

Skill-based Education in an Industrial city of Pakistan

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ABSTRACT

In this study, the need for Skill- based education at secondary school level in Pakistan was analyzed with a focus on local need of the areas. The research examined the integration of skill-related subjects in secondary school curricula and investigated the skill set required in the industrial sector. To understand the current situation, government policies were reviewed and major challenges in implementing skill- based education were highlighted. It was a qualitative research with an exploratory research design. Tehsil Gujranwala was the selected study area. Elite interviews with representatives of business, Technical Education and Vocational Training Authority (TEVTA), and Gujranwala school heads were conducted to gather data. Three documents were analyzed i.e., textbooks of technical courses taught at secondary school level, National Education Policy 2017, and the Punjab Growth Strategy 2018. The results painted a bleak picture of the state of skill- based education in the country. All the stakeholders involved lacked ambition, communication, and teamwork. The objectives of government initiatives have not been met because of poor management of resources and misuse of finances. The respondents suggested that the media and NGOs might help to emphasize the value of skill- based education pertaining to the local needs. It was crucial to modify the curriculum to incorporate skill- based education into general education for the benefit of individuals, society, and ultimately socioeconomic development at national level.

KEYWORDS:

Secondary school curriculum, General education, technical courses, Skill development

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INTRODUCTION

Education is vital for the sustainability of mankind, but skill accompanied with education is crucial for human survival. The social and economic progress of a nation is significantly influenced by education. Secondary education has a huge impact on individuals as it enables them to pursue higher education, become ready for the workforce, select a career, and acquire life skills. Skill- based education empowers students by stimulating their cognitive capacities to face real life challenges. The energy and intelligence of youth must be optimally utilized by providing them access to local skills, so they may develop a connection with indigenous craft and help preserve the culture and extend it to the global market. The spread of local culture and skill in Pakistan extends from agriculture to industry with increasing demands for integration of science and technology in these fields. Skill- based education can realize the vision “think locally and act globally”.

The demographics of Pakistan show the population of nearly 200 million, making it the sixth most populous country in the world. 37% of this population is between the age of 15 and 34 years. The young population of the nation is an asset if properly educated. The demographics further reveal that less than 20% of youth finishes secondary school, and fewer choose to pursue Technical Education and Vocational Training (TVET) (Government of Pakistan, 2017).

The rationale for this study was individual growth, societal and economic development. The researcher examined the necessity and significance of Skill-based Education (SBE) in secondary school curricula, an area that requires deeper exploration.

Skill-based education turns the traditional classroom upside down. More than memorization of facts, skill-based education focus on the development of practical abilities to be applied in different scenarios. This gives an inclination of emphasis on projects, simulations, and solving real-world problems. The goal is to arm students with a strong skill set that includes developing their critical thinking, communication, collaboration, and technical know-how, relevant to their discipline of choice. The idea is that students themselves will practice and develop these skills, so they have confidence and are well-prepared for the demands of further education or the changing job market.

Secondary skill-based education is a form of education at the secondary stage where educational services are provided that impart occupational and practical skills within students to meet the need for job opportunities in the labor



market. This form of education puts much emphasis on hands-on learning experiences, critical thinking, problem-solving, and the application of theoretical knowledge to the real world.

The dilemma with the education system in Pakistan is that it only focuses on providing students with academic information rather than practical skills. To give the pupils relevant abilities, the curriculum needs to include skill development. The Skill-based study will help in identifying the local skills needed at the secondary school level of the selected area.

A generation that is ambitious and productive will benefit from the practical knowledge and hands-on skill training provided. This may help to fulfill the annual demand for skilled labor for the local job market as well as the demand for specific skillset globally. Gujranwala the selected city for the study is among the most populous cities of Pakistan. It is a well-known industrial city of Pakistan. This city has about 5,000 small and medium firms and 16,000 cottage units, as well as a few large industries and more than half a million people in the area are related to these fields (Naz and Zaidi, 2013). Therefore, a skilled workforce is required in this area, which may be possible by integrating Skill-based education in General Education (GE) at the secondary school level.

