

Revitalize: Vocationalization of General Education, Necessary for Youth Employment
National Round Table Conference
On
Technical Education & Vocation Training
Organized by
NAVTTC in Collaboration with UNESCO
at, Islamabad
27th – 28th June, 2012
Dr. Masroor Ahmed Shaikh
Director Academic & Training
Sindh Technical Education and Vocational Training Authority,
(STEVTA) Karachi, Pakistan

Abstract

Youth age group (15-24) is a great asset to a nation, because youth being a working age population if properly trained and prepared for world of work could bring revolution in the economy of a country. Therefore, developed countries give greater emphasis to youth's training and education to prepare youth for world of work. In developed countries, to prepare youth, especially school leaver's vocational training schemes were introduced at secondary and high school level. However, in developed countries the ratio of edging population is increasing as compared to the youth working age population, whereas in developing countries including Pakistan the youth population is rapidly increasing. There is a need that we take advantage of this demographic dividend and prepare our youth for world of work. This paper highlights the importance of vocationalization in youth employment. In the paper youth's employment trend and its relation with education and training were discussed. In the country, causes for failure of past efforts made for vocationalization of general education were examined. Worldwide available different modes for vocational training and effective models were analyzed and suitable model for vocationalization of general education in the country is proposed in this paper.

1. Introduction

In Pakistan, youth in age group (15-24) constitutes a major share of our working age population. The population of working age group has increased from 53 percent in FY 1986 to 56 percent in FY 2003 (*Mustafa et.al. 2005*). Majority of these youths are illiterate or less educated and facing difficulties in entering into labour market due to lack of education and skill required in the job market. The other causes for unemployment in youth are structural mismatch, divergence between the demographics of urban and rural areas, lack of experience, region or province wise discrimination in the provision of job opportunities and sectored imbalance (*Qayyum, W. 2007*). For youth, the employment to population ratio in the year 2010-2011 is 39.6 percent (*PET-2012*). There are evidence that the unemployment in urban youth is higher as compared to the youth in rural area because of structural mismatch of skill provided and required. In the country about 52.4 percent of youth are not part of the labour force (*Ahmad & Azim, 2010*). There are approximately 3 million youths every year joining the job market. Half of this youth stay and get absorbed in the rural economy. The remaining, 1.5 million youth have to be provided an opportunity to acquire skills that could get them a job or be self employed. The skill for gainful employment to above youth could be provided in Technical Education and Vocational Training (TEVT) system (*Shaikh, M.*

A., 2009). However, majority of youth give preference to general education over TEVT and join schools of general education. Moreover, limited capacity of TEVT system as compared to the general education is unable to accommodate increasing number of youth.

It has been observed that youth joining general education majority of them left school without completing secondary level education and adds to unemployed youth's on streets. Typical trend of enrollment in education shows that about 25 percent of children are not enrolled in primary schools and 50 percent of those enrolled, drop-out before completing primary school. Moreover, only 30 percent of Pakistan's children receive secondary level education and only 19 percent attend upper secondary level schools (PES-2007-08).

In developed countries TEVT is used as an effective tool to control *Unemployment* and *Poverty*, especially in countries where TEVT is made an integral part of their general education the TEVT has played pivotal role in their economic growth (UNESCO, N-13, April-June 2005). Thus to create a "hope" in the youth for better future and to equip especially school leavers with skill to earn for decent living, vocationalization of general education is need of the time.

2. Need for Vocationalization of General Education.

In Pakistan, there is an ever increasing number of unemployed youth, while many public and private sectors are looking for suitably trained persons. The country is suffering from shortage of skilled manpower, due to the mismatch between education and job market oriented training thus accentuating unemployment. Around the globe the above problems of changing nature of work and skill gaps are tackled by promoting Technical Education and

Vocational Training (TEVT), introducing job market oriented courses, making education and training flexible, and developing industry institute linkages. In developed countries TEVT is used as an effective tool to control *Unemployment* and *Poverty*, especially in countries where TEVT is made an integral part of their general education the TEVT has played pivotal role in their economic growth. Thus for increasing employability of youth, there is a need of the hour that vocational training will be made integral part of general education as:

- There is high unemployment rate in youth.
- Majority of young people give preference to General education over TEVT.
- Unemployment in youth decreasing with increasing age, education and skill.
- There is a high drop-out rate at middle and secondary school level.
- School leavers required proper skill training for employment.
- There are more employment opportunities for properly trained skilled worker.
- There is limited intake capacity in TEVT institutes.
- Jobs are becoming more sophisticated and required specialized skill.

