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Technical Vocational Curriculum at Mainstream Secondary Schools

Dr. Sidra Rizwan, Department of Secondary Teacher Education, AllamaIqbal Open University, Islamabad, Pakistan
Dr. Afshan Huma, Department of Educational Planning Policy Studies and Leadership,AllamaIqbal Open University, Pakistan
Rizwana Rafiq, Master's Student, Educational Planning and Management, AllamaIqbal Open University, Islamabad, Pakistan

Abstract- Pakistan is considered to be one of the rich countries in terms of human resource, especially in case of youth population. According to the census report of 2017 the population of Pakistan under the age of 15 years is 29%. This bulk of population can be a blessing if they are educated and professionally trained to become active members of socioeconomic development of the country. Especially in this era we must prepare the youth of Pakistan to become economically active. At the age of 15 years, ideally the young population should be at secondary school level. This is the stage where there is huge dropout of students from the mainstream education. This research is conducted for two major purposes one is to identify the curricular change for making the school education more meaningful, relevant and empowering the youth of Pakistan and second purpose is to recommend those changes which may make education an investment in the future. To fulfill these purposes the study was designed with mixed method approach, including document analysis, elite interviews and survey. All data sources were used to review and analyze the current situation of technical and vocational education in Pakistan, identify the changes required and recommend curricular changes at secondary school level. The article is one part of a bigger study which has included policy analysis as well as education to promote art and craft. This article only focuses on the part of technical and vocational curriculum recommended to be offered at secondary schools.

Keywords: **Secondary school curriculum, technical vocational education**

I. BACKGROUND

According to the recent educational statistics report (AEPAM, 2017), Pakistan is the sixth largest populated country in the world, having the largest population of school going age group. The National survey report byGovernment of Pakistan (2017) stated that 21.2% population of Pakistan is under 15 years of age. This on one hand gives a hopeful and bright future scenario, as we can provide educational opportunities to this section of population for developing human resource; yet on the other hand it is an alarming situation as we still have almost half of this population away from educational facilities. The best use of youth's intelligence is made possible by providing them opportunities of attaining education - either vocational or technical along general education which results in accelerated economic growth.

Vocational and technical education plays an integral role to boost the economy of any country. Raza & Khalid (2017) state that all the developed and developing countries are stressing on the expansion of technical and vocational education to have educated skilled manpower for national progress. Through vocational education, a country's social, cultural and economic conditions can be improved and shaped. The problems of youth unemployment, poverty, and shortage of skilled workers could be overcome through Vocational Education (VE) system which is efficient and relevant to the county's objectives and goals. When we look at the pace of economic growth in Pakistan, itlacksefficiency as compared to its neighboring countries. According to Projected GDP Ranking (2019-2023), Pakistan Gross Domestic Product (GDP) (Nominal) ranking for 2019 is lower than many south Asian countries.

One of the main hurdles in competing with the developed countries is youth's deprivation of educational opportunities and unaligned education with the requirement of specific manpower..A way to overcome this hindrance is integration of vocational education with general education at secondary level. This will also help the country to achieve Sustainable Development Goals (SDGs). It will be helpful for youth to enter in the work

force at a relatively early age, able to earn their livelihood and become independent and productive persons. In Pakistan vocational education is a separate system, which starts generally after the completion of matriculation exams. Although in Sindh, there is an availability of technical school certificate at the matric level; and customized short training options are given in Punjab (UNESCO, 2009). According to United Nations Educational, Scientific and Cultural Organization (UNESCO,2014) as reported by Raza & Khalid (2017), there is a week linkage between industry and technical and vocational education in Pakistan except in the province of Punjab.According to Janjua (2011), in Pakistan, poor people, female youth and disabled persons are not in a position to avail the existing opportunities to learn skills. It is very difficult for them to access formal skills training institutions for two reasons: entry qualification and fees. If vocational education is integrated with general education at secondary level, students will be able to have knowledge and skills at the same time which will make them independent and productive individuals.

