In Table-21 the respondents have given their voices on the aspect of coordination at various levels. NTB took number of steps to develop an effective coordination with the respective training boards (federal and provincial) in pursuance of the ordinance to develop a sustainable and harmonized TEVT system in the country. Various legislations were made like NTB Ordinance 1980 and amended 2002 and numerous rules and regulations were formulated to run the affairs of TEVT system in the country. The provincial governments have their own legislation in isolation. There is a lot of duplication work pertaining to programs/projects are going on at various levels like legislation, policy, planning and execution and poor coordination and which are wastage of the resources.

The inert-provincial coordination remained ineffective and practically non-functioning for the last 10 years and no such forum existed at the moment. The need was to strengthen the same structure but on the contrary a new organization under the name NAVTEC was constituted in 2006 at the federal level under a new ordinance (National Vocational & Technical Education Commission Ordinance-NAVTEC, No: XXXVI, 2009) and functions aims to address the needs of TEVT system in the country through coordination, policy frameworks, projects/program and international liaison etc. This is apathy that instead of strengthening NTB and using the existing capacities, experience, resources and infrastructure, a new body is constituted under Cabinet Division performing same functions as was assigned in NTB Ordinance which is merely duplication and overlapping of functions and roles.

Very poor coordination at multiple levels and most of the authorities and institutions are working in isolation without considering a comprehensive unified framework. Further no standards are comply-with and most of the activities are segmented in nature instead of a system and holistic approach. The intervention from the bureaucracy seems very visible and all the decisions are taken through bureaucratic system instead of professional approach.

Box 23

The effective coordination of any system is articulated for the optimum utilization of the resources. This characteristic is always taken in to consideration while appraising the system for its effectiveness and efficiency. The integration and coordination of TEVT actors improve the delivery of the system.

On page 18, Esade and Francisco consider that the quality of governance should t focus in addition to other factors, coherence and coordination at various levels and stressed that policies to be consistent with well-coordinated actions among the actors who participate in the development process. Clark also underlined that government is required to enhance coordination and collaboration for the resource utilization.

In TEVT system of various countries discussed above rationalized the governance of skills development nationally through collaborative and coordinated efforts.

The problem of lack of effective coordination has been highlighted in government of Pakistan various policy and plans documents (pages: 48-51) and categorically identified overlapping and duplication of training programmes in TEVT system operated by various departments and organizations hence no standardization are being followed. On page-55 the number of institutional players are depicted for TEVT system in the country and at the federal level among four players, two are responsible for the coordination, policy formulation, quality standards under legislative coverage which clearly an example of simple duplication of work and less coordination and in contradiction of the good governance parameters.

On pages: 61-62, the role of NTB is clearly defined and the coordination of TEVT system rests with NTB. However when evaluating the NVTP program on pages: 83, 87(5.11-f), the failure indicators are weak coordination of NTB and non-maturation of provincial technical boards as an effective normative and training coordination bodies with independent resource outside governmental control is evident which shows gaps in federal-provincial communication and coordination. The constitution of new body (NAVTEC) is merely not required in the presence of NTB and causes serious repercussions and the resources to be provided to NTB have been diverted to the new body thus the role of NTB has been marginalized which has caused malfunctioning f NTB and hampered its activities and role.

Table 22

Privatization of TEVT

Sr. #	Aspect	VOICES					
		DDA	DAT	ADF	MT	PR	DDC
1	Skill development council (SDC) project with public-private partnership approach may enhance the capacity of TEVT system in the country	A	A	SA	SA	A	A
2	SDC are compromising on quality issue and more focus on earning profits	A	U	A	A	A	A
3	Private sector is not contributing its role in SDC	SA	SA	SA	A	A	A
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Skill development council (SDC) project with public-private partnership approach may enhance the capacity of TEVT system in the country	SA	SA	SA	A	A	A
2	SDC are compromising on quality issue and more focus on earning profits	A	A	U	U	U	U
3	Private sector is not contributing its role in SDC	U	U	U	U	A	A

The role of private sector to develop TEVT system is revealed in Table-22. The Skill Development Councils (SDC's) were established in the provincial capitals and Islamabad and the role of industrial stakeholders/employers was defined in running business of the councils. Seed money was given to for their initial mobilization. The issue of the quality has emerged as the respective SDC's are outsourcing their activities and certifying such institution where the training standards are not comply-with. Further SDCs has no monitoring and evaluation system to ensure the quality standards in the outsourced institutions. SDC's are interested to get their affiliation fee obtained from such institutions which allow them to use the name of SDC under the Ministry of labor & Manpower for market recognition compromising on quality training. Furthermore private sector leadership is not contributing appropriately in terms of their time and intellect to make system vibrant and competitive. There is a need that private sector may contribute some resources (machines, time) to carry out training in such institutions which imparting the training programs. Some mechanism may also be developed when imports of machineries are done, the vendors may be asked to provide some of their machines for training purposes only to the institutions of their choice where training is imparted. This will also help the industry to have the trained and well equipped manpower well in the market on new technology. Some of the non governmental organizations are sponsoring training at NTB and trainees get stipend on the contrary the trainees in their private capacity do not get anything some uniform mechanism is required.

Box 24

Due to the scale of human resource development it has become necessary for the governments to foster collaboration and partnerships with private sector training providers, including NGOs and CBOs. In almost all countries, non-government provision of TVET is on the increase both in terms of number of institutions and student numbers.