The industry in Gujranwala makes a substantial contribution to Pakistan's economic expansion. It is a large industrial city with numerous textile mills, cutlery factories, and several huge agricultural processing industries. Gujranwala produces a variety of exportable goods, including, textiles, carpets, clothing, glass, plastic, electric fans and machines, food goods, motors, transformers, surgical equipment, hosiery, leather goods, metal utensils, auto parts, agricultural tools machinery parts, automobiles, motor bikes, sanitary goods, and other items. It also manufactures parts for military equipment. According to the World Bank Gujranwala is ranked second among the industrial cities obtaining business licenses in 2010 and sixth overall among Pakistan's top thirteen cities doing business.

Vocational Education (VE) can help resolve the issues of unemployment, poverty, and a shortage of trained employees; however, the vocational education often begins after the completion of matriculation (Grade 10). (Raza and Ibrahim Khalid, 2017) state that all the developing and developed countries are emphasizing on the expansion of Technical and Vocational Education (TVE) to develop skilled manpower for national progress. However, admission to formal skill training institutes can be particularly challenging for struggling students on two accounts i.e., entry requirements and financial costs. The students can be facilitated in acquiring education with skills if vocational education is integrated with general education at secondary school level. This initiative will enable the students to become self-sufficient and productive citizens. Therefore, the identification of local skills and trades is crucial for enabling the youth to work in their communities.

This is especially relevant to the industry in Pakistan because skill-based education meets an unmet demand for a skilled labor force to support and contribute to the industrial sector. This study integrates technical and vocational training in the form of skill-based education in the secondary school curriculum to enable the students to enter the job market at the lowest tier and grow in their careers to contribute to economic development and reduce unemployment. Thus, it increases individual employability and aligns educational outcomes with local industrial needs, creating a more dynamic and responsive education system. Skill-based education in industrial cities of Pakistan should be drafted under a sustainable development plan in order to provide the youth with effective tools to combat the competitive and challenging technology-based job market.

LITERATURE REVIEW

The curriculum is determined by a variety of elements, including basic needs, social factors, cultural factors, individual talent, intellectual factors, tradition, and religious influences. There are several problems with Pakistani education, including social, political, and financial problems. Since the 18th amendment, curriculum development has been the responsibility of each province. The curriculum decided upon by policymakers is the "official curriculum" in Pakistan. Its acceptance and implementation are mandated from the top down and it is meant to be taught and learnt as teachers are obliged to follow it.

According to the theory of development of skill proposed by (Romiszowski, 2009), the ability to complete a particular type of task or activity with a specified degree of effectiveness, efficiency, speed, or other measure of quantity or quality, can be applied to all kinds of abilities. In comparison to knowledge, which is something you either have or don't have, skill grows over time through experience, and practice. He further explains that there are four types of skills: intellectual (mind-related), motor, sensorimotor, or psychomotor (body-related), personal (emotion-related), and interpersonal (others-related) (that involve interacting with others). This idea illustrates four fundamental strategies for promoting and developing skills i.e., Information provided, Practice, Feedback, Transfer and generation.

Curriculum development is a step-by-step procedure for improving the course offerings at a school, college, or university. The two main categories of the current curriculum are products and processes. The product category emphasizes performance. On the other hand, the process category is more open-ended and concentrates on how learning develops through time. These two groups must be considered while developing curricula.

Multiple curricular models have been developed since 1924. The Saylor, Alexander, and Lewis Model (which focuses on objectives and goals, curriculum design, implementation, and evaluation), the Taba Model (which focuses

on objectives and goals, curriculum design, implementation, and evaluation), and the Tyler Model (which emphasizes students, society, and subject matter) are all incorporated into the Oliva model (focus on revising, development, and implementation of new framework) (Ilie, 2013). The most recent curriculum idea was created by Oliva in 2005 (Daud, Ahmad, and Johari, 2012). Oliva's model of curriculum design is relevant to this study as it differs from earlier models and focuses on the requirements of the local community in the area where the school is located.

