

Exploration of Need and Collaboration of Technical and Vocational Education in Conventional Schools with Technical Institutions at Secondary Level

Tahira Bibi *
Neelam Yaqoob **
Malik Omer Mansoor ***

Abstract

The objectives of the research were to study the existing situation of technical education in conventional schools, which helped in assessing the need for introduction of technical education in mainstream education system. Study focused on identification of main discrepancies in existing conventional secondary education system which are causing hindrance in the effective incorporation of technical education. Study also explored the possibility of collaboration between conventional and technical institutes for technical education at secondary level. Qualitative descriptive research was conducted through the support of documentary analysis and administration of structured interview and semi-structured interview. Population for the study was ninety-seven secondary schools of Islamabad and government technical institute. Qualitative content analysis technique was applied to analyse the collected data in thematic manner, it was found that there has been need for the introduction of technical education in main stream educational system. Some of the major problems in existing system of education are deficiency of technically advanced infrastructure and other resources, mismanagement of funds and resources, non-availability of qualified technical teachers, fixed mindset of society, gaps in planning and implementation stages etc. It was also evident from the study that there exists intense possibility of collaboration between technical institutes and conventional secondary schools for incorporation of technical education.

*Lecturer, Allama Iqbal Open University Islamabad.
Email: tahira.naushahi@aiou.edu.pk

**M.Phil Scholar, Allama Iqbal Open University Islamabad.
Email: canvassanalysis@gmail.com

*** Student, Allama Iqbal Open University Islamabad.
Email: canvassanalysis@gmail.com

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Introduction

Education plays a major role in the economic and social development of any country. It gives the people awareness to defend their rights, respect rule of law, gain valuable skills to improve their living standard and spend life positively for their own well being and that of society in a broader context. The lack of quality education is the biggest cause for underdevelopment of human capital in Pakistan. Technical education can be regarded as a solution to the economic problems of countries like Pakistan. If the diversion of conventional secondary level curriculum is made towards technical and more specialized education then many of the educational problems can be solved in Pakistan.

There is a need to reduce the gap between conventional secondary schools and technical training institutions or merge them into a single institute or a subsidiary with the purpose of giving both skilled (Technical) and conventional education at the same time to maximum number of young students. Also this can be done by establishing new technical training departments in conventional schools and colleges especially in rural areas and city slums where most of the poor live. This will not put extra burden on the national economy, as the resources of conventional education will be utilized into technical education. Special attention must be paid for technical education for women. There should be skills for women which they can use from home to earn their livelihood (Durrani, 2016).

It has been witnessed from the review of related literature that there are comparatively limited number of technical institutes in Pakistan especially in Islamabad Capital Territory and this deficiency has created a gap between conventional educational system and technical education system. Technical education is lagging behind in the field of main stream education system. This issue has also been addressed in National Education Policy (NEP) (2009), in which suggestion were also made to enhance the technical education facilities in main educational system.

In Pakistan most of the students at secondary level leave their education due to different issues relating to their social, economical, financial, and personal preferences. Due to this fact this can be said that technical education can serve as an effective tool but there is a need for reforms in the technical education sector as well and one such reform is collaboration between Technical Education and Vocational Training Authority (TEVTA) with conventional schools at secondary level in Islamabad Capital Territory. In NEP (2009), it has also been highlighted

that steps should be taken to utilize the existing resources of schools to impart the technical skills to students at secondary and higher secondary level.

This collaboration will be helpful in creating a qualified workforce as per the demand of market without putting any extra burden on economy and making new expensive infra structures for the purpose of imparting technical education to the students of secondary level.

Aim and Objectives

Following objectives were achieved through this research paper with an exploratory perspective.

- Studied the existing situation of technical education in conventional secondary schools of Islamabad Capital Territory.
- Assessed the need for technical education in conventional secondary schools of Islamabad Capital Territory.
- Identified the main discrepancies in existing conventional secondary education system for technical education.
- Explored the possibility of collaboration between conventional and technical institutions for technical education at secondary level in Islamabad Capital Territory.

Research Questions

Following questions were answered in this research project:

- How will the technical education improve the conventional education system?
- How existing conventional secondary level education system is catering technical education in Islamabad Capital Territory?
- Do we need technical education at secondary level in conventional schools?
- What factors seem to affect the technical education in existing scenario of conventional secondary education system?
- Will there be any need and possibility of collaboration between conventional and technical education department? If yes, how will it improve technical education in conventional secondary schools of Islamabad?