The World Bank (page-19) has promoted the mechanisms of decentralized decision making and private sector participation for achievement of greater efficiency in good governance. In Malaysian model (page-37), the role of private sector is prominent in National Vocational Training Council (NVTC).

The Asian Development Bank on page-21 commented that in the second-generation governance reform under which Pakistan is underway, there is a need to deepen existing reforms through an enabling environment for private sector development to enhance the competitiveness. In the education policy of 1979 (page-49), it was realized to involve private sector in TEVT system by establishing skill development councils. Similarly in the seventh plan (page-50) and MTDF (page-52), the private sector was encouraged to operate technical and vocational schools and to increase the enrolment. Further incentives for tax/credit were also recommended for private entrepreneurs supporting technical and vocational training. On page-56, the table-2 shows that the percentage of private institution in the country is seventy percent and the enrolment is doubled than public which reflects its potentiality. In NTB context (on pages: 55, 70, 75, 77 and 78), the framework for private sector for TEVT system was developed under the umbrella of Skill Development Council(SDC), which aim to establish collaboration with private sector in training management and administration and to address training needs of industry to utilize the public and private sector facilities.

However (On pages: 83, 84, 88-i and 89), the concept was evaluated under Objective II of NVTP program and it is observed that non-mobilization of publics sector resources to private sector training institution effected proactive role of the private sector. Although few success stories are there but it remained a challenge to develop a public-privet partnership model effectively either due to inadequate public support or low interest level of the private sector. It is further to mention that the private sector is also the main providers to train the informal sector which is more than the formal sector, thus introducing such policies and incentives that will support increased private sector participation in TVET delivery is very much needed.

This aspect remained quite lacking for building a framework on the sound foundation and demonstrating the potential of cost recovery and harnessing the full cooperation of the employers for achieve sustainability. Consequently the malfunctioning in TEVT system observed due to an effective role of the private sector according to its share.

Table 23

Integration of technical & vocational with the main education system

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	NTB took some concrete steps for the accreditation of TEVT system	A	U	A	U	U	A
2	TEVT system is a part of the main stream education system of the country system	SD	SD	D	D	D	D
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	NTB took some concrete steps for the accreditation of TEVT system	D	D	D	D	D	U
2	TEVT system is a part of the main stream education system of the country system	SD	SD	SD	SD	SD	SD

The Table-23 illustrates the TVET system and main education system. The various categories of education offered in Vocational Education are: i) G-1 level = one-year training, G-2-Level = two years training and G-3 level = three years training. G1, G2 and G3 are interrelated but further connection to other education system is not there. Similarly technical education, diploma of associate engineer (DAE) is awarded after completion of three yeas of technical education training after 10th Grade in science. The entrance level for technical and vocational education is matriculation (10 years of schooling) and in some trade it is middle (8^{th} grade).

The trainee's competency in TEVT on the basis of matriculation is not enough as it is hard for them to understand even the basic concept. The same may be overcome by introducing some subject of technical/vocational in nature at the matriculation level. A pilot project in some of the schools in Islamabad is offering matriculation (Tech) but it is very limited and the same has to be strengthened. Further the focus in training is to complete the course instead to do extensive exercises/practical. Further education at the University level is very much restricted with only 5-6 seats at Bachelor level in the concerned fields to get B.Tech Degree (4-years after DAE) but again they are further restricted to get admission in the Masters level on the Basis of B.Tech. After getting even the highest level of technical education which is Diploma of Associate Engineer (DAE), although the government rules allow them to serve as associate engineer/supervisor but practically they are taken as machine operator and for vocational trained persons of even after G-3 level no structure of the employment exists nor to excel in any further education system.

Box 25

TEVT since its inception, one of the grey areas is that there is no concrete relationship with other segment of the education.

UNESCO (pages: 40-41) stated that the general and technical/vocational initiation has to be available to those who wish to avail in a competitive environment within or outside the system.

The Bangladesh and Indian model (on pages: 41 & 41) supported the link between the technical and vocational system with the higher level of education thus giving the opportunities to the trainees to pursue their career as of their choice and learning skills.

Ali (page-42) with reference to Pakistan stressed the need for the establishment of technical vocational education with the academic education system of the country.

On page-53, a weak connection of TEVT and other form of education is depicted but there are some serious constraints to pursue the career of choice after equipping the knowledge and skills through TEVT system and the integration with other parts of education is missing to a greater extent. For this reason education policy, 1979 (p/49) and mid term review, 2005-10 (page-52) highlighted the need of a strong linkage of technical and engineering graduates and the reason for weak TEVT system is due to a fragile linkages of TEVT with other education sectors.

This situation tends to reinforce the perception of inferiority of the technical and vocational track. It is therefore important to create articulation pathways between technical & vocational education and general education. The linked to the accreditation body, may offer professional support to providers in overcoming identified deficits. NTB has not been able to change the situation through policy dialogue or legislation. Therefore the factor of malfunctioning of NTB is the non availability or non existent of a vibrant link between TEVT and general/higher education for a long term career path for the learners.