Vocational education at secondary level in Pakistan

Numerous projects that involve the vocationalization of school curricula by adding a variety of courses have been carried out around the world due to the relevance of the issue being recognized. Investigations into TVET's potential participation in secondary school curricula as a result have sparked a heated discussion regarding the vocationalization of school curricula (Aziz et al., 2014). These issues include a lack of proper curriculum, a lack of commitment, and a lack of laboratory space, tools, and knowledgeable staff. Pakistan has developed a number of secondary vocational education strategies, such as the Industrial Arts Scheme, Comprehensive Schools, and Technical Schools, to name a few.

Many ideas and plans for a secondary vocational/technical stream have been developed during the past ten years. Due to a change of successive governments in Pakistan, a plan to establish seventy model vocational schools with a combined enrollment of 12,250 students was never put into action. (Ansari and Wu, 2013) identified many obstacles to TVE adoption at the secondary level after reviewing the research.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) and many international organizations helped increase the Metric Tech Stream in the same way in 2001–2002. Two technical specialties were included in the SSC (Classes IX-X) system of studies'. The science and humanities groups each offered one technical course as an elective subject. While one technical course was often provided in secondary schools alongside biology and computer science and technical workshops/labs were constructed following the Agro-Tech Scheme. Technical group was not officially launched in any province across the nation (Tilak, 2003).

Availability of TVE Options for the Age Group of 11 to 18 Years in the Country Presently the following TVE options are available for the age group of 11 to 18 years in the country like

- Vocational trade courses, MatricTech,
- Agro-Tech courses, technical school certificate,
- Vocational certificate courses
- Basic G-III,
- Intermediate GII and
- Advanced levels GI,
- Diploma of associate engineers (DAE) and Customized training for In-service workers of industry

National Education Policy Guideline

Pakistan has a comparative advantage in labor costs because of its vast population but poor skill levels limit the labor force's ability to make a significant contribution to the economic growth. This deficit affects business, services, agriculture, and industry. The efficiency and competitiveness of the local economy would rise because of improved labor force skill levels, which will also draw foreign investment and enable Pakistanis to work abroad and generate remittances. A formal system currently in place working as Technical vocational education and training (TVET) is not very significant.

Like all other types of education in Pakistan, TVE has challenges with accessibility and quality. Though it theoretically satisfies market demands, it only partially fulfills them. Most nations have a higher relative percentage of the applied postsecondary industry than Pakistan, which is 18.5 percent. Pakistan's technical and vocational skill base is at a decline. When compared to more advanced systems, the lack of quality is caused by fewer overall years of preparation, curriculum restrictions, a lack of qualified instructors, scarcity of resources and many such factors. The technical and vocational sub-sector is afflicted by the education sector's chronic fragmented governance structure. Numerous organizations and governments are involved in the governance of this topic, and their roles are not well defined. For sector-wide planning, there is no single point of contact.

The opinions of key stakeholder, including those from industry, are also underrepresented in the processes used to produce study materials and certified programs. The technical vocational education (TVE) sector does not gain from efficient coordination and feedback from the business sector when it comes to updating its tools and instructional materials. A forward-looking supply planning strategy is required by Pakistan's TVE industry in order to develop a labor force with a high level of competence in an international environment that facilitates the mobility of investments and people. The lack of focused research is the root cause for this failure and potential remedies have been a significant issue. We can better understand the situation of technical vocational education in Pakistan when seen in a comparative perspective with other developed and developing countries.

EDUCATION IN CHINA

Basic education in China is comprised of three levels: preschool, primary school, and secondary schools lasting seven years commencing at age twelve. The six-year primary school starts at age six. Secondary school is divided into junior and senior middle schools. The former lasts three years. Upon graduation, they can choose to enter either senior middle school or professional senior center school or professional technical center school. Those who wish to proceed to higher education, on the other hand, shall be required to pass the Public Advanced Education Selection test.