II. LITERATURE REVIEW

The difference between vocational and technical programs is explained as vocational programs teach different trades with a hands-on approach like construction, agriculture, health and general skills like typing etc. while technical programs emphasis on studying books and manuals for computer oriented careers. According to the U.S. Department of Education as reported by (Marfo, 2017), "technical schools teach the science behind the occupation, while vocational schools focus on hands-on application of skills needed to do the job". She also mentions that according to Howard Gardner, logical and mathematical intelligence is required for technical education while vocational education demands to have kinesthetic style.

Cedefop, (2011) explored the benefits of vocational and technical education and mentioned the three levels of benefits: micro (individual's benefits), meso (enterprises or group's benefits) and macro (society's benefits). At micro level, a person is able to get more earnings, employment opportunities and professional status which make an individual more satisfied and motivated. The performance of firm, the productivity of employees increase and the disadvantaged groups are also able to get benefits at meso level. While at macro level, economic growth, labor-market outcomes and social cohesion increases which improves the health of people. Moreover, it helps to reduce crime in the society.

Germany and Switzerland are having dual model to enhance the vocational education (VE) system in their countries. In Germany, after completion of primary level, students have two different paths to follow: vocational track and general education. The students who opt for vocational track are offered to have in company training and part time vocational school training. Students are taught general subjects along vocationally oriented skills (Kidwell & West, 2012). Germany's TVET system is demand and market oriented which makes its fourth position among the world's biggest economies according to the data of International Monetary Fund (Smith, 2018).

Skills giving approach is required at broad level if the VE is integrated with general education (GE). Skills transform the lives of individuals by providing opportunities of employment which help to increase earning potential in youth. Employability empowers citizens to play their role in the economic sector by expanding the growth of economy. According to (VAZ, 2012), the problems of educated unemployed and educated un-employability have been surmounted. It is all due to the lack of skills giving approach in education systems.

In UNESCO-UNEVOC(2005) the fact is presented that vocationalization of secondary schools help in inculcating the entrepreneurship skill in student and the students become self-employed. The study of Kenyan Industrial Education (IE) identified the Industrial Education studies did show a wide range of episodic and private use of skills acquired—e.g., 'fixing things' at home and helping friends or neighbors.

FurtherUNESCO-UNEVOC, (2005), elaborated three rationales for vocational education which result in individual development, social development and economic development. Through vocational education, different skills develop in students which enable them to encounter challenges on the job and in their lives and theywill have better choices in their practical life.

The integration of academic and VET is of great importance as it helps to understand the application of knowledge which youth needed to apply while adopting any occupation. Moreover, it assists the students in following right directions of their future and enables them to face the challenges of their life too (Leke, 2010).

Another positive aspect of integration of VE and GE is that it helps to minimize the drop-out and repetition rates in the students as it happens in secondary levels students get bored by the monotonous way of

teaching.Vaz in 2012 observed that integration of VE and GE helps to enhance the involvement of those students who do not get engagement by academic education. This was supported by Educational Change in Latin America and the Caribbean(1998) as cited in (World Bank, 2002) thepilot project in Sao Paulo for the students to give them specific skills, revealed the fall in dropout rate of the students by 30%.

III. Statement of Problem

According to (UNDP, 2017)Pakistan in 2015 stood in the category of medium human development by attaining 0.681 National HumanDevelopment Index (HDI). Education is one of the dimensions of HDIunfortunately; Pakistan's youth literacy rate is lower than many of the Asian countries (Rehman, Jingdong, & Hussain, 2015). One of the major reasons for dropout at elementary and secondary schools is the non-alignment of curriculum with the needs of local communities (UNESCO,2010). The present research is based on the current scenario in Pakistan, where on the one hand economic reforms in the country are providing a huge opportunity, yet on the other hand the education with regards to technical and vocational training is not being prioritized as it should be. In mainstream schools only knowledge and information based education is being offeredwith meagerfocus on practical implication of the theoretical and factual knowledge. There is a dire need to bring a curricular reform in the mainstream secondary schools.

IV. Research Questions

Following were the questions explored through this study:

i. What is the current situation of vocational and technical education at secondary level in mainstreams schools?
ii. What is the current situation of vocational and technical education at secondary level in technical institutions?
iii. Which are required skills and competencies for major local industries and services to be included in secondary school curriculum?