Table 24

Master Trainers and Staff Development

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	Trainers are competent enough to deliver the requires training	A	D	D	A	A	U
2	Trainings methodology is conventional and not according to new approaches	A	D	A	A	U	A
3	Staff careers growth are being followed	SD	SD	SD	SD	SD	D
4	The terms and conditions of the service according to market forces and acceptable to the staff	D	D	SD	D	DS	DS
5	Criteria exist for the recruitments of the staff	A	A	A	A	U	A
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	Trainers are competent enough to deliver the requires training	D	D	D	D	U	D
2	Trainings methodology is conventional and not according to new approaches	A	A	SA	SA	A	A
3	Staff careers growth are being followed	U	U	U	U	U	U
4	The terms and conditions of the service according to market forces and acceptable to the staff	U	U	U	U	U	U
5	Criteria exist for the recruitments of the staff	U	A	U	U	U	A

Table-24 demonstrates the quality of master trainers and staff development aspects.

The competency and qualifications of the master trainers are either formal or non-formal education or training. The qualifiication of TEVT teachers ends at the diploma level, and no opportunity to qualify as a TEVT Bachelor or Masters.

The innovation in the domain of technical and vocational education and training, as in all the fields of economic, technological and social innovation, depends on the quality of knowledge and skills disseminated by the master trainers.

The introduction of international standards and best practices of teaching the quality of teachers is essential. Further the profession of teacher in TEVT system has a low standing compared to general education and university studies - sometimes to the point of stigmatization which also seriously affect the quality of master trainers.

The methods and technology of training is also conventional as no funds are available to introduce new environmental and user friendly technology, consumable items etc. Although some of the consumable items under international laws are prohibited to use but due to financial constraints the alternative items are not available. The practical aspect of the training is weak to demonstrate the real time hand-on skill due to limited resources.

Further the governing structure pertaining to; terms and conditions and instructor's and staff, service rules, career growth, financial benefits, are feeble. There is no or practically nil policy in the career development of the instructors and staff. For the last more than 25 years they are stuck almost on the same terms and conditions. Although some efforts were done in order to train them internationally but the same was carried out in a distorted and very limited manner. All the instructors are teaching because they can not find job any other place or due to their domestic issues cannot leave the stations. Not a single master trainer/instructor performing his job on professional and motivational grounds. They are not equipped with new ways of teaching and best practices. The service structure of the Instructors is seniority based not competency based. Further personal likeness and nepotism has become the culture supported by the leadership who ha slot of discretionary powers. There is an urgent need to make the service structure of the TEVT an attractive for the quality of education. The criteria of their selection need also improvements. All these aspects have to be taken care at the policy level to build up the TEVT system on best practices.

Box 26

The teachers and staff assume more responsibilities in delivering the training in terms of theoretical knowledge, technical and pedagogical skills therefore play an important role in training process.

Wagner (page-7) is of the view that the availability of qualified trainers to oversee the quality of learning is the areas to be considered for the effective TEVT system. On pages: 13-14, the constructive approach suggested that the teachers/trainer facilitate the learning through active queries and in the behavioralist approach the teacher/trainer disseminates selected knowledge & skills but the role of the teacher is critical in any of the training approach.

On page-43, Krueger concluded that quality of teacher and adequate resources leads to such output (trained student) who earns higher wages.

In Pakistan's perspective Sohail (page-44,) recognized that there is a lack of industrial experience of teachers (master trainers), skills orientation in curriculum and opportunity to get training from the developed countries. In various plans and policy documents (pages: 48, 49 and 54) of the Govt of Pakistan advocated the quality of the instructors and supported better salary and benefits for the production of productive work force.

NTB (pages: 71-72) played its role in pursuance of its areas of activities and conducted a project of training of the trainers to cope up the non availability of adequate trained staff, shortage of experienced and skilled instructors however the project efficiency remains about 67% only.

Similarly in the evaluation of NVTP project (pages: 83, 85, 86 and 88-f), it has been transpired that the decentralization was not achieved by the institution which caused an inappropriate recruitment of instructional/other staff and inflexibility in the use of resources. NTDI/NSTI were created to enhance the capacity of the provinces to build up their instructor training but the major obstacle is the reluctance of the respective provinces to benefit from NSTI training because this displace their home life as the institute is in Islamabad far form their native towns. Another difficulty observed in the post-project period of budgetary constraints of provincial governments in meeting the expenses of the prospective instructor trainees.

These aspects reveal that for teachers and staff development, the autonomy in planning, management, and effective resource mobilization and utilization in the institution is almost non-existent. NTB can play a facilitating role in training of trainers and staff development subject to its autonomy in respect of administrative and financial aspect. It seems that the syllabi are out-dated and trainers are out of touch with changes in technology and work organization. Inadequate financing, poor management and ill-adapted organizational structures and conventional teaching methodologies created a very weak system of disseminating knowledge by the teacher as well as their own development. NTB is supposed to select and train such teachers/staff on competency based system. Teachers/instructors have to train how to prepare reliable and valid skills tests and practical examinations. Further the facilities like, learning resource center, library, computers, software, multimedia packages, books, and journals may be available for effective learning. It is also to mention that a comprehensive policy for career planning for the teacher and staff may be evolved to make the TEVT system attractive for the qualified professionals to pursue their careers in TEVT. Since these aspects are not present in NTB hence these factors are regarded as those which are effecting the functioning of TEVT system in NTB which leads to poor performances of NTB.