Research Method

Researchers had followed the qualitative descriptive research design in which the comprehensive summarization has been made for the under study phenomenon or process which has been experienced and perceived by the individuals or group of individuals during their practical dealings. This approach helped in investigating and exploring the phenomenon and human behaviours associated with the subject of study and assisted in answering the questions in descriptively and explanatory manner.

Population

1. Ninety seven heads of conventional secondary schools (running under the Federal Directorate of Education) in Islamabad Capital Territory (ICT).
2. One head of Technical Education and Vocational Training Authority (running under TEVTA) which is National Institute of Science and Technical Education (NISTE), located in Islamabad Capital Territory (ICT).

Sample

Eighty (80) heads of secondary level conventional schools (running under the Federal Directorate of Education in areas of ICT) were considered as sample. Also 1 (one) technical and vocational school of ICT which is National Institute of Science and Technical Education (NISTE), (running under the TEVTA) was sample for the study. The sampling framework is provided below for selection of sample population from heads of conventional secondary school and also from heads of technical institutes.

Table 1

Sampling for Heads of Conventional Secondary Schools

Geographical Area/Strata	Number of SSC Schools	Number of Selected Schools as Sample	Number of Responses Collected from Sample
BharaKau	20	17	15
Urban	36	29	29
Nilore	13	11	9
Sihala	11	9	8
Tarnol	17	14	12

Source: www.fde.gov.pk

Table 2
Sampling for Heads of Technical Institute

Institute	Total Population	Selected Sample	Response Collected
TV institute under TEVTA (NISTE)	1	1	1

Instrumentation for Data Collection

Two data collection tools were developed for separate sample for the purpose of data collection. One research instrument was a structured interview which was administered on the heads of conventional secondary schools of Islamabad Capital Territory (ICT). Other tool was a semi structured interview, which was conducted on heads of technical and vocational institute of Islamabad Capital Territory (ICT).

Results

The data were collected by researcher from Islamabad District which is comprised of urban area and four (4) rural areas. This geographical distribution of Islamabad District was considered as the strata categorization for the purpose of sample selection and data collection. The randomly selected sample schools from each stratum were visited and research tool (structured interview) was administered on heads of the secondary schools who gave their views and opinions in the form of responses to questions of tool. Similarly, the head of technical institute was approached and a semi structured interview was conducted which provided the detailed opinions of interviewee regarding the questions of semi structured interview.

Technical and Vocational Education

Technical and Vocational Education is any education which can make a human prepared for employment in recognized occupation (Kennedy, 2012). The foundation of technical education is on self employment and self reliance of individual.

Technical and Vocational Education is defined in different ways by different authors:

1. McDonald (2011) defined vocational education as “all those experiences whereby an individual learns to carry on successfully any useful occupation.”

2. In views of Spindler (Spindler, 2010), “vocational education aims at the development of human abilities in terms of knowledge, skills and understanding so efficiently in carrying on the activities in the vocational pursuits of his choices”.
3. Lee (2012) in his contribution stated that vocational education is “designed to develop skills, abilities, understanding attitudes, work habits and appreciation encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis”.
4. Skill development of workforce working in an industry of a country is known as Technical and Vocational Education and Training. (Ismail, 2005)
5. Technical education is known as post secondary course of study and training focus of which is to make technicians to work as supervisory staff. (Ismail, 2005)
6. Vocational training on the other hand means lower level of education and training for preparation of semi skilled workers for different trades. (Ismail, 2005)

In the light of versatile definitions, technical and vocational education can be termed as development of skills and abilities to perform the occupational activities of any field so that the maximum possible productive results can be attained within the scope of available resources. Technical and vocational education is combination of knowledge acquisition and training for the skills development for various occupations and trades of life for the sustainable livelihood of individuals.

Benefits of Technical Vocational Education and Training (TVET)

Developing countries are now focusing on importance and critical role of Technical and Vocational Education and Training for National Development (Maclean & Wilson, 2009). One of the most important features of TVET is its orientation towards vast work and emphasis of the curriculum on the acquisition of employable skills. The curriculum of TVET is therefore well placed to train entrepreneurial workforce and skilled man-power which the country needs for economic and social development. This means that the youth, the poor and the vulnerable society of a country can benefit directly from TVET programs.