V. Methodology

The research design was "sequential exploratory mixed method"(Creswell, 2009, p. 211). According to Creswell,sequential exploratory mixed method research is divided into two phases. Following the design in first phase, qualitative data was collected and analyzed; while in second phase, quantitative data was collected and analyzed. The data collection in second phase was based on the results of the first phase of research.

VI. Population and Sample

Study was conducted in Rawalpindi district. Respondent group in the first phase included focal persons from District Education Office,and Rawalpindi Chamber of Commerce and industries; in the second phase 605 Teachers of Public secondary schoolsand 52 teachers of technical and vocational institutions in Rawalpindi city were included in the target population.

Table 1: Sampling for Interviews

S. No	Participants
1	Director, District Education Office, Rawalpindi District
2	Focal person of Rawalpindi Chamber of Commerce
3	Head of regional office of TEVTA, Rawalpindi District

Table 2: Sampling for Survey

S. No	Institute Type	No of Institutes	No of Teachers
1	Public Secondary Schools of Rawalpindi Tehsil	97	303
2	TEVTA's Institutes of Rawalpindi Tehsil	5	10

VII. Instrumentation

After a detailed review of policies, the first tool developed was the interview protocols for the district Education Office (Rawalpindi District); head of Technical Education & Vocational Training Authority (TEVTA) (Rawalpindi District), and the focal person of Rawalpindi Chamber of Commerce and Industries. The second tool was a questionnaire for survey of secondary school teachers and the teachers of TEVTA institutes of Rawalpindi tehsil. The survey questionnaire comprised of personal information of the participants, one open ended question and lists of technical, vocational, service and industry relevant skill sets to be prioritized.

VIII. Data Collection

The data of this study was collected through semi-structured interviews and questionnaires. Content validity was ensured with the help of five experts from mainstream and professional education departments. In-depth interviews were conducted during which probing questions emerged.The questionnaires were mailed and e-mailed to the concerned participants, while face to face interviews were conducted. With the questionnaire, a consent letter was attached to explain the purpose of the study and to seek informed consent. To have better response from the participants, follow up strategy was used. The researcher personally visited 70 out of 97 public secondary schools for the collection of data.

IX. Data Analysis

In analyzing the data the researcher used two types of methods.

i. For qualitative research, interviews and the open ended question of survey was analyzed through open coding.

ii. For quantitative research, frequency, and mode score for each category was calculated so that highest frequencies could be calculated.

X. Major Findings

The respondents from Chamber of Commerce and Industry, District Education office and Technical and Vocational Education Department, authenticated that it is not possible to make secondary school students active member of society without giving them the skills to become a part of national economy. This is the peak age of studying and learning. The students must have the experience of self actualization and guidelines at this stage about their future. K-12 education must enable the adolescents to become independent.At the age of 16-18 years, when they complete their secondary and higher secondary education they must become active member of the society by realizing their role and responsibilities. Students' personal interest in choosing science or humanities field must be given importance and within science and humanities they must opt for one skill based course. In this way, students can excel in their respective fields and multiple sectors will be covered.

Following major themes emerged from the interviews:

i. Absence of career counseling services for the students

For the students of public schools, there was a policy in early 70's regarding career council but that policy was not implemented as it had a demand. Resources and funding are needed to implement policies. Recently,

there is no policy of government about career centers. Although there is a lack of formal set up but the principals and teachers informally guide their students about their future careers. There is no information or data available in any school to guide students about choosing career. It happens that many people choose same field without knowing the demand in that field. There is no current policy to introduce the vocational and technical track in public secondary schools. The pilot schools project is going on in 30 schools of Rawalpindi district. Nowadays, there is no policy for the provision of counseling regarding careers. Even no school has any data to guide students for their future careers which results that supply of specialists in specific careersoverride thedemand of that sector. Although informally teachers guide the students in their own capacity but due to un-availability of data, proper guidance is not given.

