

DEVELOPMENT OF PAKISTAN'S TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET): AN ANALYSIS OF SKILLING PAKISTAN REFORMS

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ABSTRACT

Technical and vocational education and training (TVET) play an important role for socio-economic development of a country. An overview of documented literature reiterated that the TVET sector in Pakistan needs substantial reforms to meet the challenges of global skilled labour market. This paper focuses the development of TVET in Pakistan with particular emphasize on the "Skilling Pakistan" reforms outlined in National Skill Strategy (NSS) (2009-2013) and the progress of TVET reform support programme (2011-2016). The current progress showed satisfactory performance to achieve the 20 proposed reforms under 4 major components. Under the Skilling Pakistan reforms some tangible efforts for making a world class TVET system have been executed and also plan to achieve the desired objectives. Moreover, proper mechanisms for the implementation of proposed reforms were also framed with monitoring and performance evaluation to access the progress using overall success indicators. However, some others steps are suggested to be taken up by the Government to ensure the implementation of the current reforms with quality, equality, equity and equal access to build a lifelong learning society.

Keywords: *TVET reforms; Skilling Pakistan; Sustainable development; Implementation; Performance*

1 INTRODUCTION

Technical and vocational education and training (TVET) refers to education and training that prepares people for an employment and makes them more productive in various economic fields (Finch and Crunkilton 1999). TVET enhance human potentials and diversifies peoples' choices in order to promote self-employment and entrepreneurship development. It is perceived that TVET plays an important role for social development and sustainable citizenship (UNESCO, 2004; Jallah, 2004). For example, Jallah (2004) referred that TVET is a “*master key*” for sustainable development, which is of great concern for the people in 21st century and also plays pivotal importance in Education for Sustainable Development (ESD). Thus, the development of TVET has become one of the key strategies for education development in both developed and under-developed countries (Tabbron, and Yang, 1997; Grierson and Young, 2002). However, UNESCO recent report reiterated that how TVET can solve the problems of many marginalized communities worldwide, who have not equal access to resources due to socio-economic inequalities. It is generally believed that TVET could be an effective tool to reduce unemployment in semi-urban areas, which ultimately cut down people migration to metropolitan cities (UNESCO, 2010).

Pakistan is a developing country with higher population growth and the youth (15-24 years old) population appeared to be the major portion of the population. With the fast growing youth population, the TVET's sector capacity for delivering demand-driven training services for increasing workforce with technical and professional skills remain insufficient to meet the modern labour market challenges (Shah, 2004; Janjua and Irfan, 2008). Moreover, the Labour Force Participation (LFP) rate in Pakistan is relatively low (only 44%) as compared to other developing countries in the region. Figure 1 presents the proportion of trained workers in Pakistan in relation to other South Asian countries. Consequently, majority of the population is unemployed that ultimately impact on health, education and quality of life (Janjua and Irfan, 2008). Many countries leading in global workforce have heavily invests on skills development. Unfortunately, Pakistan has fallen beyond in meeting the international TVET standards (GoP, 2009a). Thus, extensive TVET reforms are essential to support it in order to meet the demands of workforce in a technologically advanced economy and global markets. Figure 2 show the percentage of enrolment in Vocational education in different Asian countries.