According to the World Bank’s 2007 World Development Report (Bank, 2007)

“1.3 billion 15 to 30 year old young people now live in the developing world—the largest youth population in the history of the world, in both absolute and relative numbers. Young people make up

nearly half of the world's unemployed population. For example; a recent study concludes that 100 million new jobs have to be created in the Middle East and North Africa by 2020, just to keep pace with new entrants into the region's labour markets. Most surveys of young people in East Asia, Eastern Europe, and Central Asia indicate that access to jobs, along with physical security is young people's biggest concern". The report goes on to say, "developing countries have a very short time to get this right before the youth dividend turns into a generation of unemployed adults."

Technical and Vocational Education and Training in Pakistan

Developing countries like Pakistan have realized the importance of TVET but unfortunately gap between policy making and its implementation makes it hard to achieve the required goals. In a country like Pakistan where a large number of youth is outside the formal schools, integration of non formal education and methodologies, and also literacy programs in national education programs are really worthy. But to completely overhaul the system of TVET in Pakistan, TVET institutions and TVET programs must be mobilized at all stakeholder levels and position them to be responsible for regional cooperation.

New technologies are being developed and implemented frequently due to globalization and radical changes in demand for work force. To meet this demand, Pakistan has to make drastic changes in its TVET policies and implementation. According to UNESCO research study (UNESCO, 2009) on Technical and Vocational Education in Pakistan at Secondary Level in 2009 "Pakistan workforce showed 43.1 percent engaged in agriculture, 13.8 percent in manufacturing and mining and 43.1 percent in service. Since year 2000, there has been a shift of 5.3 percent work force from agriculture to manufacturing sector. At present there are 18 colleges of technology, 54 polytechnic institutes (11 for female) and 25 mono techniques".

National Education Policy 2009 and TVET

According to NEP (2009), large population in Pakistan give an advantage of cheap labour but the low quality of skills hamper the growth of labour force to its full. This low quality skill set is a problem in all sectors like agriculture, industry, services, commerce etc. Any improvement in these skill set will make more opportunities for labour force, both in local and international market, resulting in better

economical and social conditions. NEP (2009) suggests that the present system of TVET in Pakistan is not enough to meet the required demands of market. Like all other sectors of education in Pakistan, TVET also suffers in all aspects due to improper management and policy making.

With the development of every sector of Pakistan, very less importance has been given to TVET since its independence. Jobs in public sector are a priority; but for low end jobs qualification of matriculation and for higher jobs education of bachelors was deemed enough with no requirement of specific skill set, even though Pakistan has gone through major development economically. The institutions responsible for creating and supplying skilled people for the jobs also failed to meet their responsibilities fully. A major variety of skills are totally absent from such institutes and those present have outdated or obsolete curriculum.

Also stakeholders, such as business sector, are not given adequate consideration in development of TVET sector. TVET sector does not majorly benefit from collaboration with business sector for anything like up gradation to latest equipment, latest technology or introduction of new skill sets etc.

NEP (2009) identified following issues in TVET in Pakistan:

1. Schools in Pakistan do not have sufficient budget to meet the equipment requirement for vocational training,
2. Trained and skilled teachers for TVET programs are not available,
3. The curricula assume prototype that do not cater to differentials in market requirement across districts or other geographical divides like rural-urban etc.

Vocationalization of General Education in Pakistan

Realizing the importance of Technical and Vocational Education in development of economic conditions and social structure of Pakistan, governments in previous years also tried to make efforts for vocationalization of general education in Pakistan. This concept was also started due to the fact of large number of school drop outs and unemployed youth. Following schemes were started by Pakistan government in past:

1. Comprehensive High Schools (CHS)
2. Agro-Technical Scheme (ATS)

3. Technical School Certificate (TSC)
4. Matric Technical Stream (MTS)

Technical and Vocational Education Option for Age Group 11 to 18 Years

Following TVE options are available for the age group of 11 to 18 years students (UNESCO, 2009) in Pakistan

1. Vocational Trade Courses (after Grade-VIII)
2. Matric Tech (Grade IX-X)
3. Technical School Certificate (Grade IX-X)
4. Agro-Tech Courses (Grade-IX-X)
5. Vocational Certificate Courses (after Grade-X):
 - i. G-III (Basic Level)
 - ii. G-II (Intermediate Level)
 - iii. G-I (Advanced Level)
6. Diploma of Associate Engineers (DAE) after Grade-X
7. Customized Training for In-Service Workers of Industry (after Grade-X, and DAE)

Research Findings on the Basis of Structured Interview and Semi-Structured Interview

This part includes the analysis and interpretation of findings for the data collected through the structured interview from the heads of conventional secondary schools and semi-structured interview from head of technical institute. The qualitative thematic content analysis for the data collected from both tools is organized and interpreted into four themes or categorize which are as follows.