ii. **Expansion of academic disciplines**

In the secondary schools, there is very limited choice of subjects for the students. They can either chose science or humanities cluster of subjects. None of these choices include practical skills which are marketable. Those subjects should be introduced which are the need of the economy and enable students to get some skills as well. Skills would help out in choosing profession after matriculation. In case of discontinuity of education after matriculation, skills will enable youth to enter the world of work to earn for them and to become productive citizens. The policy provision of the government for secondary schools is to introduce technical and vocational stream in selected middle, high and higher secondary schools and establish counseling centers to provide guidance to the students and to make them ready for the world of work. But in Rawalpindi where the research was conducted none such mainstream schools were identified.

iii. **Lack of facilities in Public Schools**

Public secondary schools only have two major groups of subject offered –science and humanities. There were pilot schools identified where technical and vocational course were offered, but due to lack of required equipment, materials and space, the skill based courses offered in those schools were very limited. The schools were short of budgetsrequired to fulfill the needs of skill based curriculum.

iv. **Lack of skills training facilities in Public Secondary Schools**

In the past, technical labs were built for students' guidance of elementary level. At secondary level, the primary focus is on preparation for board examinations. In Rawalpindi, only in pilot schools, few skills like metallurgy, electrical, computer and wiring skills for boys and baking, parlor, first aid and hand embroidery skills were offeredfor girls. Every pilot school does not offer training of same skills it varies from school to school. The teacherdecides the skills for the studentsby analyzing student's potential or interest for learning skills. It is perceived that secondary students should focus on studies and guided for their future. Students must have the right to choose their career as it will help them to perform better in the field of their interest.

v. **Demand of skilled and trained manpower**

Pakistan is a developing country facing multiple socio economic problems. Poverty acceleration is at the top of the list. In such situation CPEC has emerged as a ray of hope. This project requirestrained and skilled manpower from within Pakistan.To fulfill the demand there is a need to bring industries and trades associations on board for developing competency based curriculum. The quality of vocational and technical courses at specialized institutions should be enhanced and the development of industrial skills in youth should boost the economy. The policy provision of the government for TVET is to assess the needs of industry and services sector and all districts should provide training facilities in these sectors. The government aims to broaden the narrow base of TVET by introducing life skills in general schools as well. It is another strategy of the government to facilitate students through career counseling and vocational guidance services. In Rawalpindi Tehsil, there are more than 430 schools but only30 pilot schools provide facility of learning skills. In girls' schools, skills related to home economics are taught such as cooking, sewing and stitching. It was mentioned by a respondent that at some schools beauty parlors were built to provide training skills but these are very few. In DhokeKashmiriyaan, there is a school where girls are given training of skills related to baking, parlor, first aid and hand embroidery. For boys', there is only one institution where mechanic

workshop is built where students are provided lessons for motor bike repair. Apart from that Computer skills and different types of wiring skills are also taught through practical work at schools.

Lessons Learned from TEVTA

It was very useful to learn about TEVTA and see what are the success and failures from which secondary school educational planners can learn:

i. Basic level courses of industries, occupations, & services in TEVTA

TEVTA offers training in 20-22 trades. The training of basic level of courses related to industries, occupations and services like electronics, industrial electronics, industrial electronics, electrician, plumbing, surveyors, civil surveyors, mechanical surveyors, machinists, tailoring, fashion designing and advance tailoring is given to the students. Advance level training of specific industry in not offered in TEVTA as there is no industrial zone in Rawalpindi. Some of the courses are of certificate level of three months to two years while some courses are of diploma level of three years.

ii. Selection and training of teachers and trainers of TEVTA

The teachers and trainers are selected according to the specific teacher selection rules. Different types of institutes have different type of qualification requirements. There are Government Technical Training Institutes (GTTC'S) which demand different qualification whereas the female institutes namely Government Vocational Technical Institutes (GVTI'S) requirement is totally different. For different trades, the scale of qualification is set. The teachers and trainers are selected according to the set scale of qualification. The teachers and trainers of TEVTA institutes are trained at Government Staff Training Centers (GSTC'S). Previously, the training was given at Government Staff Training Institutes (GSTI'S). Three months pedagogy is given to all teachers to equip them with the teaching skills. The up gradation of teachers is on rotation. There is no specific rule that teachers will be trained after every three months. There are a number of trades for which training is given to the teachers. Once the training of any trade is given, that training is not repeated anymore. The teachers and trainers may get training of advance level of any specific trade.