3. Youth Age Group.

The United Nations defines youth as a period during which a person is being prepared and prepares himself to be an active and full, responsible member of the society. This period of youth is identified by the United Nations as 15 to 24 years (ILO, 2006). While the lower period remains 15 years, each country has adopted different maximum years ranging from 24 to 40. In Pakistan it is taken as 15-29 years, which are 35 million in number (Malik, M. A. A., 2004). Youths are working age population and an asset to a nation. In developing country including Pakistan this working age population is increasing, whereas the developed countries

are facing problem of ageing population. The demographic dividend of youth (working age population), if properly educated and trained could play vital role in economic development of the country.

4. Unemployment in Youth

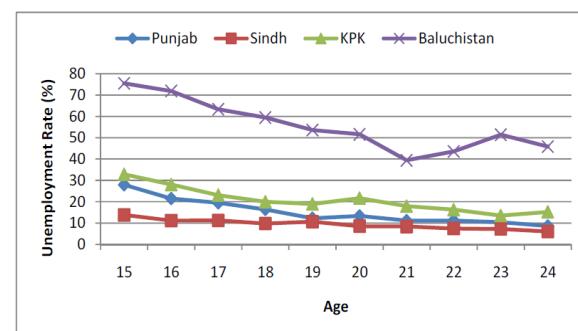
Un-employment in youth is of great concern for the world, as the unemployed youth consequently face social exclusion, get frustrated and involved in drug abuse and street crime. Furthermore, politician and religious groups when desired could very easily exploit these frustrated immature youth's. In Pakistan, it has been observed that most of the suicide attacks in recent years have been carried out by youth of age 15 to 24 years.

Overall youth unemployment rate in the world was lowest at 11% in the year 1992, afterward the youth unemployment rate started to rise and reached to maximum 13.1% in the year 2002. Around the globe youth employment remained in crises during the period from 1997 to 2005, the unemployment rate then started to decline and reached to 11.6 in the year 2007. The youth unemployment rate again rose sharply from 11.6% to 12.7% and remained comparatively steady since its rise in 2009 (*ILO, 2012*).

In Pakistan, there is a higher youth unemployment rate in Balochistan as compared to the other provinces of the country, where unemployment rate at the age of 15 is 78% both in urban and rural areas (**Fig.1**). However, in Sindh province youth do not face many difficulties in finding work and at the age of 15; youth unemployment rate is 24 percent and 11 percent in urban and rural areas respectively (*Amed & Azim 2010*). Youth unemployment rate in the country decreases with the increase in age, education and experience. The youth employment trend in Punjab, Sindh and Khaiber Pakhtoon Khawan (KPK) province is almost very close and similar, whereas overall unemployment rate in Baluchistan in much

higher than other three provinces of Pakistan. In the country major causes for unemployment in youth are:

- a) Higher growth rate of population exceeded optimum limit and available resources.
- b) Decreasing investment in private sector and shifting of capital abroad because of the unrest, violence, high taxes, government's business unfriendly policies and nationalization of industrial units in the country (*Khan, I. A. 2003*).
- c) Reduction in jobs in both public and private sectors.
- d) Youth population is not prepared for self-employment.
- e) Lack of education and training: majority of unemployed youths are illiterate or less educated and facing difficulties in entering into labour market due to lack of education and skill required for the job market.
- f) In Pakistan, the other typical causes for unemployment in youth are structural mismatch, divergence between the demographics of urban and rural areas, lack of experience, region or province wise discrimination in the provision of job opportunities and sectored imbalance.



Source: *Ahmad & Azim, 2010*.

Figure-1 Provincial unemployment rate in Pakistan, LFS (2006-2007)

5. Education and Skill for Youth Employment.

Education and skill play pivotal role in employment of youth. The result of Labour Force Survey (2005-2006) in the country shows that unemployment is more in youth illiterate or less educated. Furthermore, youth have education below tertiary level earn less and whole life remains in a relatively disadvantaged position as compared to better-educated youth. Comparing province wise *youth unemployment rate* with *youth literacy rate* showed strong inverse relationship. In Sindh, Punjab and KPK provinces there is higher literacy rate (71%), (61%) and (59%) respectively with lower unemployment rate (14%), (28%) and (32%), whereas in Balochistan there is low literacy rate at 48% with higher rate of unemployment at 76% (**Fig-2**).