1. Existing situation of technical education in conventional secondary schools.
2. Need for incorporation of technical education in conventional secondary schools.
3. Discrepancies in existing conventional secondary education system for technical education.
4. Possibility of collaboration between conventional and technical institutes for technical education at secondary level.

Theme 1: Existing situation of technical education in conventional secondary schools.

Table 3
Structured Interview from Heads of Conventional Secondary Schools

Statements	Opinion	
	Yes	No
Do you have knowledge of any current policy which provides introduction of TVE in conventional secondary schools at secondary level in ICT, if yes please specify?	21.91% (16)	78.08% (57)
From your experience, do you feel students of secondary level of ICT show interest or inclination towards TVE?	87.77% (64)	12.23% (09)
According to your observations, is the dropped out rate of non-affording students at secondary level higher? Please Elaborate.	65.75% (48)	34.25% (25)
Can the dropout rate of students in ICT at secondary level be lowered by introduction of TVE?	82.20% (60)	17.80% (13)

Respondents elaborated in the comments that;

- a. National Education Policy 2009 has the provisions to introduce the TVE in conventional secondary schools so that the existing resources can be utilized.
- b. Students of secondary level leave their education due to socioeconomic problems and financial issues.

Table 4
Semi-Structured Interview from Head of Technical and Vocational Institute

Statements	Yes	No
Do you think technical education planning is effective in Pakistan? If not, why?		
In your opinion, are the policy objectives being observed while planning TE in Pakistan?	✓	
Is the allotment of funds for technical education, in ICT, sufficient?	✓	
Do you have knowledge of any current policy which provides introduction of TVE in conventional schools at		

secondary level in ICT, if yes please specify?

Comments by the respondent were:

- a) Governing bodies of technical education are trying to incorporate the technical education in mainstream general education system. Many plans have been made in past for this purpose, many schemes were introduced at different times, but planning fails mostly due to the implementation problems.
- b) Government is working on making technical education part of the main stream education system of Pakistan. Federal Ministry of Education and Professional Training are working on the introduction of Matric Vocational stream in the country. Respondent was of the view that hopefully these efforts will be fruitful and result oriented. Sincere efforts are needed to bring a change in the society and in the educational system. Such changes can serve as a basic catalyst in the progression and development of a country as a nation as well as an economic power of the world.

Theme 2: Need for incorporation of technical education in conventional secondary schools.

Table 5
Structured Interview from Heads of Conventional Secondary Schools

Statements	Opinion	
	Yes	No
Is there any need for TVE at secondary level in ICT? Please explain.	86.30% (63)	13.70% (10)
Will there be any improvement in socioeconomic conditions of families of students by introduction of TVE at secondary level? Please explain.	87.77% (64)	12.23% (09)
Will it be feasible to incorporate the TVE in conventional school's curriculum at secondary level, in ICT?	79.45% (58)	20.54% (15)
Do you think it is beneficial to incorporate the TVE in conventional school's curriculum at secondary level, in ICT?	87.77% (64)	12.23% (09)
In your view, what will be the response of students for TVE if it is introduced at secondary level in ICT?	87.77% (64)	12.23% (09)

In your view, what will be the response of teachers on introduction of TVE at secondary level in conventional schools of ICT?	87.77 (64)	12.23% (09)
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Comments by the respondents were

- a) Secondary level students leaving their education normally fail to earn their livelihood due to lack of technical skills,
- b) Students having any technical skill will be in a better position to earn a sustainable livelihood for at least themselves or for their families which is a huge advantage of technical education,
- c) Students will show positive response because they will be able to learn something other than the words from the books, and
- d) Technical skills can benefit the students in short run as well as in long run for their income earning purpose and also for the accomplishment of their hobbies.

Table 6

Semi Structured Interview from Head of Technical and Vocational Institute

Statements

Do you think TVE should be introduced at secondary level? If not, please specify the level at which TVE can be introduced in your opinion and why?

Is quality of technical education in Pakistan; especially in ICT meeting standards of advanced countries? If no, why?

How the development of technical education is progressing in Pakistan especially ICT?

Is there any need for changes to be done in curriculum of secondary level education in ICT for introduction of TVE at secondary level in ICT?