iii. Training system of TEVTA and its relationship with industry

Training at TEVTA institutes is being offered for two types of level: certificate level and diploma level. The certificate level training is given in three different levels of G1, G2 & G3. The duration for each certificate level training course is different like two years, one year, six months and three months. The diploma level training is offered only for three years. The training in general courses is given on basic level like mechanical, electrical and civil. Advance level training for specific industry is not offered in TEVTA. In TEVTA, the teachers and trainers are selected according to the service rules of TEVTA. There are specific TSR (teacher selection rules) which help in the selection of teachers. For 1 or 2 years course of trade, there are Government Technical Training Institutes (GTTI'S) and for 3 or 6 months courses.

iv. Industries involvement in curriculum development of TEVTA

The curriculum of TEVTA is developed with the mutual understanding of industrial representatives and the committee members of TEVTA. The presence of industrial representative is mandatory in the development of curriculum for TEVTA. The curriculum of TEVTA goes to industries for prior review. The content of training courses is sent for prior review and the presence of industrial person is mandatory in the process of reviewing. The industrial representatives and the committee members of TEVTA finalize curriculum with mutual understanding. The training content of TEVTA is based on 80% practical and 20% theory. TEVTA produces 25,000 skillful students yearly. Only industries are facilitated by TEVTA. Labor is produced for local industries. Crafts are not taught as it is not in the jurisdiction of TEVTA to preserve or promote local craft.There is a need to have association with industrial trade unions to know their

requirement of manpower. In this way manpower would be trained on the basis of demand. In this way, TEVTA institutes will progress.

v. Need to have linkages with industry for the improvement of TEVTA

For the improvement of TEVTA institutes, the linkage with industry is mandatory to know which job requires skilled persons so that according to industry's requirement, manpower must be trained. There is a job placement system in TEVTA which helps to keep track of thejobtrends. . A big chunk of trainees is sent abroad.

vi.Government's policies for enhancement of professional skills in TEVTA

There is no new policy of government for the enhancement of TEVTA system since many years. New schemes are started on and off according to the availability of government funding. There are two schemes which have been started in Government College of Technology Rawalpindi and Taxila. Beautician labs are being upgraded in two institutes and Professional cooking labs are being improved in five institutes of Rawalpindi. A clear policy on the part of the government is needed to add, upgrade and improve the department.

Steps to improve mainstream secondary schools

Learning at secondary school level should adopt practical approach. The skills taught at secondary school level provide a chance to the youth for better coordination of abilities and productive performance.

i. Skills for economic development

It is the need of the hour to introduce practical skills at secondary school level. To cope with the modern world of economic development and the advance practical world, skills introduction is of great importance. In developed countries like USA and China, skilled youth plays a fundamental role in national progress. This is an economic era and skilled people can share in the progress and prosperity of the country. To make worthy economic progress, practical skills are needed to perform duties in the field of economic and industrial development. Many western countries are acquiring skilled labor to keep up the pace of development. The stability of an economy relies on skilled and professional workforce. World leading countries emphasize skills particularly in the field of economics and IT industry.

ii. Problems faced by the citizens

Pakistan is a developing country where acquisition of higher education for many students is still a dream.. Poor people or parents, lower-middle families can't afford the costly education of universities so students leave education after matriculation. Another problem is that unemployment is at a rise. Government can't provide jobs on large scale anddue to the shortage of government jobs; few official /white color jobs are available.