Table 25

Social aspect of TEVT

Sr. #	Aspect	VOICES					
		DDA	**DAT**	**ADF**	**MT**	**PR**	**DDC**
1	TEVT considered as low level education in the country	A	A	SA	SA	SA	SA
2	NTB took some concrete steps to change the perception TEVT and compatible to their professions in the country	D	D	U	U	D	U
Sr. #	**Aspect**	**VOICES**					
		TR1	**TR2**	**TR3**	**TR4**	**TR5**	**TR6**
1	TEVT considered as low level education in the country	SA	SA	SA	SA	SA	SA
2	NTB took some concrete steps to change the perception TEVT and compatible to their professions in the country	SD	SD	SD	SD	SD	SD

The society does not consider them suitable for the respectable jobs the only attraction is to get training and enhance their skills to some extent and with their personal efforts to leave the country for the employment. In Pakistan the poor performance of TEVT system is primarily due to the fact it is recognized as the profession of low prestige due to very poor service and wage structure for the persons associated with the system as compared with other professions. This requires some radical structural changes in the TEVT system for the social integration of this profession which is considered as the disadvantage group of the society.

Box 27

TVET has to act as a vehicle for the economic empowerment as well as for the social mobility and for the promotion of good governance and integration.

Mustapha (page-3) consider that technologies related knowledge and skills are critical in various sectors of economic and social life. The support to TEVT is enormous (page: 7-8) however there is school of thought (Blaug), which consider that vocational schooling create a disparity in the society and it is a low grade education and skills which are not esteemed. Lynch (page-14) is of the view that the vocational education assist in developing the knowledge and one tool for the acquisition of knowledge is through social contextual. Coase (page-16) stated that institutions play a crucial role in development for providing formal/informal rules and leads to promote social relations thus the role of constitution in social context is quite critical. Jan (page-18) regarded governance as a part of socio-political theory for effective interaction. World Bank (page-19) refers that in pursuance of socio-economic resources of the country it is important to conceptualize the way in which the power is exercised and that may follow the principles of good governance.

Naveed (page-22) suggested that although globalization has changed the landscape of the world but the entire benefits of globalization in terms of improved social indicators. Similarly Gordon (page-35) considers that the social aspects is immense in addition to technological and economically prosperity.

In NTB environment the mega project i.e. NVTP has been thoroughly evaluated and on page 90/ section 5.12), it is concluded that the impact of the social objectives of the project remained negligible.

The social capital or the development of shared national values is as important as human capital or technical skills formation. The preliminary evidence seems to indicate that social and cultural norms are binding constraint to their participation and has a significant effect in TEVT system. The policy strategy should not discriminate on the basis of social status, ethnic or religious affiliation, age, or academic background. Efforts should be made to eliminate or reduce gender, economic and geographical inequities that limit access

[i] No. IMP-1(23)/76- Resolution: Ministry of Labor, Health, Manpower & Population Planning, Islamabad, 15th May, 1976. In order to remove the divergences between the output of various training institutions in the country and the actual requirement of employment market and also to effectively coordinate, streamline and rationalize activities of various government agencies both Federal and Provincial in the filed of technical training and education, the Federal Govt has decided to set up National Training Board in Manpower Division consisting of members as: i) Federal Minster for labor Manpower, Health and Population Planning, ii) Minster r of State for manpower Labor & Manpower, iii) Additional Secretary, Labor & Manpower, iv) Secretary Education, Govt of Pakistan, v) Four Provincial Education Secretaries, vi) Four Provincial Labour Secretaries, vii) Secretary Industries, Govt of Punjab, viii) Director General Technical Training Manpower Division.

[ii] No: F.17(1)80-Pub, National Training Ordinance IX 1980 amended Vide National Training Amendment Ordinance, 2002. 21 Member Board. The composition was: i) Federal Minster for Labor and Manpower-Chairman of National Board, ii) Secretary, Ministry of Labor & Manpower-Vice Chairman, iii) One representation from Planning Commission, Ministry of Education, Ministry of Finance, Ministry of Science & Technology, iv) four representatives from employers or the Chairman of Skill Development Council form each province and one women to be appointed by Chairman on the recommendation of Employers Federation of Pakistan, v) Four representatives from workers, each province (at lest one member to be appointed by the Chairman of the Board) and one woman of the worker to be appointed by the Chairman of the Board on the recommendations of National Workers Organization. Chairman of the Provincial Training Board of each province and Director of the National Training Board as Secretary.

[iii] No F.17(1)/80-Pub Ordinance No: IX Dated 2oth March, of 1980. 39 Members Board. members with a representation predominantly form the public sector and only four members from the employers organizations/respected chambers and four members workers organization from each province and to be appointed by the Chairman of the board who is Federal Minster on the recommendation of the provincial government.

[iv] Functions: i) Collaborate with source of labor market information as determined from survey of establishment with view to assessing on a continuing basis existing and future training needs, both local and foreign, ii) Systematically study existing training programs with respect to their relevance, duration and size and recommend such measures to be taken as seem desirable to improve the quality of training, iii) Establish criteria for evaluating and determining training programs and facilities, iv) Develop training syllabi and establish and specify national training standards and trade testing rules to ensure horizontal and vertical mobility, v) Supervise such training programs which are funded from the federal budget, vi) prepare National Training Plan, programs and projects in view of local as well as foreign requirements and monitor their implementation, vii) Recommend to the Federal Government means financing training programs, viii) Promote and finance training establishment based or institutional based training officials and instructors, ix) organize and conduct seminars and workshops for various types of personnel associated with training activities, x) Collect and compile statistical related training, xi) Co-ordinate with Provincial Board and Technical and vocational training authorities, xii) Review existing and propose legislation on vocational training and recommend necessary legislation on vocational training and recommend necessary legislative provision with the concurrence of the Provincial brads and technical education and vocational training authority, xiii) Issue to establishments, provincial boards, technical education and vocational training authority or institutions for compliance directives within the framework of the approved plans and projects, xiiia) Assist and establish institutions in collaboration with private sector to promote technical, vocational and implant training and skill development, xiiib) Undertake registration and licensing of all establishment, organizations or institutions which are offering or providing vocational training, xiiic) Develop system and conduct trade testing and certification of skilled workers who received vocational training through any source or acquired skills through experience or informal, xiv) Do all other acts necessary for carrying out the purpose of this ordinance.