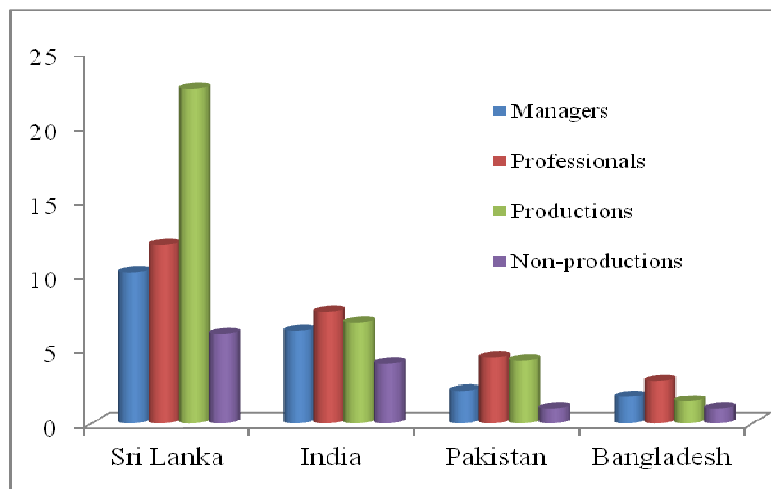


Figure 1. Proportion of the workers trained by occupation (% age) in four South Asian Countries.
Source: adapted from NEMIS (2009).

Generally, there are two major streams in Pakistan’s education system (Shah, 2004). One is general education system, which is comprised of primary (1st to 5th class), middle/elementary (6th to 8th class), secondary (9th and 10th class), higher secondary (11th and 12th class) and higher education. The second stream is technical and vocational education for the development of skilled workforce and middle level technicians, which is comprised of three (3) years education after secondary level (class 10th). Furthermore, different durations (from 6 to 8 months) certificate courses in vocational training are also offered after class 8th or 10th in all technological fields for both girls and boys nationwide (Janjua and Irfan, 2008; GoP, 2009b).

Review of the documented literature including Government policies, reforms and reports revealed that Government of Pakistan recognizes the significance of TVET sector for development (Kazmi, 2007; GoP, 2013). In the last few years, numerous steps have been taken to overcome the challenges faced by TVET sector; such as relevancy, access, quality and equity of current TVET practices. For example, in 2005 a national level body, National Vocational Technical Education Commission (NAVTEC) was established for reforming TVET in the country. Afterward, NAVTEC documented a vision in National Skill Strategy (NSS) known as “Skilling Pakistan”, which aimed to reform Pakistan’s TVET to make it a demand-driven skill (Janju, and Irfan, 2008). Likewise, many steps have been taken to formed provincial bodies, named Technical Education and Vocational Training Authorities (TEVTAs) to promote its vision, Skilling Pakistan. Recently, TVET reforms support programme was launched to support the Government’s initiative outlined in Skilling Pakistan to reform TVET sector (GoP, 2013). In Pakistan very few studies have been reported on the TVET especially on the recent TVET sector reforms.

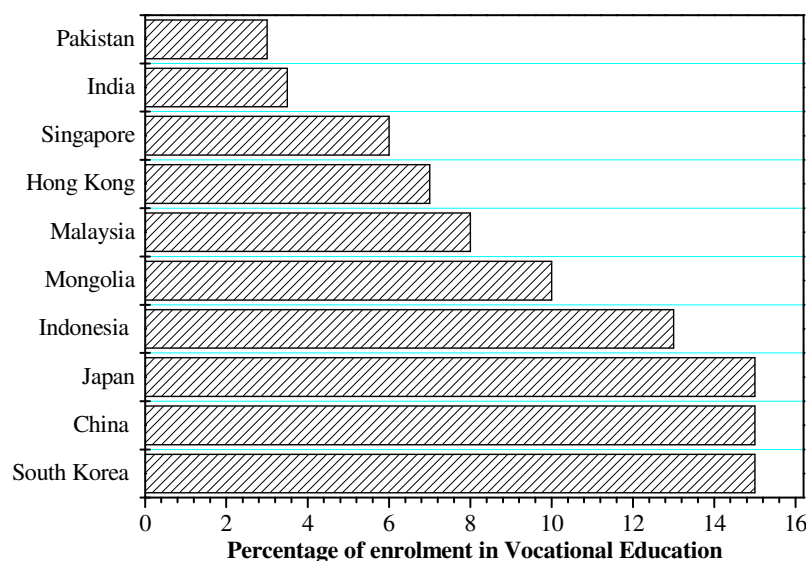


Figure 2. The percentage on enrolment in Vocational education in some Asian countries Source: adapted from Janjua and Irfan (2008).