Curriculum Reform in China, started in 1999. It focused on skill, strategy, and attitude-oriented rather than transfer of knowledge-based education. Among other things, the new curriculum targets at developing a balanced and integrated framework for curriculum; developing the ability to identify significant information, giving importance to active learning that involves problem-solving; extension of the assessment-based curriculum; and finally, moving on to more collaborative curriculum management. The reform has basically updated the pedagogy and teachers' development programs.

The Vocational Education Law of the People's Republic of China, which was passed in 1996, was aimed at promoting vocational education, improving the quality of the workers, and facilitating social and economic development. Vocational training was made a content of paramount significance of the state-run education program. It made compulsory the obligations of the bodies concerned involved in vocational education; guaranteed access for women and the disabled and encouraged the combination of education and production as well as regional economic development.

Skill-Based Education in Austria, Germany, and Switzerland

Austria, Germany, and Switzerland rank ahead in terms of both skilled education and the absolute number of the skilled workforce due to their structurally similar dual apprenticeship training systems of upper secondary education. All these countries make up a collective skill system cluster characterized by:

- **Curriculum Standards D1:** The classrooms learning and work or training experience or the world of business go by integration.
- **Structures of Governance D2:** Regulation, financing administration and monitoring through government agencies and social partners. A special emphasis is put on the way goals of education, content and standards are developed.
- **Educational System Location-D3:** The dimension stages the educational institutions in the remainder of the educational system.
- Hybrid organizational forms that join elements from both Vocational Education and Training (VET) and Higher Education (HE) are operationalized.

The institutional change of these systems may occur based on four main models.

- **Displacement:** Old institutional rules are replaced by new ones.
- **Conversion:** Existing rules are re-interpreted and re-applied in new ways.
- **Drift:** Exogenous changes in the environment transform the impact of existing rules.
- **Layering:** The introduction of new rules that influence the meaning of older norms.

In Austria, Germany, and Switzerland, hybrid organizational forms have emerged which combine core elements of VET and HE such as certificate and admission regulations and curricular standards. The hybrids bridge gaps between VET and HE; the Swiss Initial Vocational and Training (IVET)-Universities of Applied Sciences (UAS) system is a very popular option because it provides a structured path from dual apprenticeship training to bachelor courses.

According to (Muehlemann, Wolter, and Wüest, 2009) skills which offer chances for employment and help youth to increase their earning potential, improve people's lives. This can be realized by encouraging economic growth and employability that enables citizens to play a more active part in the economy.

(Maclean, Lauglo, and Wilson, 2005) state the fact that secondary school vocation lists assist students in developing entrepreneurial abilities and being self-employed. (Owuondo, 2023) revealed that Kenyan Industrial Education subjects displayed a wide range of episodic and private uses of acquired skills, such as "fixing stuff" at home and helping neighbors or friends.

In local scenario (Amjad, ul Haque, and Colclough, 2005) in his study "Skills and Competitiveness: Can Pakistan Break Out of the Low-Level Skills Trap?" brought this topic to light. Pakistan should concentrate its efforts on creating technology and knowledge-based products, which account for most of the global growth, the researcher reiterated that Pakistan needs to escape the lower-level skill trap in order to accomplish this task. Investment in human capital is essential to move manufacturing from labor-intensive processes toward high-quality, technologically sophisticated sectors. The incorporation of skill-based education at the secondary school level in industrial cities of Pakistan has been recognized as an imperative measure contributive to economic development and addressing the rising employment demands of the country. Skill-based education can provide the requisite practical and technical skills to the students which are highly valuable for the labor market. Thus, it will increase their employability and such development is reversible for sustainable growth.

The importance of such an education format is hence substantiated by the importance of bridging the skill gap between the existing outcomes of education and the requirement of the industrial sector. For instance, a study conducted by (Huma, Rizwan, and Rafique, 2022) has suggested that current educational policies and educationalists in Pakistan lack the alignment of educational policies with the demands of technical and vocational education. The study called for extensive policy change that can emulate the successful models practiced especially in Germany, Switzerland, and South Korea, where the essentials of technical and vocational education are considerably incorporated into the mainstream of the school curriculum.