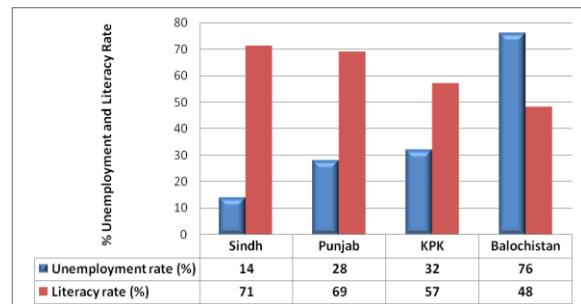
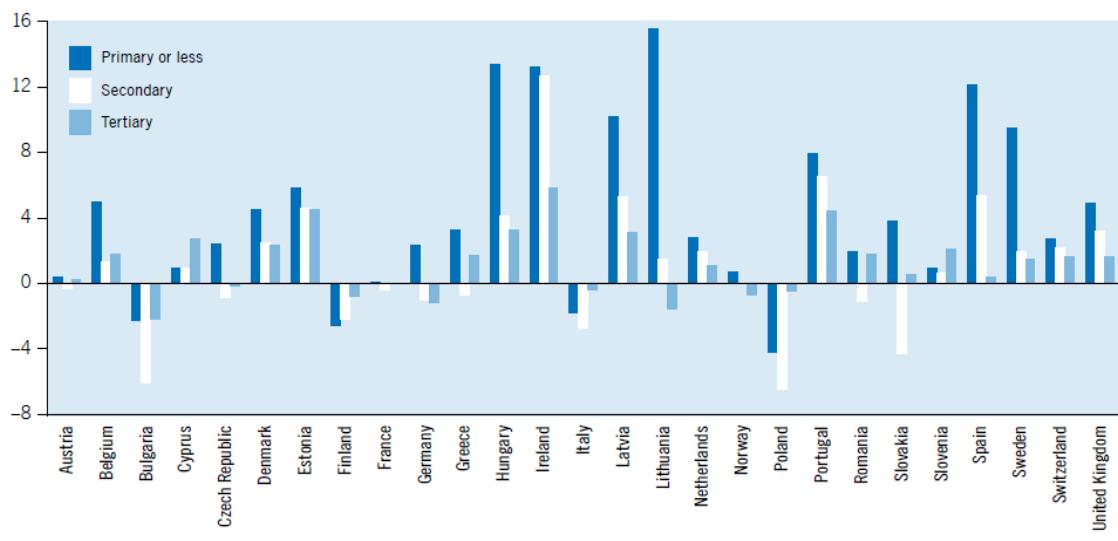


Figure-2 Youth (15-24): Province-wise Youth Literacy rate in Fy 2005-06 (GOP-2008) and Youth unemployment rate in Fy 2005-2006 (Ahmad & Azim, 2010).

In developed countries similar above effect of education on youth's unemployment is reported by ILO (**Fig-3**). In 21 countries out of 27, unemployment rate is high between persons with primary education. It is also observed, that people with skill and more education have more opportunities of employment as compared to the people with no skill and less education (ILO, 2012).

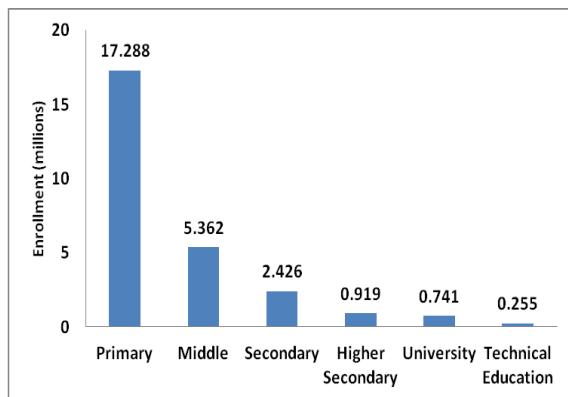


Source: ILO (2011a).