2 PURPOSE OF THE REVIEW

The main purpose of this paper was to document some details about Pakistan's TVET development and the recently implementing Skilling Pakistan reforms, and also to document its achievements so far for readers. Thus, the aim of this work was to initially highlight the development phases of Pakistan's TVET and the efforts for reforming this sector with mainly focusing on the proposed Skilling Pakistan reforms outlined in NSS. Moreover, we have also documented the relevancy of vocationalizing of Pakistan's TVET system and its implications in the line of the proposed reforms.

3 METHODOLOGY

The present review is a blend of intensive documentary analysis that includes: Government policies, International development agencies and TVET reforms support programme reports and relevant published literature about Pakistan's TVET system. Document analysis is basically a qualitative research method, as described by Glenn (2009) where the author employed documents as a source of data in qualitative research and discussed its process in the context of real research practices. Thus, in this work an overview of literature is presented as an information source for descriptive analysis. However, some quantitative information was also gathered from published literature and reports.

4 RESULTS AND DISCUSSIONS

This section is broadly divided into four major parts including the historical development of Pakistan's TVET, reforming of Pakistan's TVET system, TVET reforms support programme and the concept of vocationalizing of Pakistan's TVET in the light of recent developments.

4.1 Historical Development of Pakistan's TVET

All the developed nations around the globe made progress through technology. Like in other countries, Pakistan has also greatly emphasized on the importance of TVET and that can be revealed from the Government policies and economic development plans. Even the necessity of technical and scientific education was clearly stressed by the father of the Nation "Quaid-e-Azam Muhammad Ali Jannah" in the first education conference just after the independent in 1947 (Shah, 2004). Unfortunately, in Pakistan all the policies and development plans were designed in keeping in view of the political interests of the respective ruling party, which ultimately had no sustainable impacts on the socio-economic conditions of the country (Rashid and Mukhtar, 2012). One of such programme was the recent Prime Minister's Skill Development Initiative (2006-2013) with 2 billion Pak Rupees to trained 1 million people, which has been criticized and also no evaluation has been carried out so far (Janjua and Irfan, 2008). However, under the eve of such political influences the educational system also underwent changes to certain extend with the outlined objectives (Shah, 2010).

Extensive literature survey revealed that many authors (Shah, 2004; Mustafa et al., 2005; Kazmi, 2007; Hassan, 2007; Janjua and Irfan, 2008) have categorized the development process of Pakistan's TVET in to six phases, as shown in Table 1. However, in this work a new phase "TVET reforms and implementation" has been added in light of current TVET reforms and there implementation. Moreover, the growth of TVET sector in recent years is also elaborated in Figure 3, which reiterated that the development of TVET sector smoothly progressed.

In Pakistan's TVET history, a major transformation from general education to the term of "*world of work*" was suggested in the framed education policy of 1972-1980. Consequently, it resulted in the induction of agro-technical studies, agriculture and home economics in both urban and rural settlements throughout the country (Mustafa et al., 2005). Moreover, significant development and extension in Pakistan's TVET sector has appeared in 1970s and 1990s with the financial aids from various international donor agencies. TVET governance was charged by the National Training Bureau (NTB) before the development of new governance structures; NAVTEC and TVETA at federal and provincial levels, respectively, in 2005 to oversee TVET activities in the country (Janjua and Irfan, 2008).

Table 1. Development phases of TVET in Pakistan.