The findings as per the response of participants were

- a) There is a significant need for incorporation of technical education at secondary level in conventional schools of ICT. National Education Policy 2009 (Government of Pakistan, 2009) has the objective to incorporate technical education in conventional education system at secondary level, but unfortunately this objective is yet to be achieved.
- b) Quality of the technical education in Pakistan is not meeting the International Standards due to lack of advanced training facilities and infrastructure for technical education, non availability of trained and competent teachers, and lack of commitment by the Government.

- c) Due to these issues the development of technical education is progressing at a very slow rate in Pakistan. This is the era of science and technology, country like Pakistan needs advancements and updations in the field of technical education to compete in the international market. Trained and skilled labour of other countries is capturing the international market. Pakistan itself is also importing the trained and skilled technical manpower from other countries to run the different advanced industries within the country. This situation is creating a huge gap in demand and supply, disturbing the market cycle and increasing the unemployment rate of country.
- d) In order to incorporate the technical education at secondary level in conventional schools of ICT, there is a need for changes in the curriculum and the current resources of schools are not sufficient to incorporate the technical education at secondary level. Curriculum should be revised and updated according to the needs and objectives.

Theme 3: Discrepancies in existing conventional secondary education system for technical education.

Table 7
Structured Interview from Heads of Conventional Secondary Schools

Statements	Opinion	
	Yes	No
Do you believe curriculum of secondary level is enough to enhance the *craftsman ship skills of students? Please explain.	0% (0)	100% (73)
As per your view, Do you think a dropped out student from secondary level is capable enough to generate income for the family?	11% (08)	89% (65)
Are the current resources of secondary schools enough to cater the introduction of TVE in ICT? Please explain.	11% (08)	89% (65)
Do you think teachers of secondary level have enough expertise to teach technical education?	5.48% (04)	94.52% (69)
In your opinion, does the curriculum of secondary level have enough capacity and flexibility for introduction of TVE	60.27% (44)	29.63% (29)

Please specify main problems existing in present scenario regarding TVE and conventional education at secondary level in ICT?

Comments by the respondents of conventional secondary school heads indicated that:

- a) Existing conventional secondary schools lack the resources, for instance infrastructure, equipment, technical expert teachers, maintenance staff for labs or workshops etc
- b) Qualified trained and competent teachers of technical education are essential. Non availability of technical teachers can make the material resources useless. Conventional secondary schools need technical subject specialists, technical training and practice needs to be increased as compared to theoretical education of the technical subjects. For this purpose, trained teachers and trained staff for practical training are required in conventional schools at secondary level in ICT.
- c) Hindrances in effective technical education in conventional secondary schools are lack of Interest from students, Interest from parents, School management, Seriousness by the government, Proper planning, Policies by government, Proper management of resources, and Administration etc.
- d) Although many programs and schemes for technical education at secondary level are being introduced in past, but almost all of the schemes failed. Proper planning, management of resources, implementation, and administration is required in this regard for achievement of any fruitful outcome.

Table 8

Semi Structured Interview from Head of Technical and Vocational Institute

Statement

Is there any lack of coordination between plan preparatory people and implementers? Explain?

In your views what are the reasons due to which targets of technical education in ICT are not achieved previously?

What are the main problems for promotion and development of technical education in Pakistan, especially in ICT? Please specify

Are the current resources of secondary schools at sufficient enough to cater the introduction of TVE in ICT

Please specify main problems existing in present scenario regarding TVE and conventional education at secondary level in ICT?

Responses by head of technical institute were

- a) There is a lack of coordination between planning and implementation stages. Policy objectives are being observed while planning, but efforts fail at the implementation stage due to lack of coordination.
- b) The targets of technical education are not still achieved mostly due to fixed mindset of the society, cultural norms and lack of respect for technical education in our society. Society has a specific thinking and reasoning mindset, according to which technical education is a low end certification for labour class manpower.
- c) Society has some unusual cultural norms to label or tag the technical education with labourers and workers. Society doesn't consider the technical education as a proper qualification to be achieved in schools colleges and universities. This mindset has made a scenario of disrespect towards the technical education itself and also towards its attainment in schools or institutions.
- d) Schools need infrastructure, technical laboratories, equipment and tools, funds for running expenses, trained technical staff, appointment of technical teachers to teach the technical subjects in conventional schools. Proper administration of resources and accountability system is also required so that the programs for technical education don't fail due to mismanagement of resources in the future.
- e) Main problem relating to technical and vocational education is non-availability of higher education in the field of technical and vocational disciplines. There is non-existence of opportunities for upward progression to master and doctoral levels in the technical education. This is causing lack of competent and highly qualified technical teachers or scholars in the field of technical education in Pakistan.