Further, the critical thinking and practical educative components often miss from the national curriculum of Pakistan. (Rind and Mughal, 2020) had previously identified that the mathematics curriculum of the country, being the core subject for developing analytical skills, rather failed to properly design the curriculum which could ensure students to enhance their problem-solving skills. The curriculum needs to be more oriented towards practical applications and the presence of critical thinking to enable them to better adapt to the rising demands of the industrial sector.

The implementation of skill-based education also faces enormous challenges, which involve inadequate teacher training and lack of resources. For instance, a survey by (Rajput, Bukhari, Noonari, Solangi, and Soomro, 2020) found that most of the teachers were not well equipped with the necessary skills and knowledge to integrate information and communication technologies (ICTs) during their teaching sessions, which is a crucial requirement for modern skill-based education. According to the same study, the schools' infrastructure, especially computer laboratories is available in a very meager percentage of schools, and it has found that most teachers lack adequate skills to use the available technologies effectively in classrooms.

The Need for Education 4.0

In addition, there is a need to use Education 4.0 principles in the Pakistani education system. Education 4.0 is said to be the latest wave of digitization and entails the integration of various technological advances such as the Internet of Things, cloud storage, and artificial intelligence, among others. According to (Butt, Siddiqui, Soomro, and Asad, 2020), despite the desire among educators to want to use these technologies, there is a lack of systematic frameworks and resources that will facilitate their applications. To accomplish this, this gulf must be filled, and properly harnessed this opportunity so that the fullest potential of Education 4.0 can be realized in Pakistan.

Education Based on Life Skills

Life skills-based education has also been studied as a new approach to exploring the path towards addressing other problematic issues in society. For example, a case study by (Svanemyr, Baig, and Chandra-Mouli, 2015) looked into a scale-up implementation of a comprehensive sexuality education in Pakistan that consisted of life skills. According to the findings of the study, these kinds of programs can be successfully initiated in even highly conservative societies if a carefully designed curriculum is implemented hand in hand with the key stakeholders such as parents, teachers, and community leaders among others.

To conclude, integration of skill-based education at secondary school level in the industrial cities of Pakistan faces a number of challenges, including inadequate teacher training, lack of resources, and poor policy support, but offers great opportunities for making students more employable and enhancing the economic growth of a country. Comprehensive policy reform, teacher training, and the integration of modern technologies are essential to realize these opportunities.

Statement of problem

In Pakistan, skill-based education does not receive the recognition it deserves. Those with degrees are unable to function as competent people due to a lack of practical experience. Knowledge based education is prioritized over skill-based education. The education being imparted is not connected to the needs of local communities. Low-income families do not feel it beneficial for their daily earnings. Therefore, it may be considered as one of the main causes of student dropout at secondary school level.

Statement of purposes

The purpose of this research is to investigate the various training courses and skill sets needed in the industrial sector in the Gujranwala region. It may help to deliver skilled workers according to the "local labour market" needs and may guarantee a consistent and easy method of supplying relevant labor force to the market. It may help the students, their families, and the community to reap socioeconomic benefits by engaging in skill development during secondary school education.

Significance of the study

The research study may help to envision a brighter future for the industrial sector in Gujranwala in particular and Pakistan in general. This study may aid in creating a baseline for reforms to incorporate skill-based education at the

secondary level and to develop a curriculum for future needs by providing insight into the issue. This study may also help to understand the need for a skilled based education system at the school level. It also informs that practical study is also important along with traditional school studies.

Research Questions

Based on the following main questions further interview protocols were developed:

1. Which skill related subjects are being offered in secondary school curriculum? What kind of theory and practical components are included in the textbook?
2. Which large and small industry-related skills are needed in the Gujranwala region?
3. What kind of curriculum is needed at secondary level with respect to the needs of major and small industries of Gujranwala?
4. Is there any connection between the secondary-level skill- based subjects offered and the actual requirements of major and minor industry in Gujranwala?