Phase	Implementation period	Level of implementation
1	1947-1958	Initial policy formulation stage
2	1959-1970	Expansion and development period
3	1971-1977	Experimentation period
4	1977-1988	Second expansion period
5	1989-1997	Quality improvement period
6	1997-2010	Good governance and self reliance
7	2009-2016	TVET reforms and implementation

Source: adapted and modified from Hassan (2007)

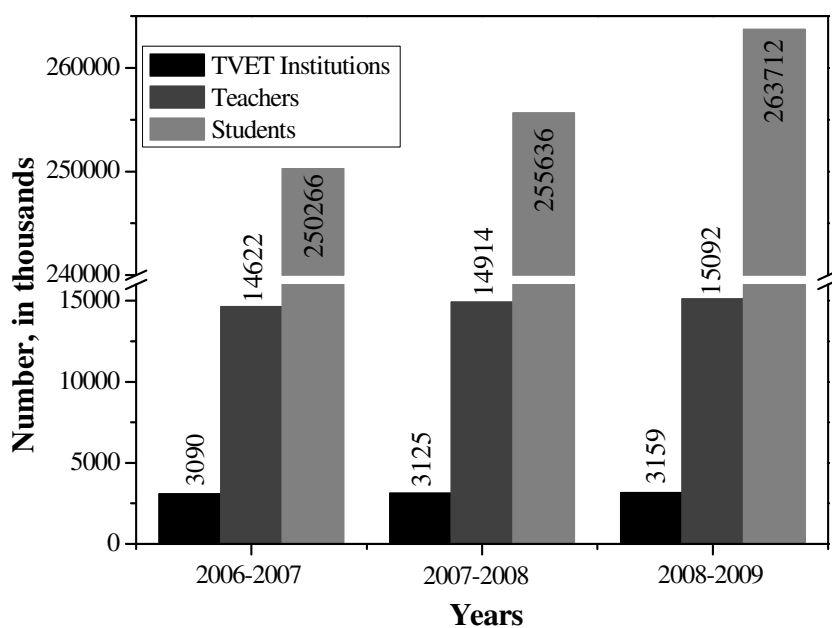


Figure 3. Growth of Pakistan's TVET Institutions, Teachers and Students from 2006-2009. Source: adapted from NEMIS (2009).

4.2 Reforming of Pakistan's TVET

The term “reform” refers to a systematic change in education system by re-structuring its main components with entirety. Reforms can be accomplished with innovative developmental projects, policy changes, power devolution and decentralizations (David, 1993).

In present scenario, promotion of TVET is considered to be a key aspect of any development initiative that intends to improve socio-economic well being, generate jobs and eliminate poverty (Grierson and Young, 2002; GoP, 2013). But in Pakistan the development of the workforce's skill has been the most neglected sectors and the formal government institutes have produced a very small portion of the skilled work force (Kemal, 2005; Agrawal, 2013). Only 3% of the all the students enrolled in TVET sector, as shown in Figure 4, which is lowest from any South Asian countries. The early TVET system in Pakistan has more focused on rote learning rather than practical approach to achieve the desired objectives (Janjua and Irfan, 2008). Agrawal (2013) had also documented five major challenges in Pakistan's TVET sector. However, the recent National Education Policy drafted in 2009 is recognized the importance of skill development and strengthening the TVET system with innovation by making it a demand-oriented sector.

For reforming Pakistan's TVET sector, recently NAVTEC developed a document entitled “*Skilling Pakistan: National Skills Strategy 2009-2013 (NSS)*” to sets the national direction for the development of world class skills in Pakistan to compete with global scenario. Moreover, Government has also set a vision for the drafted NSS as “skills for employability or skills for all”. Under the umbrella of the provided framework for TVET in Pakistan, two main goals of paradigm shift were proposed to be achieved (GoP, 2009a):

- Time and curriculum limited based training to the flexible and ability based training.
- Supply-driven skills training to the demand-led skills development in TVET sector.