Chapter 6: Discussion, Conclusions and Recommendations

6.1 Discussion

The investigation of the leading research problem of the study is the determination of the factors responsible for the functioning/malfunctioning of Technical Education and Vocational Training (TEVT) system in context of Pakistan. The scope of the study carried out in perspective of the key objectives which includes; i) to map the TEVT policies, guidelines, programs, laws, ordinances, ii) carry out a systematic assessment of national TEVT policies and programs implemented and iii) to find out the counter productive factors impeding the strategies and programs of TEVT System.

In addressing the Research Problem, the parameters critical for the study on pages: 2-4 (technical education and vocational training, development, governance and functioning/malfunctioning) are considered and relevant theories and materials were studied in accordance with the scope of the study. The learning theory on pages: 2, 12 and 13 advocated the importance of technology in learning and the role of vocational education and skill in the learning process. The theory supported that the traditional way of learning is not sufficient and the learner may seek knowledge and skills without error through the desired curriculum, instructional strategies, management, laid down procedures and positive reinforcement. Further the Behavioristic approach theory is also considered on page 11 in which the elements of learning taken in to account and their replication regarded as important tool to change the behaviors for the productive learning. Since the learning process involves some important stakeholders including human resource (trainees and trainers), institution(s) and governing system, hence the theories related to these aspects keep on the interest of the researcher. The human capital theory supported the investment in human resources which is economically and socially viable for the productivity and producing quality of labour force thus contributing their skills and knowledge in the best interest of the society. On the other hand the institutional theory considers that there must be a framework under which the whole process of learning may be carried out and the institution may have some rules, procedures with legitimate instrument of operation. The procedures and rules are governed under specific policies and plans. Therefore the polices and plans to peruse the objective of the institutions arc critical which has also endorsed by Valid theory on page 25 in which the objectives are to be vigilantly pursued and gaps to be addresses through the consideration of all aspects including social one. The gaps can be minimized if can't be eliminated in absolute terms if the good governance practices are observed in institutional perspective. Consequently in the learning process within institution(s), the neo-institutional and stakeholders theory is also considered on page 15 to follow the institutional approach and thus taking all the stakeholders on board for the outcome in accordance with the designed policy objectives. It is also worth mentioning that in policy and plans development the role of the state is central therefore the modernization development theory on page 2 is also pertinent for the study. Further on page 18, the public management theories helped the researcher for taking in to account the dynamics under which the power is exercised while delivering the obligatory social services in pursuance of quality of governance and also the factors impeding the development process. The various policy, plans and

programs documents are studied in the section 4.4. The malfunctioning factors in addressing the research problem mean the deviation from the prescribed course of action. The Deming theory of variation on page 4 provided the foundation to address the research investigation as the variation of the development process leads to the malfunctioning of the system(s) and degree of variation from the original identify the impeding factors of TEVT system.

Considering the above, an approach to pursue the study is a prerequisite, which may be supported by some testified theory as well. The system theory is considered as the most appropriate to address the objectives of the study and the research problem. The system theory is capable of analyzing the organizational process which is at the delivery stage and to determine the output in pursuance of the designed policies and what actually happened thus identifying the gaps for highlighting the factors of malfunctioning.

Hence the factors of malfunctioning are studied through above theories in context of Pakistan's TEVT system. The synthesis of Chapter 1, 2 and 4 at Box 1, Box 2 and Box 3 on pages: 10, 27 and 65 reflects that the parameters of the study has close relationship with the leading research question and the aspects of quality of education, policy implementation, curriculum, materials, learning environment with legal structural frame, institutional capacity, research and innovation, quality of governance, coordination and participation are very much valid for an effective and efficient TEVT system. The box 3 on page 65 has exclusively spelled out the main factors causing the malfunctioning of TEVT system in Pakistan and highlighted the gaps pertaining to; weak governing structure, irrational policies, plans, programs, inappropriate legislation, limited institutional capacities, relevance of trades and standards are not comply-with, quality of education is not observed, inadequate physical facilities, restricted role of various stakeholders particularly with the industry (employer perspective), not addressing the need of informal sector, low teacher student ratio & gender disparity, low level of social acceptability, non adoption of new teaching and technological tools by master trainers and their competency, lack of research & development practices, feeble coordination with various actors and respective provincial government, , non availability of market information system for employability and feedback, and above all either the financial resources are meager or inequitably distributed. All these aspects contributed to the malfunctioning of TEVT system in the country. A case study at the institutional level is also conducted in chapter 5 to test the aspects of the research study discussed in chapter 1, 2, 3 and 4 and proofed that that the institutional capacity is limited in delivering the desired level of the deigned objectives of NTB. The Boxes 5-26 (pages: 77, 81, 82, 83, 84, 86, 87, 88, 97, 100, 101, 103, 105, 106, 108, 110, 112, 114, 117, 119, 121, and 124) depicts the same which shows the ineffectiveness of TEVT system at the institutional level as well.