iii. Need of change in education system

Our curriculum is not addressing issues and our assessment system just check the memory of the students. Our existing curriculum is based on theoretical knowledge and mere theoretical knowledge isnot enough to survive in the dynamic global society. Introduction of skills is necessary because our educational system is not performing properly; it is distributing certificates not concepts and ideas. Skills help the students in understanding theimplications of their studies for real life problems and utilization of knowledge in practical life(offices). It is of no use to get only information without any practical skill. Practical skills are more important than theory and help to gain experience through practice. Knowledge can be longer lasting through practical skills instead of focusing on theoryonly. It is also considered that youth without practical skills is like disable people. It is obvious science without practical is nothing. Practical work through experiments help to have clear concept, improves scientific knowledge by working scientifically and make

teaching and learning process easier. After completion of each level of education, students should be able to perform some productive jobs/skills. The students should have some sort of skill at thecompletion of secondary school education.

iv. Professional skills

The teaching of practical skills at secondary level is a mean to introduce the concept of professionalism to the students. Learning skills during education provides base for future profession and helps to choose a profession rightly. Practical training helps to acquire the specific techniques that will become relevant to start work in chosen field. It helps to learn better about the professional options and provide a chance to the youngsters in adoption of better fields in future. Practical skills create professionals who people are required in every department. To make youth ready for professional life and to adopt some professional degree at higher education, practical skills are of paramount importance.

v. Skills for technical development

Across the globe, technical and practical skills have great importance regarding development of nations. Technical education is a necessary part of modern education in this country. To make our country move forward in technical development, it is important to introduce practical skills at secondary level. For society building, technical mindset is necessary and if development of technical mindset starts at early level, it will make huge difference in society building. For Pakistani youth, it is essential to provide them technical skills as they are important for career choices and enable students to find a place in the job market after secondary school level. Technically skilled youth will add to the economy of the country without relying on government jobs.

vi. Skills for industrial development

Practical skills at secondary level make youth industrious and creative fulfill the requirements of skills needed in the industry and providing readiness to the youth for working in industry. Students should be aware of basic industrial and computer operating skills. Skills lead the society to industrialization. To prepare skilled workers is important for country's economy. It is important to impart education according to local and industrial needs and to introduce handicraft skills & industrial development programs to our new generations to enhance inner abilities related to industries to have skilled manpower and to cope with the modern world of industrial development. Experience and inner abilities lead to promotion of industry at both national /international level. More skillful people mean increased development in every sector including agriculture, industry, business and fisheries. This is subject to huge investment in industrial sector in Pakistan to provide jobs to the educated and skilled youth.

vii. Solution of issues

Skills help to face the hardships in life and make it healthy, easy, smooth, peaceful & prosperous. Skillful person enables to earn livelihood for himself and to support his family too. Master degree students without skills and experience are jobless. Skilled person never waits for government jobs. Skills help to lessen the unemployment issue. Providing skills to the youth means solving the problems related to unemployment and improving the situation of nutrition and environment, tackling the issue of increasing population and less resources, dealing with stress and frustration and getting rid of social evils like poverty, child labor, snatching& incident of suicide. Our country needs handyman and skills enable to survive in society.

viii. Motivation for students

Youth should be motivated to learn skills as most of today's jobs will not be relevant in the future. Skilled person can increase his living standard, live with dignity, meet his expenses, increase his income, start own business, develop hands-on skills, do online jobs with computer skills and have better settlement in the society. Due to globalization, the demand of skilled workers has increased. Skilled worker/labor may go abroad. Practical skills help youth to become independent, leaders and entrepreneur. Availability of products in market will be better and more products will be produced according to the need. By introducing 'Do it yourself' (DIY) projects, recycling of the unwanted things will be possible and helpful in reducing the cost of house hold things.

ix. Future career

In an ever-growing technology and data driven world, much of the focus in education has taken a shift toward science, technology, engineering and math (STEM) based initiatives that prepare the students for the course work and careers of the future. Secondary level is the beginning level of successful career. Skills help to observe and analyze the interest of youth to suggest careers of their interest, to dig out different abilities of students, to choose the learning fields accordingly and gain basic knowledge or skills to develop interest. This is an era of competition; skills help a child to achieve his final goals to success.

x. Skills for school leavers

Secondary level is the terminal point and many students seek jobs after matriculation. Family background,mental & IQ level counts. For middle or lower class families, practical skills are worth more than academic degrees. There is a need to introduce courses and skills related to needs of the community and more focus should be given to agricultural productions as Pakistan is an agrarian country. Skills enable youth to support themselves if they lack resources to enter higher education.