The proposed paradigm shifts are necessarily adopted to achieve three objectives, which includes:

- i. Provision of relevant skills for economic development
- ii. Improving access, equity and accessibility and
- iii. Assuring quality for skills development

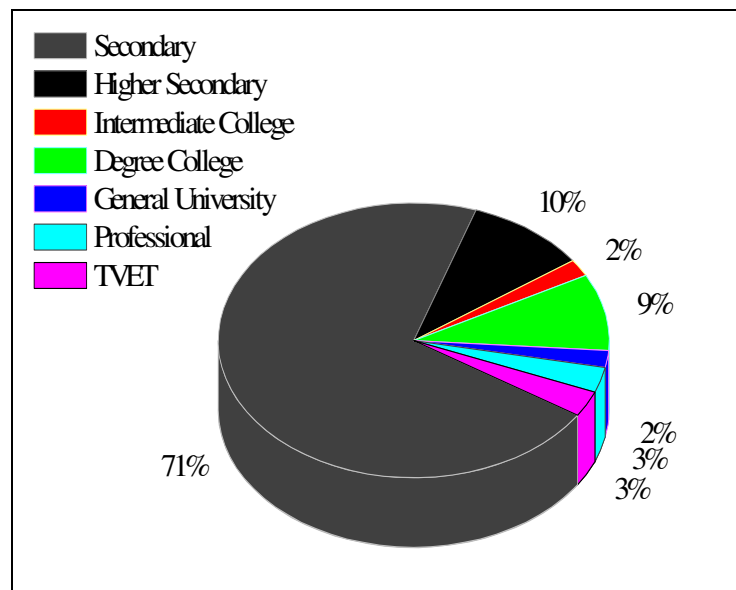


Figure 4. Enrolment of students in different education sectors in Pakistan. Source: adapted from Kemal (2005).

The proposed objectives in NSS were the important aspects for development of TVET in Pakistan, which were suggested in many authors (Shah, 2004; Kemal, 2005; Kazmi, 2007; Shah, 2010). In order to achieve the aforementioned three objectives, 20 reforms were proposed to implement with action plans and the roles and responsibilities of the concerned line departments. Additionally, mechanisms for the implementation of proposed reforms were also framed with monitoring and performance evaluation to access the progress using overall success indicators (GoP, 2009a). In contrast, the extraordinary progress of TVET in China revealed that such substantial progresses were made possible only by all round policy reforms (Jiang, 2012). Moreover, in China a ten years long term educational reform and development (2010-2020) was released to achieve “lifelong learning society” goal with self supported funds. But in Pakistan a five years programme, TVET reform support programme was launched in 2011 with the financial support of International donor agencies to implement NSS, which raise several questions about the sustainability of such reforms in TVET sector.

According to the recent data there are more than three thousands TVET institutions across the country in both public and private sectors. Figure 3 presents the growth of TVET sector in Pakistan. Instead of all these initiatives and reforms Pakistan’s position in skilled manpower is fairly weak among the other South Asian Countries (Kazmi, S.W., 2007). Recently, in the view of human development index Pakistan was ranked 134 out of 186 nations worldwide (TVETR, 2013).

4.3 Pakistan's TVET reform support programme

In order to achieve the 20 proposed reforms outlined in NSS, Government started a five year TVET reform support programme in 2011 with financial aids from international agencies. Stakeholders from both public and private sectors are jointly encouraged to implement NSS with the coordination of NAVTTC (formerly NAVTEC) at federal level and TVETAs at provincial levels. It is worthy to mention here that for the translation of NSS into the federal and provincial action plans and also to support for the formulation of eight skill development plans for the federal, provincial and other administrative zones of Pakistan have been conducted (TVETR, 2011).

The implementation of Pakistan's TVET reform support programme is being carried out in four major components, as shown in Table 2. Considerable progress has been tabulated in progress reports of the implemented programme after two years of implementation (TVETR, 2013). Field scale verifications were not within the scope of this review. However, reports affirmed that the implemented programme is progressing on-track in all the components towards achieving of the proposed reform objectives.

Table 2 summarized the list of the TVET reform programme implemented since 2011 and also highlights the upcoming plan activities. Despite of many challenges in recent years, the progress in TVET reforms support programme progress was satisfied during a meeting held in July, 2012 (TVETR, 2013). Recently, under the TVET reform support programme a new initiative named "German Pakistan training initiative" has been launched, which aims to offers on-job training to the youths in different national and multinational companies (GPATI, 2013).