Theme 4: Possibility of collaboration between conventional and technical institutes for technical education at secondary level.

Table 9

Structured Interview from Heads of Conventional Secondary Schools

Opinion

Statements	Yes	No
Is collaboration between conventional schools and TV institutes/centers possible for introduction of TVE at secondary level in ICT? Please Explain.	87.77% (64)	13.23% (09)

Please provide suggestions for collaboration between TVE and conventional education at secondary level in ICT?

Different ideas and suggestions according to the experience of conventional secondary school heads were:

- a) Revision of curriculum to incorporate the technical education in conventional education is required.
- b) Competent, trained and qualified technical teachers should be appointed to impart the technical education to students of secondary level.
- c) Technical education cannot be taught without the practical training, and practical training requires the laboratories or workshops. Every conventional school should be equipped with labs, workshops, latest equipments, and technical staff to run the labs.
- d) Technical education at the conventional secondary schools should be linked with actual technical market of the country. Students and technical education departments of conventional schools should have access to the stakeholders or practical market, such as agriculture, industry, business etc.
- e) Technical education departments at conventional secondary schools should be visited and administered by the technical authorities or governing bodies for evaluation and assessment purposes.
- f) There is a need to change the mindset of our society about technical education. Parents and students should be made aware of the importance and benefits of technical education at secondary level.

Table 10

Semi Structured Interview from Head of Technical and Vocational Institute

Statements
Please provide suggestions and recommendations, which will help in development of TVE in ICT?

Is there any possibility of collaboration between conventional schools and TVE institutes for introduction of TVE at secondary level in ICT?

Comments by the respondent were:

- a) In order to change the mindset of population regarding the technical education for every student, a media campaign can be started to create the awareness about the importance of technical education.
- b) There is a possibility of collaboration between technical institutes and conventional schools for the introduction of technical education at secondary level. But there are a lot of factors which need to be considered before collaboration. Proper planning and implementation of any project is needed to make the collaboration successful and results-oriented.

Conclusion and Recommendations

From the analysis of the data it is interpreted that the incorporation of technical education in conventional education system needs some serious efforts and commitment by the government, policy makers, school administrations, students and their parents, and society as a whole. There are definitely some gaps in the systems which are needed to be encountered in order to achieve the targets. Practical and realistic recommendations at planning stage can serve as contingency plans at implementation phase. United efforts are required to bring the change in society and in educational system. There is a need to set priorities as per the demand of market. Teaching-Learning process needs a revolution to meet the challenges of globalization. Following were the main conclusion:

1. In present scenario, National Education Policy 2009 exists which recommends the introduction of technical education at secondary level in conventional schools.
2. There is an overall significant need for introduction of technical education at secondary level in conventional education system.
3. Many schemes have been introduced in regard of technical education at secondary level, but all the schemes failed mainly due to mismanagement of resources.
4. There is a fair possibility of collaboration between technical institutes and conventional schools for the introduction of technical education at secondary level in mainstream conventional education system.

Recommendations suggested on the basis of analytical findings for the introduction and incorporation of technical education in conventional secondary schools are:

1. Prioritization of the education is needed. Type of education which is imparted to the students of different age groups needs consideration from policy makers.
2. Existing curriculum needs modifications and up-gradations. Standardization of technical education can improve the quality of technical education.
3. Any scheme introduced in regard of technical education shall be properly managed and administered. Standardized check and balance procedures shall be adopted. Previously failed schemes evaluation shall be made to identify the main causes of failure and their remedies.
4. Availability of resources and their maximum utilization shall be made possible. Technical education needs advanced technical facilities, such as infrastructure, laboratories, equipment, trained and competent technical staff etc.
5. Qualified and competent technical teachers shall be selected through merit, Pre-service and in-service training shall be made mandatory for teachers to equip them with updated knowledge and skills of their field.
6. As recommended by the Head of technical institute, a media campaign shall be initiated to create the awareness about technical education. Both, print and electronic, media can be utilized to bring a change in the mindset of the society.
7. Private sector shall be encouraged to participate in the technical education. Technical education shall be properly linked with actual practical fieldwork. Agriculture, industry, business, and service sector etc. shall be given incentives to participate in the improvement and development of technical education.
8. More opportunities shall be created for higher education in technical disciplines to encourage the students in this field.

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