6.2 Conclusions:

The specific conclusions for each component of the research in pursuance of the research question are narrated below:

6.2.1 Governance Structure

The governance and management weaknesses exists with reference to the institutional capacity recognized as major impediments in perception of policy, plans and transformation in to implementation capability through well coordinated efforts under TEVT system. On page 47, it is stated that Pakistan inherited weak TEVT system from Britishers and all the development in TEVT system may be considered in the last 60 years. It has been concluded that the effective mechanism of governance refers to the laws and regulations which has to be derived from legislature and public policies therefore these instruments are very much essential with clear demarcation of the responsibilities. On pages 20-21, Sania and document of Pakistan's education policy depicts the problem of bad governance and highlighted that the fragmented structure of governance in technical and vocational education is primarily due to hazy responsibilities of various actors. The same is endorsed in educational policy, 2009 on page 54. The section 4.7 (page 57) also indicates that the numbers of agencies are involved in TEVT system both at the level of federal and provincial without any demarcation of responsibilities and jurisdiction in terms of their functions. This means the coordination and linkages are weak and thus an integrated approach is also lacking.
In section 4.8 (pages: 57-63), the data in table 2-5 reveals that the institutional capacity to accommodate the youth of the country is less than 1% of its potential. The proportion of female teacher is almost 50% less than male's teachers despite the fact the female's population comprises of 49% of the country but their participation is quite limited. In section 4.4.2 (pages: 42-45), it has been argued that the lower student-teacher ratio leads to better learning. The quality of teacher in TEVT system is also concern of Asian Development bank on page 55. It is also to be mentioned that there exists disparity with regards to the number of institutions between various provinces, enrolment and teacher ratios. The gender disparity is also visible. On financial front the situation is also not promising which is reflected in table 6 (page 63), the share of TEVT remained between 3-8% in the five year development plans of the education which is quite meager and further the fig-1 (page 58) illustrate that the funds utilization capacity is also quite weak. The aspects identified in the study are clearly discussed on pages: 1-5 and 8-9, it has been argued that for the quality of TEVT the aspects like curriculum, education standards, qualification framework, capacity of the respective governments, research and development priorities, appropriate fiscal allocations are critical and on the contrary the country is lacking in term of skills development, creativity, physical facilities (lab, teaching material, infrastructure etc). It is further agreed through research findings that quality of teacher is quite critical for effective learning and the present teacher force are not equipped with updated tools of teaching and the curriculums they are pursuing do not cater the present needs. On page 48, it is mentioned that although a manual for TEVT reflecting curriculum, standards, qualifications framework, labs/workshop, equipments was developed however the same was not updated accordingly. The linkage with the industry of TEVT is rudimentary in nature and this aspect is recognized on page 15 and while taking in to account the stakeholders of the study in section 3.6.2 (page 31), the industry is considered as key actor. However on page 44, it is concluded in Pakistan's perspective a vibrant linkage of technical and vocational education with the industry is missing in the TEVT system. The same finding is also endorsed in fifth five year plan on pages 49 and described that the traditional training program of TEVT is not in accordance

with the requirements of the employer/industry. In Medium Term Development Framework (MTDF-2005-10) of Government of Pakistan on pages: 52-53 and Education Policy (page 54) it is evident that the existing technical and vocational training system is not meeting the requirements of trade and industry.
The social dynamic of TEVT system is also critical is in terms of its external efficiency determination. On pages: 2, 13, 18, 21, and 25, it is articulated by various researchers and organizations (Mustapha, Lynch, World Bank, Naveed, Amjad, Valid etc) that the acquisition of practical skills in societal context is essential and these social obligations is to meet up by observing good governance management practices but in Pakistan's context due to bad governance and insufficient social structure and system, the country is trapped in a low-level skills. Kemal on page 44 elaborated the same aspect and stressed to uplift the social status of TEVT system.

6.2.2 Policy Planning

One of the main objectives of the study is to map the policies and plans in context of TEVT and identified the gaps for the factors causing the malfunctioning of TEVT system mentioned on pages: 4,5,20, 21 and 26. The concept of policy is clearly described (pages: 21-24) by Peter and Clark that policy is the product of government activities and in TEVT perspective UNESCO emphasized for a TEVT policy. On page 22, Zaki regarded policy as an instrument of planning which is also agreed by Good and Chandrasekrana. Good governance is very much related to the transparent and equitable policy development and its implementation (World Bank, McCawley and Robinosn) on page 3, and thus deviation from effective policy leads to malfunctioning of the system. On page 35 in developing countries context the World Bank identify the non availability of effective mechanisms through which the policy is implemented through clear roles of each actor. Asian Bank (page 20) indicated in Pakistan's perspective that the country is lacking in term of rational policy and the same is also endorsed in National Education policy of 2009 that the education policy of the country is quite fragmented. On pages: 23-24, it has been discussed that if any failure in the policy leads to the question of its factors caused its failure. The policy feedback is an important aspect to reframe the policy which has also been articulated on page 24. It is discussed on page 43 that the role of federal government is central in the overall policy-making, coordinating, regulating and advisory authority in education and TEVT. The document of federal government (Pakistan Economic Survey 2009, page 45) stressed the need of investment in TEVT to be decided at policy and plans levels. The implementation of these policies and plans are observed at institutional level, the researcher (page 10/box-1) concludes that for an effective TEVT system, vibrant polices, legislations, programs and the role of the institutions is essential that is why the case study in chapter 5 carried out at the institutional level which is a federal government organization to deal with policy formulation and its implementation on TEVT. In box 3 on page 65, the polices, plans and commission reports on TEVT system are taken in to account for the country and it is concluded that every document speaks a lot of TEVT system but the subsequent document criticized the earlier one and at the implementation stage the failure is evident due its performance.