There are many others steps need to be taken by the Government to ensure the implementation of the current reforms with quality, equality, equity and equal access. Similarly, the same parameters were equally emphasized in China long term educational reform and development (2010-2020). But the important factor in China's TVET reform is its internationalization and that initiates 60 different programmes of joint-venture skill development with foreign countries for promoting the international exchange (Jiang, 2012).

Table 2. Progress of the TVET reform support programme, as per 2013 progress report, TVETR (2013).

Component	Completed reforms activities	Plan reforms activities
Component-I		
Governance	<ul style="list-style-type: none"> - Provincial/National skills development plans - Human Resource Development policy for teachers - Accreditation mechanism for TVET program - TVET monitoring and evaluation system - TVET communication strategy 	<ul style="list-style-type: none"> - Enterprise-based TVET policy - TVET financing policy - Vocational counseling and guidance policy
Component-II		
National Qualification Framework and Human Resource Development	<ul style="list-style-type: none"> - TVET Qualification Framework for Pakistan - Competency based curricula formats - 1000 TVET lead teachers trained 	<ul style="list-style-type: none"> - Implementation of other plan activities for HRD
Component-III		
Innovative Training Delivery and Labor Market Information	<ul style="list-style-type: none"> - Modules for Funds for Innovative Training (FIT) 	<ul style="list-style-type: none"> - Implementation of FIT initiatives
Component-IV		
Capacity building of TVETAs	<ul style="list-style-type: none"> - Modules and plans finalized 	<ul style="list-style-type: none"> - Continue and ongoing process

4.4 Vocationalizing of Pakistan's TVET

Many established literature raised the issue of higher students drop out from the education institutions in Pakistan (Mustafa et al., 2005; Kazmi, 2007; Kemal, 2005; Janjua and Irfan, 2008; Shah, 2010), which they recalled of less vocationalized or less practical national curriculum. In a recent research documented by Rashid and Mukhtar (2012) presented an exceptionally distressing school dropout rates in Pakistan. Data showed that out of the 30% Pakistan's children who are enrolled in secondary schools and only 19% get admission in higher secondary schools. It is also interesting to note that the National Education Policy (1998-2010) confirmed that 50% of the students failed to get access into higher secondary schools, which then suggested that those dropout students and others who passed with lower grades should be shifted to the TVET

sector for high Human Resource Development (HRD) in Pakistan (Shah, 2004; Janjua and Irfan, 2008). However, there could be many reasons for less practical approach towards TVET in Pakistan, which need to address in future research studies.

Recently, the implication of vocationalization in education, especially in TVET sector has emerged in many countries aiming to improve the education's output for better world of work (Lauglo and Meclean, 2005). Vocationalization usually means the introduction of more practical parts for learning that offers the learners an opportunity for fieldwork and provide vocational guidance in an applied way (Oketch, 2007). Meanwhile, lessons and providing vocational skills to the learners, it can be hoped that graduates would find job in relevant fields and become more useful for economic development of a country. Numerous studies were performed worldwide on the induction of pre-vocational education, more practical or work related curriculum, which showed of achieving the desired economic goals (Grierson and Young, 2002; Mwiria, 2002; Maclean and Wilson, 2005).

Recognizing the importance of the issue, various attempts have been made in different countries in order to vocationalize the current curricula by adding more practical subjects (Grierson and Young, 2002). Irrespective of all these progress worldwide, Pakistan's TVET system is still pre-mature to apply this approach. However, efforts have been made to make the three years diploma more practical and 60% of practical subjects have been included (Shah, 2004). But in Pakistan's TVET Institutes; outdated technology, financial constraints and lack of trained teachers hinder the development of qualified technicians to compete in global markets (Janjua and Irfan, 2008; Inamullah et al., 2009; Shah, 2011). In the rapid changing world and technology, there is an urgent need to prepare learners effectively to the competitive labour market by vocationalizing TVET system. Thus, many reported studies (Mustafa et al., 2005; Kazmi, 2007; Janjua and Irfan, 2008; Rashid and Mukhtar, 2012) recommended many improvement points to Pakistan's TVET sector for sustainable economic development.