Skills to be included in Curriculum

The following tables show skills identified through document analysis and city survey:

Table 3: Identified Skills

Occupations			
Tailor	Graphic designer	Product designer	Event manager
Chef	Interior designer	Paramedical	Calligraphist
Carpenter	Cobbler	Plumber	Welder
Web designer	Farming	Vegetation	Milkman
Electrician	Veteran	Mechanic	Textile designer
Pharmaceutical technician	Beautician	Mechanical surveyor	Civil surveyor
Nutritionist	Computer Operator	Accountant	Office Assistant
Industries / Business			
Computers & Multimedia industry	Industrial tools, equipment & machines	Motor spare parts	Motor body and art Industry
Furniture industry	Home/office fixture	Construction Business	Electronics industry
Pharmaceutical industry	Medical Equipments	Ceramic industry	Cooking and Bakery Products
Clothing and Fashion industry	Tourism	Garment industry	Footwear industry
Cottage industry	Textile industry	Dairy products	Handicraft industry
Food Industry	Soap Industry	Ghee and Oil	Cement Industry
Paints Industry	Home accessories	Vehicle Accessories	Souvenirs Industry
Services			
Salesmanship	Catering	Designing of websites	Design new products
Repairing of medical and industrial equipment	Maintenance of home appliances	Finance and feasibility testing	Fixing & improving computer programs
Steel fixing	Repairing of phones	Motors Repairing	Repairing of watches
Repairing of musical instrument	Auto repair &maintenance services	Operating n maintenance of garment machines	Manufacturing of leather goods
Repair of pipes lines	Fixing of transmission lines	Specializes in fusing materials together	Dispense prescribed drugs

Advertising Print /electronic	Beautician & skin care treatment	Training of body building and maintenance	Medical Lab sample collection
Event photography	Event management	Pest controlling	Food preservation

Top Priority Skills to be taught at secondary school level

The following three tables 4, 5 and 6 show the top priority skills identified by the teachers

Table 4: Prioritized Occupational Skills

Occupational Skills Identified by General Schools	Highest frequencies
Computer operator	90
Nutritionist	54
Web designer	44
Occupational Skills Identified by TEVT teachers	
Computer operator	7
Textile designer	4
Interior designer	3

Table 5:Prioritized Industries/Business related Skills

Industries / Business Marked by Gen School Teachers	Highest frequencies
Computer and multimedia industry	104
Food industry	59
Handicraft industry	48
Industries / Business Marked by TEVT teachers	
Computer and multimedia industry	7
Textile industry	4

Table 6:Prioritized Services

Services	Highest frequencies
Maintenance of home appliances	69
Designing of websites	53
Food preservation	50
Services	Highest frequencies
Beautician & skin care treatment	4
Maintenance of home appliances	3
Designing of websites	3

Finding of open ended question from survey of teachers

In survey questionnaire, the respondents were asked to comment why they consider it important for youth to learn through skill based curriculum. Following are the major findings of open ended question of survey.

- **Importance of skills for economic, industrial and technical development**

Skills are important for the economic development of any country. As developed countries are focused on provision of skills to the students, it is needed to make our youth skillful as well. Skillful person can play their

positive role in the economic development of the country. Skills make people professionals who can share in the stability of economy. Due to lack of finance, majority of youth discontinues their further education. The introduction of practical skills will help in the economic and industrial development of the country.

Across the world those countries are progressing rapidly which focused on the provision of industrial and technical skills for their students. Thus to compete with the world, it is necessary to make our youth skillful for technical and industrial sector. New technologies are being used in every field of the developed world. To equip our youth with such skills, it is imperative to introduce skills related to occupations, business/industries, art and crafts and services at secondary level. It will provide skilled manpower for industries;youth would have awareness of occupations and businesses. More skillful people would be a source of advancement in every sector.