Participants

- President of Gujranwala Chamber of Commerce and Industry (GCCCI)
- Head of TEVTA Gujranwala
- Head of Government and Comprehensive high school
- Head of Christian technical school

Research design and instrumentation

- The exploratory research design was used to conduct the qualitative research in accordance with the purpose of the research.
- To collect data from participants, in-depth elite interview protocols were developed based on background knowledge and literature review.
- As a result, the codes were created from the themes of discussion in the interviews and furthermore a checklist for document analysis was developed.

Data Collection

In-depth interviews with participants were the initial method used to gather the data for this study. Using data collected from elite interviews, three document analyses were carried out, including

- Punjab growth strategy 2018
- National education policy 2017-2025, and
- Textbooks of skill- based subjects.

DATA ANALYSIS

The themes and concepts from the interviews were derived using sentence coding. Open coding of interviews was used for the deductive thematic analysis of documents utilizing a reflective thematic analysis approach.

Findings

Based on interview and document analyses following findings were drawn:

- There is only the science and arts group available. The ratio of technical subjects offered, and teachers is very low as compared to general subjects.
- Board of Intermediate and Secondary Education (BISE) Gujranwala and Board of Technical Education (BTE) are working independently without any cooperation in the area of skills.
- No hands-on skills are being provided so far as practical component is not given significant weight age and importance hence it is clear the textbook's goals are not met so far.
- Lack of infrastructure, books, apparatus and even teachers of technical subjects
- Vocational teacher trainers have not received any pre-service or in-service training, and there were no student field trips or visits to industries
- Lack of finance and misuse of funds in schools, absence of a check and balance system
- Low enrollment in TEVTA so TEVTA alone cannot meet the needs of industrial sector of Gujranwala for trained workers on its own.
- Gujranwala is one of the main hubs of industrial activities. Thousands of small, medium and large industrial units are working and producing a vast variety of products

- Industrial diversity needs multidimensional vocational skills and different job skill sets to meet the requirements of the emerging industrial sector of Gujranwala.
- PGS 2018 sought to train 2 million students and create 1 million jobs annually.
- NEP 2017 aimed to encourage the students by developing practical skills and keeping their interest in the vocational education particularly female students.
- Objectives of the policies are not met so far.
- As Gujranwala is labeled as 'mini-China of Pakistan' by stakeholders. It needs a well organised and collaborated system and technical curriculum for the training and provision of skilled workers.
- The role of stakeholders is not sufficient, and parents and students lack ambition and interest.
- The criteria for skill evaluation recognition of prior learning (RPL) have altered, and TEVTA now conducts an annual labor force survey.
- Motivational speakers, media, and NGOs can play a significant role in promoting skill-based education.
- There is no correlation between the provided technical subjects and the real local skill demand.
- A lack of surveys and research in this particular field.
- The addition of skill-related studies alongside general subjects is urgently needed.
- Lack of commitment to developing and implementing science and technology focused curricula
- No significant actions have been done. As a result, policy objectives are not being met.

CONCLUSIONS

The conclusions below were drawn from findings while keeping the statement of purpose in mind:

The curriculum does not put a great deal of emphasis on technical courses. Making technical subjects courses an essential part of curriculum has not gotten serious consideration from the government or curriculum designers. Students are less interested in skill-based learning, and schools do not care about it either. Data revealed that even in those schools that offered technical disciplines, there were no labs, equipment, books, or trained teachers. The existence of stereotypes regarding low value of skilled based education was observed in the society. To raise the level of skill of the workforce it is absolutely important to revive and modernize TVET in specialized institutes of technical education as well as to combine it with general education, according to the UNESCO assessment. This is the reason for the failure behind many government plans and schemes.

In the comparative review the literature revealed that the secondary school students in industrialized countries like China, Germany, Switzerland, and Austria have the option of learning new skills, which not only broadens their knowledge but also boosts their confidence and paves the way for their future job. Their educational system gives young people the skills they need to support themselves, their families, and society as useful members. Policymakers believe that secondary public schools should teach skills. These nations changed their curricula to accommodate both their own demands and those of the global labor market, and as a result, they now control most of the world's skilled employees and skill sets.