5 CONCLUSION

We concluded from this overview that the TVET sector in Pakistan did not receive due recognition from planners and decision makers in the light of established literature. We further discussed the historical development of TVET, reforming Pakistan's TVET and the concept of vocalization and its connection to Pakistan's TVET. The documentarily analysis (academic and institutional documents) showed numerous efforts to promote technical education since 1947, but no such tangible progress was recorded as compared to other developing countries. Consequently, Pakistan's development sector faces serious skills gap, which ultimately put immense pressure on the people to acquire marketable jobs. Many authors discussed many issues including lack of government interest, less vocationalized TVET curriculum, high student dropout, outdated technologies, lack of trained instructors and market information, access and relevance that hindered Pakistan's TVET sector to boost up. But considerable progress towards the development of world class TVET system has been shown from efforts, like; the establishment of NAVTEC and provincial TVETAs to streamline NSS for reforming TVET system in Pakistan. Practically, the progress towards Skilling Pakistan reforms under the outlined NSS showed satisfactory outcomes in

recent year and improve the present TVET sector in making it a demand-driven sector for the socio-economic development of the country.

6 RECOMMENDATIONS

Recommendations are here proposed for the Skilling Pakistan reforms, which are currently being implemented under a five year programme, TVET reform support programme (2011-2016).

- i. Greater focus on the development of skill oriented curriculum or vocationalizing of TVET curriculum to reduce students drop out from TVET institutions.
- ii. Systematic training of TVET teachers or instructors with modern methodologies for delivering practical and demand-driven TVET knowledge to compete in global labour markets.
- iii. Implementation of the 20 proposed TVET reforms under the four outlined components with quality, equality, equity and equal access to TVET.
- iv. Promotion and public awareness campaigns on TVET as a demand-oriented field for the sustainable socio-economic development.
- v. Establish institutions-Industries linkage and provide translation of the developed labor market information into local languages which could be useful for the relevant job placement of TVET graduates.

References

- Agrawal, T. (2013). *Vocational education and training programme (VET): An Asian perspective*. *Asia-Pacific Journal of Cooperative Education*, 14(1), 15-26.
- David, N.W. (1993). *Reforming technical and technological education*. *The Vocational Aspect of Education*, 45(3), 265-284.
- Finch and Crunkilton, (1999). *Curriculum development in vocational and technical education: Planning, content and implementation*. Allyn and Bacon (Boston) Book (ISBN 0205279023), 5th Edition.
- Glenn, A. B., (2009). *Document analysis as a qualitative research method*. *Qualitative Research Journal* 9(2), 27-40.
- GoP, (2009a). *The National Skills Strategy 2009-2013*. National vocational and technical education commission, Prime Minister's Secretariat (Public) Islamabad.
- GoP, (2009b). *Draft national education policy*. Ministry of Education Islamabad, Government of Pakistan.
- GoP, (2013). *TVET reforms support programme*. Government of Pakistan, Islamabad, <http://tvetreform.org.pk> (accessed on 10th Oct, 2013).
- GPATI, (2013). *German Pakistan training initiative under TVET reform support programme*. <http://www.gpati.com/training.html> (accessed on 10th Oct, 2013).
- Grierson, J and Young, C. (2002). *Technical and vocational education and training in twenty-first century: New Roles and Challenges for Guidance and Counselling*. Division of Secondary, Technical and Vocational Education, UNESCO, Paris.
- Hassan, H.M. (2007). *Relevance of diploma of associate engineer curricula with the job requirement*. Institute of Education and Research. Lahore: The University of the Punjab.
- Inamullah, H.M., Naseeruddin, M., Hussain, I, & Shah, I.H., (2009). *The development of technical education in Pakistan*. *International Business & Economics Research Journal* 8(1), 87-90.