6.2.3 Implementation of TEVT in the Institutional level

The case study in chapter 5 form pages: 67-127 is conducted to see the real time situation of TEVT system at the institutional stage where the implementations of the programs are executed in pursuance of polices under their governing structure.

On page 87 (table-10/Box 11) illustrates that the governing structure in terms of leadership at NTB/PTB frequently changes thus long term harmonized polices are not observed. Similarly on page 94(5.11-f), the management and governance issues are not observed at programs levels in context of; constraints in decentralization of administrative and financial powers, rigidity in training programs, dependency on government resources, political intervention in the decision making, inappropriate recruitments, miscommunication/poor coordination, delays in legislations and training laws and lesser empowerment of the stakeholders. More specifically the legislation in TEVT system, the duplication is evident due to the fact that NTB ordinances of 1975, 1980 and 2002 (page 127-end notes) empower NTB to address all aspects of TEVT system in the country and these legislations are still under execution. On the contrary another ordinance/law of National Vocational & Technical Training Commission (NAVTEC) is promulgated in 2005 under the administrative control of an extra organization and entrusted the same functions as of NTB at the federal level. National Vocational & Technical Training Commission (NAVTEC) is also an apex body on TEVT and has same scope (page 99) as of NTB. In addition to this the provincial technical and vocational training authorities exists in Punjab and Sindh whereas in Balochistan and NWFP/KPK the Directorate of Manpower are responsible on the subject. Further another law Apprenticeship Ordinance 1962 (page 70) exists to develop, promote and regulate apprenticeship programs in the industries and to secure minimum standards of skills. Box 23 (page 117) also testifies the duplication of functions and poor coordination are the dominant factors. At table 21 (page 115), it is confirmed that effective coordination is non existent between multiple levels of the governing structure consequently causing duplication of work. Further on the legislation side in the presence of NTB Ordinance/law a new body(NAVTEC) is constituted under a new Ordinance which is merely duplication of the legislation, overlapping of the functions/roles and share wastage of the resources.

The structural formation of TVET system is at figure 2 (page 59) points out the linkages of all tiers of education system in the country and technical education and vocational training is considered as a disconnect stream in the main education system of Pakistan with very limited opportunity for the student to pursue their education at the higher tiers. This limitation is also endorsed in table 23 (page 120).

As far as the trainee-trainer ratio is concerned the data at table-11 (page 88) shows an abnormal trend of the ratio (trainee-trainer ratio is high) which has hampered the effective functioning of the system. Similarly in table 24 (page 122) indicates the constraint in staff development due to poor terms and conditions and very limited opportunities for the career growth.

Similarly at the intuitional level the participation capacity is only about 65% as documented in Box 6 (page 81) which demonstrates the institutional limitation. Further the Box 10 (page 86) shows that the enrolment in SDC/CMCs in various provinces is negligible (within 10 years) with regard to apprenticeship training and even negative in

two provinces and enhancement is very small for the other two provinces in vocational training centers.

In Box 26 (page 124), the budgetary constraints are depicted from the availability of the resources including required master trainers.

The case study of NTB endorsed the above aspects in Box 9 (page 84), which is the findings of table-8 that the targets parameters which includes equipments, infrastructure are lacking in accordance with their schedule. Similarly in Box 10 which is in pursuance of table-9 indicates that trained master trainers are limited and Box 12 (table-11 /page 88) shows decline trained in teacher-student ratio. The Box 16 and 17 described that the quality standards and curriculum are the grey areas. Similarly the Research and Development aspects has not be taken in to account in TEVT system and the labor market information has no link with the existing knowledge and skills for the employability of trainees.

On page 100 & 104, (box 14/table 15), at the institutional level the level of linkage and coordination with the industry is lacking and also endorsed by the voices in table 19 (page 111).

At program and institutional level it is concluded on page 96 (section 5.12) that the social achievements of the objectives have not been achieved. The data on table-25 (page 125) testifies the social non acceptability of technical and vocational education in the society due to the lowest level status. The same is further endorsed by taking in to account the data at table-9 (page 85) that a comprehensive national training policy is yet to be developed as still all the provinces of the country are still striving to start their respective plans which has to be included in the policy. The same is also evaluated in the program of NTB under which the National Training Policy to be developed for the Quality of National Vocational training system but due to the limited follow-up by taking all the actors on the board, the objective remain under the category of under achievement. The overall assessment of NVTP program of NTB on page 93-96 reflects that the sectoral policies are not being developed fully. The data in table-12 (page 98) and Box 19 (page 108) clearly have an consensus of the respondents that the policy objective has not achieved by NTB and a gaps is obvious due to non effective linkage with other national policies, strategies, regional and international policies and world of work. One of the policy issue is not addressing the requirement of informal sector as endorsed in Table-18/Box 20 (pages:109-110), although the informal sector and disadvantage group has a great potential for technical an vocational training for workforce development but no policy guidelines are available to cater its needs. On page 90 the evidences leads to the fact that due to non-mobilization of the training services of the informal sector this aspect remained unattended. One of the key grey area of policy indicates on page 117 (box 23) the limited role of private sector in TEVT system, further on page 121 (box 25) the integration of technical and vocational education with other education system is advocated which at the moment is quite challenging.