Figure-3 Changes in unemployment rate by educational level in developed economies.

6. Dropouts Rate at School level

The school enrollment data obtained from Pakistan Education Statistics (2007-08) shows that enrollment in Primary level (17.288 million) is much higher as compared to the enrollment in Middle level (5.362 million). There is student dropout of 69% (**Fig-4**) between primary and middle level. Further almost 86% of student those enrolled in Primary left the school education at Secondary level. The data show very low enrollment (0.255) in technical education as compared to general education.



Data extracted from PES 2007-08

Figure-4 Student enrollments in Pakistan by level of education

Thus, there is a need that high number of youth leaving schools at early stage of working life could be made more employable by introducing vocational training at school. By learning employable skill, these youth could play effective role in economic development of the country. Otherwise, there is always chance that these immature and unemployed youth's could be exploited by the evil internal and external forces for their negative agenda.

7. Efforts for Vocationalization of General Education in Pakistan

Realizing the importance of demographic dividend for economic development and save high number of school leaver and unemployed youth from being involved in unlawful activities, in the past number of efforts were made by the government to vocationalize general education in the country.

In the year 1968, scheme of Comprehensive High School (CHS) was introduced in selected government schools to provide vocational training to youth with the aim to equip them with purposeful, productive and income generating skills. The concept for CHS schemes was basically derived from the comprehensive high school setup in USA and UK. In CHS for boys, basic training facilities in the trades of Electrical, Metal, Wood and Plumbing work, and for girls Dress making, Embroidery and Cooking were introduced (**Figure-5**). The above trade courses were optional and offered at Secondary level in 9th and 10th classes only.

In late seventies CHS was revisited by the government and it decided to strengthen the CHS scheme for vocationalization of general education and expand vocational training to middle level to catch more school leavers, thus government introduced Agro-Technical (AT) scheme. The AT scheme was launched in the year 1977, where vocational training is introduced at middle level (class 6th to 8th) in the three different groups (a) Industrial Arts, (b) Agriculture and (c) Home Economics. The training courses were designed to provide knowledge, aptitude, values and skill. In AT scheme students were expected to use tools in early age at middle level in class (6 to 8).

In both the above schemes vocational courses were offered as an optional subjects which were assessed internally/locally with no credit hour incentive for students learning skill. Therefore, above schemes fail to produce fruitful results and attract interest of students

and society. There were number of reasons for failure of above schemes of Comprehensive High School and Agro-Technical including: lack of systematic planning and implementation, lack of resources mobilization, shortage of staff, shortage of equipment and raw material for students practice. But the most obvious was no credit hour incentive for student.

Realizing the importance of vocational training and increasing rate of youth unemployment, in the year 2000 the government has decided to introduce Matric Technical Stream (MTS) for vocationalization of general education under

Education Sector Reform project. The scheme was designed in inspiration of Technical School Certificate (TSC) program offered by the Sindh Board of Technical Education (SBTE) in the Sindh province. The TSC program was introduced by SBTE in the year 1973 at Vocational Training Institutes with the main objective to provide an opportunity for learning skill to youth who left school education at middle level. The TSC scheme of study consists of three components: (a) Compulsory, (b) Optional and (c) Technical component containing trade course.

Program	Year	Trade Course	Class Level	Trained Teacher	W/S & R/M	Credit Transfer	Certification
Comprehensive High Schools	1968	Electrical, Metal , Wood, Plumbing, Dress Making, Embroidery and Cooking	9 th & 10 th	WI BS-16 AWI BS-14	Yes, R/M from PTA Funds	no	Internal Assessment
Agro-Technical							
Matric Technical Stream	2002	17 trade Courses, <u>Elective among</u> Trade Course / Biology / Computer Science	9 th & 10 th	WI BS-16 AWI BS-14	?	yes	Board of Education

Figure-5 Comparison of Vocationlization schemes in Pakistan.