- Jallah, M. (2004). *UNESCO-UNEVOC-An International experts meeting "Learning for Work, Citizenship and Sustainability"*. The Experts Meeting in Bonn, Germany from 25 to 28 October 2004.
- Janjua, Y., and Irfan, M. (2008). *Situation analysis to support the programme design process for National Skills Strategy of the Islamic Republic of Pakistan*. SEBCON (Pvt) Limited Socio-economic and Business Consultants, Islamabad.
- Jiang, B. (2012). *China's TVET: Reform and opening-up-speech at the WFCP 2012*. World Congress in Halifax, Canada, <http://wfcop.org/wp-content/uploads/TVET-Reform-and-Opening-up-in-China.pdf> (Accessed on 10th Oct, 2013).
- Kazmi, S.W. (2007). *Vocational education and skills development: a case of Pakistan*. SAARC Journal of Human Resource Development Vol. 3, No. 1.
- Kemal, A.R. (2005). *Skill development in Pakistan*. *The Pakistan Development Review*, 44(4), 349-357.
- Lauglo and Maclean. R. (2005). *Vocationalized secondary education revisited*. Dordrecht, Netherlands: Springer.
- Maclean, R and Wilson, D.N. (2005). *Vocationalization of secondary education revisited*. Dordrecht, Netherlands: Springer.
- Mustafa, U., Abbas, K., Saeed, A. (2005). *Enhancing vocational training for economic growth in Pakistan*. *The Pakistan Development Review* 44 (4), 567-584.
- Mwiria, K. (2002). *Vocationalization of secondary education: Kenyan case study*. Prepared for Regional Vocational Skills Development Review Human Development Africa Region World Bank.
- NEMIS, (2009). *National educational management information system*. Academy of Educational Planning and Management, Ministry of Education, Pakistan Education Statistics 2006-07, 2007-08, and Pakistan Education Statistics 2008-09 (Unpublished).
- Oketch, M.O. (2007). *To vocationalize or not to vocationalize? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa*, *International Journal of Educational Development* 27, 220-234.
- Rashid, K. and Mukhtar, S. (2012). *Education in Pakistan: problems and their solutions*. *International Journal of Academic Research in Business and Social Sciences* 2(11), 332-343.
- Shah, I.H. (2004). *Problems and prospects technical education in Pakistan*. University of Arid Agriculture, PhD Thesis, Murree Road, Rawalpindi, Pakistan.
- Shah, I.H., Ajmal, M., Rahma, F. (2010). *Structure of technical education and vocational training in Pakistan*. *Journal of Technical Education and Training* 1, 67-82.
- Shah, I.H., Ajmal, M., Rahman, F., Akhter, M.N., (2011). *A Comparative Study on Vocational Training Structure of Pakistan with British and German Model*. *International Journal of Business and Social Science* 2(1), 162-169.
- Tabbron, G and Yang, J. (1997). *The interaction between technical and vocational education and training (TVET) and economic development in advanced countries*. *International Journal of Educational Development* 17(3), 323-334.
- TVETR, (2011). *Supporting TVET reform in Pakistan*. Pakistan technical and vocational education and training reform http://www.tvetreform.org.pk/index.php?option=com_content&view=article&id=7&Itemid=101 (accessed on 10th Oct, 2013).
- TVETR, (2013). *TVET reform support programme*. progress report, Islamabad, Pakistan.
- UNESCO, (2004). *International Experts Meeting, "Learning for work, Citizenship, and Sustainability"*. UNESCO, Bonn-Germany.
- UNESCO, (2010). *EFA Global Monitoring Report 2010: Reaching the Marginalized*. Oxford University Press, Oxford.