6.2.4 Development

The development process is considered in pursuance of the modernization theory (page 2) in which the state is the central organ for the development process and education and training is considered as key element for knowledge and skill based human resources for societal development. On page 5, the HDI is considered keeping in view the tangible role of education sector in developing HDI. Various scholars like Wagner, Loxley, Backer

and Yang on pages: 6-7 endorsed that the socio-economic development is predominantly depends of the education and skills of the individuals. Researchers like Nabil, Joost and Coase on page 14-15 relate development with the institution and their capacity with good governance capacity. The same has been endorsed by the World Bank to adopt an institutional approach for the development through transparent and equitable process. On page 25 it has been argued through the approach of Marx and Max Weber that there exists a close relationship between institutions and development. On page 35, according to Curl there exists a close relationship between the country's priorities in policy reforms towards educating its populace and national development. In Dutch model (page 36) the workplace learning is an important factor in the development of broad occupational competency concluded by Onstenk. In Pakistan's context accordingly the development process seems quite weak considering the fact the government is paying less priority on education and on page 5 it has been reported that the government is investing even less that 2% of GDP in education sector. On page 43, Rehamn considered that the skills development has been the most neglected area of the education in Pakistan. It is argued in the study on pages: 8-9, that concrete efforts are required to improve socio-economic fabric of the country through education and training and good governance which are the key factors to achieve the sustainable development.

On table 17 (page 107), the voices in the institution agreed to the fact that TEVT policies and plans are not consistent for achieving sustainable development.

6.3 Amalgamation of Conclusion based on the theory and data discussed above

The responsibility of this segment of education (technical and vocational education & training) is quite vague. In the public policy articulations, governance and management did not receive the specific attention it deserved in concretized terms, clearly delineating roles of various tiers of government. As a result, the implementation of goals set in different policy documents is not uniformly achieved due to unequal attention paid at various tiers of implementation or adversarial environment concerning governance of TEVT system. Further the relations between the federal, provincial and local governments are defined by the constitution and ordinances but there exist a serious level of ambiguity with reference to its execution which demonstrates lack of clarity in materializing these rules. These aspects includes various instruments including; i) policy formulation, ii) planning, iii) curriculum development, iv) national standards of TEVT, v) regulatory and institutional framework and vi) national framework for monitoring and evaluation of policy implementation. A holistic and integrated approach is missing in demarcating the specific TEVT bodies at federal level like NTB and NAVTEC and at provincial levels, Technical Educational and Vocational Training Authorities (TEVTAs) etc in addition to other public and private stakeholders.

The capacity and staffing in TEVT system is also challenging on the basis of the research. The prominent constraint factors in TEVT system are; inadequate facilities of building, laboratories, computers, reading materials, research facilities and financial budget. Further the master trainers are not abreast with the modern teaching techniques and teaching methodologies nor are any budget allocated for their professional growth and the quality of students is also not up to the mark. The curriculum is outdated and not

in accordance with the current market demand and competency-based and practically no effective link exists between industry and TEVT.

Thus to address the Research Question of the study it is concluded that the malfunctioning of TEVT system is causing a great deal of inconsistency due to gaps in; good governing structure, legislations, duplication of work, effective role of the stakeholders, policies, plans, programs and formulation of the projects without considering the implementation capacity of the respective institutions. Further TEVT system has constraints which are leading to malfunctioning of the system in terms of; quality of education and skills of trainees and trainers, relevance of the trades, national/international standards, poor linkage with the industry, not addressing the viable and tangible informal sector, minimal role of private sector, social value of the education, limited institutional growth, mismatched of financial resources and their effective utilizations, women disparity at all levels, non adoption of new technological tools and coordination between stakeholders, resources either are inequitable or wasted because of ill conceived TEVT programs/projects and lack of ownership by the managers at ground levels.

6.4 Recommendations

In the light of the results discussed and conclusions drawn, it is recommended that the Government must fulfill its constitutional, legal, social and obligatory responsibility to prioritize the TEVT system of the country in accordance with its potential for the socio-economic uplift of the country and to improve the country's HDI. A TEVT legal framework has to be chalked out through consultation process by taking all the stakeholders at board. A holistic approach is inevitable by taking in to account all factors which are causing malfunctioning to the system pertaining to; quality of governance (decentralization of administrative and financial authority, responsiveness, efficiency, and accountability), addressing policy and plans issues and following the development process through an integrated approach. The TEVT system may be allocated adequate resources, ensuring the quality standards and executing such modules of teaching which are market driven and without any disparity on the basis of gender, religion and geographical locations. A simulation method of learning may be applied for better learning in which the learner applies what he/she has learned. Stronger links are to be pursued between TEVT and industry/employment and a diversity of TEVT system and its applicability has to be adopted. All these aspects are to be considered while developing rational and pragmatic polices and plans through preferred institutional capacities for better learning to ensure delivery in accordance with the earmarked program(s) targets. The national standard for TEVT system for each of the trade has to be developed to meet the challenges of an ever changing World. The implementation strategy may also consider a link of TEVT system with the higher education system and also to facilitate mobility between formal and non-formal education through a flexible system of learning and new teaching methodologies. The social acceptability is very much required for TEVT system to improve its status in the society with a greater voice of all the stakeholders and ownership of the TEVT system has to be advocated at multiple levels.

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