For MTS, 17 trade courses and teaching learning resources were developed by the National Institute of Science and Technical Education (NISTE), Islamabad to be offered in 9th and 10th class as an optional subject to choose among Biology, Computer Science and Trade course. Depending on the facilities available in school student could select a trade course from 17 available trades. The two credit hour trade course was design to assess by the examination board of general education. Initially, it was plan to introduce MTS in 1100 schools of general education in the country. However, during devolution plan and introduction of City District

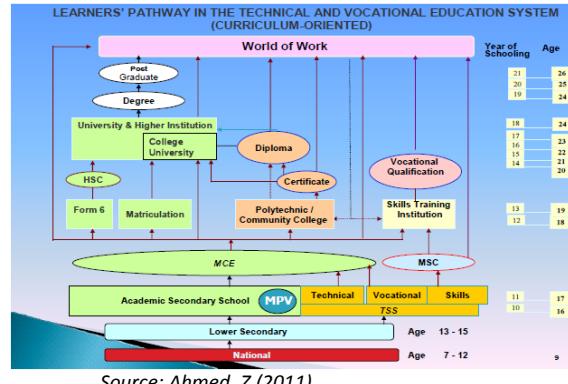
Government the scheme was mismanaged and the money allocated for providing tools for the workshops in the school was utilized for construction of workshops in schools, thus the MTS scheme was abandoned before implementation. The other reasons for flop of MTS scheme were lack of interest, commitment, shortage of money, shortage of technical staff and lack of expertise in examination board to handle the assessment of technical trades. The scheme for MTS was later on taken up by comprehensive schools.

8. Models for Vocationalization

Vocationalization for general education models generally based on the three modes for TEVT delivery (a) School-Based, (b) Centre-Based and (c) Workplace-Based. For vocationalization each mode has its advantages and disadvantages. Generally, vocationalization models are based on single mode of delivery with developed NQF for determination / recognition of qualification across general education and TEVT.

a) Separate Parallel System

A separate-parallel system required its own TEVT institutions and separate facilities in schools to offer training. The separate-parallel system at school required integration of vocational courses into general education curriculum with maintaining balance between theoretical and practical training. For recognition of learning and mobility of students in separate-parallel system, pathways between vocational education and general education is required. In separate-parallel system, it should be possible for school leavers to learn a trade to re-enter the formal vocational school system to upgrade their skills, either on part-time or full-time basis. Similarly, regular vocational school students should be able to acquire relevant practical skills in the non-formal sector in separate-parallel system. In Pakistan and Malaysia (**Fig-6**) separate-parallel system for vocationalization exists, however the success of Malaysian model lie on its pathway and mobility of students in one stream of education to the other stream of education.



Source: Ahmed, Z.(2011)

Figure-6 Structure of TVE system in Malaysia

b) Dual Training System

The hybrid training system is offered in partnership and combination of learning at school/institute and training at industry/workplace. The vocational school supplement the training received by student at workplace at a theoretical level and to fill gaps in general education. In Germany, there is a very successful and popular model for Dual Training System (**Figure-7**), where a trainee attends training in a company (*Workplace-Based*) for three or four days per week and at a part-time vocational school (*School-Based*) one or two days per week. The implementation of dual training system requires strong Industry – Institute linkages and required commitment from both industry and institute. The dual system of training in Germany is governed by legislation under the Vocational Training Act. In Germany there are also some full time vocational schools those provide school based vocational training.

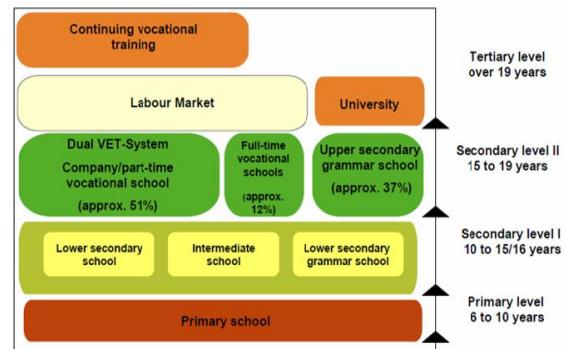


Figure-7 German Vocational Education System

c) Apprenticeship

In apprenticeship model, vocational training is delivered at workplace. It is similar to the informal training, where a young person works with an employer to learn a craft for exchange of food in person agreement with the employer. In Pakistan, the training is regulated through Apprenticeship Act-1962, where each industrial unit is bound to provide apprenticeship trainee in their premises and apprentice is paid by the industry. However in developed world where apprenticeship training is a very effective system to train unemployed youth, the idea of working for food is reversed and for apprenticeship training either government, financier or trade association have to pay the fees of apprentice to the employer for learning a set of skill at a workplace. For effectiveness, the training is supervised and certified by training donor agency. In developed countries, such as USA and UK under apprenticeship program the vocational training is left to the initiatives of the individuals, companies, local authorities etc. Companies, especially the big ones, play a dominating role within the vocational training.