The government of Pakistan should plan innovative policies to keep the students in secondary school, especially female students as they have a higher dropout rate at secondary school level. Unemployment is a big issue in Pakistan with the integration of skill-based education at secondary school level the students will have a chance to seek vocational training through their schools. Several obstacles in the quest to achieve secure sustainable economic growth were recognized by the Punjab Growth Strategy (PGS), 2018. A risky security environment, underemployment or unemployment, a skill gap, poor progress toward the Millennium Development Goals (MDG) primarily are the factors that cause the abortive progress in skills.

However, the outcomes of the primary goals were disappointing. The "high-level" approach and the implementation strategy differed greatly from one another. The researcher concluded that the book or content is only being taught to acquire theoretical knowledge that is based on rote memory rather than practical skill because no practical or experiment is given in theoretical studies. The students could only learn skills by getting education in skilled based education institutions. Regardless of whether they attend TEVTA institutions or normal schools. The time has come to teach our students the skills they will need for both their personal development and the growth of their geographic areas.

According to the policy documents the government wanted to add technical and vocational courses to general education curricula in order to strengthen TVET's basis. The secondary education strategy also calls for the introduction of a technical and vocational stream. As a result, the growth of secondary schools will profit from the introduction of all skills and training at the secondary level.

According to head teachers and secondary school teachers at public secondary schools and TEVTA institutes the provision of skill-based education to students in regular secondary schools could support the future economic, industrial, and technological development of the nation. Additionally, having the right abilities will help people to deal with problems, and students can be saved from many prohibited inclinations. The current educational system needs to be altered to allow students to gain skills. This may prove a problem-solvent and can become a motivational force with the incorporation of skill-based education in the general education stream. This may provide problem-solving and career assistance to the

students who do not pursue further education and a skill base for those who aspire to higher degrees or certifications. Technical schools neglect or completely forego visits to industries in their area due to lack of funding, these visits are crucial for direct observation and hands on learning and provide a conducive environment for the progression of skilled based education.

According to research study, Gujranwala is representing Pakistan internationally through exporting products. Another significant aspect about Gujranwala is that each resident owns a factory, operates a little or large business, and may even possess one room or 600 rooms. This is the success and accomplishment of the people of Gujranwala in the industrial field, and it is unquestionably due to the workers' skills. Career opportunities help young people to increase their earning potential. Employability encourages economic growth, which enables citizens to participate more actively in the economy. The lack of a skill- based approach in educational systems can be held accountable. Examining the potential role of TVE at the secondary school level has become a debate regarding the nationalization of the school curriculum (Maclean et al., 2005). This debate has been ignited by a lack of laboratory space, equipment, and experienced staff, as well as a lack of curriculum and dedication.

The training and skills related to computer and multimedia , food industry and handicraft industry , iron pipes, wires and sheets, cook wares, skills and training in the maintenance of home appliances, such as heater, coolers, washing machines, motor pumps, refrigerators, utensils, stainless steel, cutlery, ceramics, cement leather, sanitary, injection mold, light engineering, auto parts, sports goods PVC pipes, textile, metallurgy, website design, commerce, trade, and management, have been suggested by participants.

Participants suggested introducing skills and training for female students in secondary schools, such as professional crafts, stitching & sewing, dress designing, computer graphics, laser printing, baking/cooking, packing, management, and commerce recommended subjects from the lists of industries/business for the students of secondary level. As no connection between the subjects taught and actual demand of industrial sector of Gujranwala it is suggested a matric-tech stream should be implemented in male and female secondary schools in a progressive approach to expose students to the working world, fostering the curiosity, and help them to establish a foundational level of skill in employable trades, according to both the policy text and all the respondents.