Keeping in view the developing stage of our country and low economic status people are fighting against poverty and the government is struggling with dwindling economic growth Therefore it is not possible for every educated person to get jobs in government sector. Whereas, if practical skills are provided to the students at secondary level, it would prepare them to earn for themselves, to support their family which will result in improved living standard. Skills tend to minimize the issue of unemployment as the skillful individuals can start their own small scale businesses which will make them independent leaders and entrepreneurs. Skillful production will eventually enhance the quality and quantity of the local products. Moreover, psychological problems related to unemployment and future uncertainty would decrease among the youth and the entire society would prosper.

- **Skills provide more options for the future career**

The introduction of practical skills helps students to acquire skills relevant to their future field of profession so it can be true that skills provide foundation for future professions. In addition to this, skills learning process helps teachers to observe and analyze the interest of youth which makes it easy to suggest careers in which students are interested. In short, skills inculcate basic knowledge and develop interest in the specific profession. In this way, youth can initiate their successful career which can in future provide a base for further technical trainings and education. So entering the economic cycle at an early stage is not necessarily the end of future prospects of education.

XI. CONCLUSIONS & RECOMMENDATIONS

The policy documents and interviews revealed that the planners are aware of the needs of the country so it was recommended by them that change in the curriculum is necessary. Especially, to compete with the developed countries or to enhance the pace of development in every sector of national development, introduction of competency and skill-based curriculum is vital.. No matter, whether the students are of general schools, TEVTA institutes or art and crafts learning institutions, it is time to make our youth proficient in the skills which are needed for themselves as well as for the development of their geographical regions. All pilot schools offer different skills but of limited variety and mostly at the basic level. No skill related to local crafts and industries is given to the students. Apart from pilot schools, other schools are not having facility of skill provision for the students.

It is suggested by the head teachers and secondary school teachers of public secondary schools and TEVTA institutes that if the students in the regular secondary schools are also given skill-based education, it will be a source of economic, industrial and technical development in the country in future. Further, skills will be helpful to solve problems faced by the citizens;the purposeless activities of youth will be reduced. In addition, practical skills play a vital role in personality development and in getting professional skills. There is a need to change the prevailing education system and provide opportunities of skills development to the students at secondary school level. Skills generate motivation in students they and guide themfor future careerselection. Moreover, skill learning is much beneficial for students who leave education after matriculation as they can enter the job market. Last but not the least, skills play a positive role in the development of secondary school students in utilizing their abilities for better performance in the school. Art and crafts are two major areas which have been ignored at large, due to which many of the local crafts are dying, while this could be a real source of developing small industry region wise across the country.

The survey of secondary schools depicts that participants demand the introduction of skills and training as computer operator, nutritionist and web designer from the list of occupations. The training and skills related to computer and multimedia industry, food industry and handicraft industry is recommended from the lists of industries/business for the students of secondary level. Related to art & crafts, computer graphics, stitching and sewing and dress designing are suggested for the students whereas the skills and training of the services of maintenance of home appliances, designing of websites and food preservation is recommended. The results show that majority of the participants are interested in computer, food, apparel, maintenance of home appliances and handicrafts related skills.

The findings of the survey of TEVTA institutes portray that mostly participants recommended training of computer operator, textile designing and interior designingfor secondary school students from the list of occupations. It is required to introduce computer and multimedia, textile, fashion, food, industrial tools, equipment & machines, medical equipment, motor spare parts, garment and cooking & bakery industry related skills and training to the students as well. From the list of art & crafts, the skills and training of computer graphics, laser printing, dress designing and baking/cooking is preferred. It is recommended to introduce skills and trainings of beautician & skin care treatment, maintenance of home appliances, designing of websites and operating & maintenance of garment machines from the list of services to the students.

This study depicts that if the data of required in manpower in certain regions is provided to the curriculum planners public secondary schools, it will be helpful to guide students in choosing skills from the field of their choice and relevance to local needs. If the students are allowed to choose skills of their interest, they will excel in that field. This study further discloses that if industrial requirements are shared with TEVTA institutes, the required manpower can be trained in these institutions.

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