In the country, after failing to obtain fruitful results in Comprehensive high school and Agro-Technical schemes for vocationalization of school, the NISTE conducted a study (**Fig-8**) for selection of suitable model for vocationalization of schools in the year, 2009. The results of study presented in **fig.10** shows that majority of respondent were in favour of Separate-Parallel system.

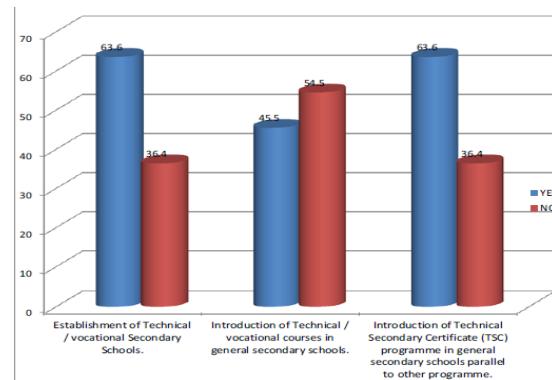


Figure-8 Results of study conducted by the NISTE in the year 2009

Around the globe experts are in favour of Separate-Parallel system (**Fig.9**) as the other models required strong industry-institute linkages, which is very difficult to developed even if industry is available within the vicinity of school/institute. Furthermore, the experts in general would like to keep curriculum for vocationalization of school overwhelmingly academic containing minor portion of practical skill (Louglo, 2005). The Separate-Parallel system required more financial resources, equipment, trained technical teachers and recurring operational cost at school.

Source:UNESCO

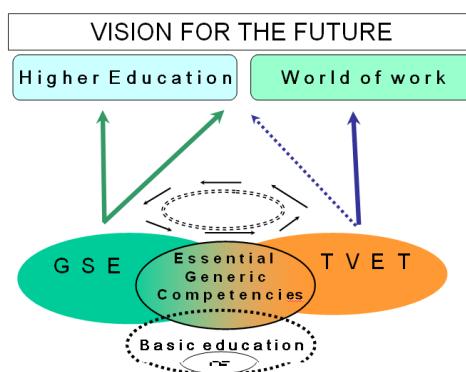


Figure-9 Model: Separate-Parallel for Vocationalization of Secondary education

9. Conclusion and Recommendation For Vocationalization

Importance for vocationalization of school education specially to prepare low profile youth for world of work has been realized around the globe. Developed countries where linkages between industry and institutes are well established effectively using all the three models for vocationalization. In developed countries TEVT is used as an effective tool to control youth Unemployment and Poverty, especially in countries where TEVT is made an integral part of their general education the TEVT has played pivotal role in their economic growth. In some developed regions of the world enrolment in vocational training is upto 50% of the total enrolment in secondary education, whereas in Pakistan the total enrolment in vocational training is less than 2% of the enrolment in secondary education. Therefore, to prepare large number youth and school leavers for world of work and gainful employment in the country, there is need that we plan for next decade that enrolment in vocational training at school will be raise upto 10% of the enrolment in secondary education. It is recommended that:

- a) Realizing students and parents are inclined towards academic studies in general education and overall image and status of TEVT is low in the society. Further expecting to learn practical skill from students of class 6 to 8 is too ambitious. It therefore recommended that at schools of general education from class 6 broader awareness about the vocational training shall be developed. The students at middle level (class 6 to 8) shall be provided knowledge, aptitude and values about vocational training, whereas students at secondary level (class 9 and 10) will be offered practical skill training.
 - b) Our past experience of Comprehensive high school and Agro-Technical schemes for
- vocationalization show that, it is extremely difficult to implement a wide range of complex TVET skills in the classroom. Similarly, providing and maintaining practical facilities (tools, equipment, raw material and workshop) and trend teachers at school required heavy funding. It is recommended that instead of investing in school for developing skill training facilities and providing technical teachers, hybrid training system is introduced. Where each school of general education is partnered with a vocational training institute in the vicinity, where for vocational skill training 9th and 10th class student's from high school attend one or two days at partner vocational training institute.
- c) In regions where vocational training institute is not available in the vicinity of a high school or where school of general education is not available within the close vicinity of a vocational institute the schools and vocational training institute may run as a parallel vocational training institute / school.
 - d) Students adopt vocational trade in class 9th and 10th shall be given incentive of credit hour and benefit of extra 2% marks for admission into further higher classes.
 - e) Trade courses shall be assess and certified by BTEs or TTBs. The student taking Trade course shall be allowed Credit transfer for admission in TEVT institute.
 - f) NAVTTC shall also launch a project for VT at school, where student electing Trade course may be given stipend and tool kit.