DISCUSSION

Findings of the current study emphasize that skill-based education is desperately needed within the ambit of education systems operating in Pakistan, especially in an industrial city like Gujranwala. This is supported by the work of Muehleemann et al. (2009) Muehleemann, Wolter, and Wueest (2009), who state that the dual apprenticeship training system of Switzerland generated positive effects on employability and economic growth. The structured pathway of the IVET-UAS system of Switzerland acts as a model for emulation and implementation in Pakistan so that skills gap levels between VET and HE decrease, and that will result in enhancing the opportunity of earnings and employability for the youth.

In a similar vein, Maclean, Lauglo, Wilson, (2005) echoed that there is no strategy based on skills art the backdrop of Pakistan's educational dispensation, something that was also found in the study by Owuondo (2023) regarding Kenyan Industrial Education. Both studies indicated a gap between the skills provided and those required by the local industry. In Kenyan educational dispensation, the provision of vocational subject helps to inculcate entrepreneurial abilities among the learners and pave the way for self-employment, which is still unattended by Pakistan primarily due to its insufficient practical training and infrastructure.

(Amjad et al., 2005) emphasized the development of Pakistan from a low-cost labor-oriented country to high-quality, highly technologically advanced sectors, which requires huge human capital investments. Findings of the current research emphasize the problem of a lack of practical skill training and insufficient coordination between different educational boards in Gujranwala. In the absence of such required coordination and deficiencies in technical infrastructures, there is almost no way to develop an organized and systematic technical curriculum that meets the diversified industrial needs of the region.

Findings of the current study pertaining to inadequate training of teachers and a lack of resources are also supported by Rajput et al. (2020) in a study of integrating ICT into pedagogy in Pakistan. Both studies emphasized that insufficient training and weak infrastructure on the part of teachers don't enable them to transfer technical skills to the students effectively, thus widening the skills gap.

Moreover (Huma et al., 2022) point to the need for policy changes at a macro level that include adopting successful models from countries such as Germany, Switzerland, and South Korea. This again aligns with the need for policy realization with the current study urging the implementation of policy reforms to make educational outcomes more compatible with industrial objectives in Pakistan.

As using ways for revamping curricula to ensure that students receive ample opportunities to develop their critical and practical skills through problem-solving work, as also identified by (Rind and Mughal, 2020), based on the perceived ineffectiveness of the current ones in bridging the industry-academia gap.

The current study, therefore, is adding weight to the already existing accord on a shortage of skill-based education in Pakistan. The integration of skill-based education into the curricular framework with better changes in the existing gaps and incorporation of modifications, coupled with comprehensive reforms with stake-holder engagement and investment in infrastructure and teacher training, can bring the desired results of developing a skilled workforce to pave the way for economic growth in the country and meet the challenges of the modern times in the industry sector.

IMPLICATION

Firstly, there will be more demand for teachers of technical subjects if technical courses are included alongside general subjects. As a result, more students will study particular skills to become technical subject teachers in the future. If skill-based education is taught to students in traditional secondary schools, the labor market may be developed as a future source of nation's economic, industrial, and technical development.

Secondly, the necessary workforce for the local industry will be prepared if students receive comprehensive instruction in line with market demands. This will be an innovative way to introduce students to the workplace, foster curiosity and help them acquire a fundamental level of skill in employable trades. Giving the business sector a significant role in growth will allow them to establish closer relationships with local industry. The federal government, local government, and schools should work together and play their part in the holistic development of individuals. As a result, the purpose of curriculum evaluation may shift from pure identification and selection of knowledge to the advancement of student success, teacher development, and instructional enhancement as per the demand of global market.

CREDIT AUTHOR STATEMENT

Dr. Sidra Rizwan: Conceptualization, Methodology, Data curation, Visualization, Investigation, Supervision. **Fareeha Sohail:** Software, Validation, Writing- Reviewing and Editing, writing—original draft preparation.

COMPLIANCE WITH ETHICAL STANDARDS

It is declared that all authors don't have any conflict of interest. Furthermore, informed consent was obtained from all individual participants included in the study.

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