10. Advantages

- Hybrid system will help in optimum utilization of facilities both in Schools of General education and at Institutes of TEVT.
- With minimum available resources the scheme for vocationalization could be implemented.
- It will open doors for flexible education and training.
- School leavers with learning skill for employment would be able to rejoin the school again.
- School of General education would not be required to establish and maintain workshops and technical staff.
- Recognition of learned skill will be insured by certification of technical courses by the Board of technical education.
- Student will be able to learn skill properly and under the supervision of technical teachers.
- Student will be able to get credit transfer in admission for further higher education.
- School of general education will have no fear of closing the training in middle of the session, due to transfer or unforeseen extra ordinary leave of Trade course teaching staff at school.
- Students will have more options in selection of trade course.

11. Disadvantages

- Synchronization between school and institute required dedicated heads.
- School/Institute will be required dual affiliation.
- Increased cost on students due to double registration and examination fee.
- Students will have to attend two institutions; institute for trade course and school for courses in general education.
- School and Institute hours might be increased.
- Transportation of student might put extra financial burden.

References

1. Mustafa, U., Abbas, K & Amara, S (2005): Enhancing Vocational Training for Economic Growth in Pakistan. The Pakistan Development Review 44:4 Part II (Winter 2005) pp. 567-584.
2. Qayyum, W. (2007): Causes of Youth Unemployment in Pakistan. The Pakistan Development Review 46 : 4 Part II (Winter 2007) pp. 611–621.
3. Pakistan Employment Trend-2012, Progress towards achieving MDG Target 1B “Full and productive employment and decent work for all” Government of Pakistan Statistics Division Pakistan Bureau of Statistics.
4. Ahmed, R and Azim, P, (2010): Youth population and the labour market of Pakistan: A micro level study Pakistan Economic and Social Review Volume 48, No. 2 (Winter 2010), pp. 183-208.
5. Shaikh, M. A. (2009): Restructuring of TEVT for Employable Training to Youth in Pakistan, 2nd Meeting of the Working Group on Basic & College Education For 10th Five year People's Plan 2011-15, 4th November, 2009 Organized Government of Pakistan Planning Commission, Planning and Development Division (Education Section).
6. Pakistan Education Statistics (2007-08): Academy of Education Planning and Management, National Education Management Information System, ministry of Education, Islamabad.
7. Labour Force Survey (2011-10): Government of Pakistan, Statistics Division, Federal Bureau of Statistics, Thirteenth Edition, July 2011.
8. Malik, M. A. A. (2004): A Country Report for Symposium on Globalisation and Future of Youth in Asia. Ministry of Labour, Manpower and Overseas Pakistanis (www.ilo.org/pub).
9. International Labour Organization (2012): Global Employment Trends for Youth 2012, International Labour Office, Geneva.
10. International Labour Organization (2006): Global Employment Trends for Youth 2006, International Labour Office, Geneva.
11. Khan, I. A. (2003): Impact of Privatisation on Employment and Output in Pakistan. The Pakistan Development Review 42: 4, 513–536.
12. Nayab, Durr-e- (2008): Demographic dividend or demographic threat in Pakistan. The Pakistan Development Review, Volume 47(1), pp. 1-27.
13. Ahmad, Z. (2011): Vocationalization at Secondary level, Ministry Education Malaysia.
14. National Institute of Science and Technical Education (2009): Research Study on Technical Education in

Pakistan at Secondary level conducted in collaboration with UNESCO, Islamabad.

15. Lauglo & R. Maclean (2005) Vocationalized Secondary Education Revisited. Dordrecht: Springer,