



UNIVERSITI PUTRA MALAYSIA

***MODERATING EFFECT OF VOCATIONAL SELF-EFFICACY ON THE
RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS, SOCIAL
SUPPORT, VOCATIONAL OUTCOME EXPECTATION AND
STUDENTS' INTEREST IN TVET PROGRAM, PAKISTAN***

NAZIA AZEEM

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By

NAZIA AZEEM

**Thesis Submitted to the School of Graduate Studies, Universiti Putra
Malaysia, in Fulfilment of the Requirements for the Degree of Doctor of
Philosophy**

June 2021

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DEDICATIONS

This thesis is dedicated to my late father, Mr. Ghulam Ahmad, whom dreams for me have resulted in this achievement, and without his loving upbringing and nurturing; I would not have been where and what I am today.

To my dear husband, Muhammad Azeem, who remains willing to engage with the struggle. Even though we sacrificed throughout this process, you never quit, and you motivated me to finish what we started.

To my soul my son, Daniyal Azim I am grateful for all the sacrifices you have done to complete my challenging journey and your lovely presence in my life motivated me to go through my aims.



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NAZIA AZEEM

June 2021

Chairman : Muhd Khaizer Omar, PhD
Faculty : Educational Studies

The Technical and Vocational Education and Training program (TVET) has been widely acknowledged as one of the most important subjects in the educational system. TVET has been gained attention in numerous national and international contexts. The skilled workforce has a significant role in economic development, industrialization, individual development, and to attract foreign direct investment. Despite the significance of Technical and Vocational Education and Training to rapid economic growth, the program still seems to be far from receiving massive acceptance in Pakistan. Thus, this study examines the moderating effect of vocational self-efficacy on the relationship between socioeconomic status, social support, vocational outcome expectation and students' interest in the TVET program among secondary school students in Pakistan.

For this quantitative research, a questionnaire was used as an instrument for collecting data. Socioeconomic status was measured using instrument developed by Dadge et al. (2015) presented a reduced version of the Aggarwal et al. scale (2005). Meanwhile, social support was measured using Multidimensional Scale of Perceived Social Support (MSPSS) scale developed by Zimet et al. (1988). Vocational outcome expectation was measured using instrument Vocational Outcome Expectations-Revised scale was developed by McWhirter and Metheny (2013) and students' interest was measured by Interest Scale developed by Ainley (2012) and Baker et al. (2015).

It was a descriptive cross-sectional study using a survey method. A total of 386 respondents were selected through multistage proportionate stratified random sampling to participate in this study. The reliability and validity of the research questionnaires were determined using Cronbach alpha and composite reliability. The collected data were analyzed using descriptive statistical tools such as mean and standard deviation; the research hypothesis was formulated and tested using inferential tools. Structural Equation Modeling (SEM) analysis was also employed to test and establish the convergent validity and discriminant validity of the measures. The Pearson Correlation (r) and Structural Equation Modeling were used as the main inferential statistical analysis for this study.

The results revealed that all the selected variables such as socioeconomic status, social support, and vocational outcome expectation have a negative and significant correlation with students' interest in the TVET program. Socioeconomic status was found a strong correlation with students' interest negatively ($r = -0.653$, $p < .05$). Meanwhile, social support was found to have a strong negative correlation with students' interest ($r = -0.700$, $p < .05$). Vocational outcome expectation was also found to have a strong negative correlation with students' interest ($r = -0.757$, $p < .05$) in the TVET program. Based on the PLS-SEM analysis, the combination of the three research variables have significantly contributed 71 % ($R^2 = 0.71$) to students' interest in the TVET program. This means that the three independent variables have a strong impact towards the dependent variable. Meanwhile, socioeconomic status ($\beta = -0.414$, $p < 0.05$) was found to be the most dominant factor contributing to students' interest in the TVET program.

Similarly, there was no moderating role of vocational self-efficacy between the relationship of social support and interest in TVET program ($\beta = 0.049$, $t = 1.034$, $p > 0.05$) and vocational outcome expectation and students' interest in TVET program ($\beta = 0.002$, $t = 0.851$, $p > 0.05$). On the other hand, vocational self-efficacy plays a moderating effect on the relationship between socioeconomic status and students' interest in the TVET program ($\beta = 0.114$, $t = 2.738$, $p < 0.05$). Hence, the research model confirms the theory that all these factors are significant in making student interest.

Conclusively, all the selected factors showed a significant and negative relationship with students' interest in the TVET program. This indicates that those who belong to moderately high socioeconomic status, have moderately high social support and moderately high vocational outcome expectation, they are less likely to pursue a TVET program. Thus, these findings of this study provide vital implications for Pakistani educational policymakers in order to encourage interest among school students to pursuit education in the TVET fields expose them to the program as early in the lower secondary level and provide career development program in the TVET fields through counselling service.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia
sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**KESAN MODERASI EFIKASI KENDIRI VOKASIONAL KE ATAS
HUBUNGAN ANTARA STATUS SOSIOEKONOMI, SOKONGAN SOSIAL,
JANGKAAN KEBERHASILAN VOKASIONAL DAN MINAT PELAJAR
DALAM PROGRAM TVET, PAKISTAN**

Oleh

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Jun 2021

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Fakulti : Pengajian Pendidikan

Program Pendidikan dan Latihan Teknikal dan Vokasional (TVET) telah diterima secara meluas sebagai salah satu mata pelajaran terpenting dalam sistem pendidikan. TVET telah mendapat perhatian dalam pelbagai konteks di peringkat nasional dan antarabangsa. Tenaga kerja mahir berperanan penting dalam pembangunan ekonomi, perindustrian, pembangunan individu, dan usaha menarik pelaburan langsung asing. Di sebalik kepentingan Pendidikan dan Latihan Teknikal dan Vokasional bagi pertumbuhan ekonomi yang pesat, program ini nampaknya masih jauh daripada penerimaan yang luas di Pakistan. Oleh sebab itu, kajian ini meneliti kesan penyederhanaan efikasi sendiri vokasional dalam hubungan antara status sosioekonomi, sokongan sosial, jangkaan keberhasilan vokasional dan minat pelajar ke atas program TVET dalam kalangan pelajar sekolah menengah di Pakistan.

Bagi kajian kuantitatif ini, soal selidik digunakan sebagai instrumen untuk mengumpul data. Status sosioekonomi diukur menggunakan instrumen yang dibangunkan oleh Dadge *et al.* (2015) yang dipersembahkan sebagai versi diperkemas skala Aggarwal *et al.* (2005). Sementara itu, sokongan sosial diukur menggunakan Skala Multidimensional Tanggapan Sokongan Sosial (Multidimensional Scale of Perceived Social Support, MSPSS) yang dibangunkan oleh Zimet *et al.* (1988). Jangkaan keberhasilan vokasional diukur menggunakan instrumen Jangkaan Keberhasilan Vokasional–Skala Semakan (Vocational Outcome Expectations–Revised scale) yang dibangunkan oleh McWhirter dan Metheny (2013) manakala minat pelajar diukur dengan Skala Minat (Interest Scale) yang dibangunkan oleh Ainley (2012) dan Baker *et al.* (2015).

Kajian ini merupakan kajian keratan lintang deskriptif menggunakan kaedah tinjauan. Dalam kajian ini, sejumlah 386 responden dipilih melalui persampelan rawak berstrata mengikut kadar berbilang tahap. Kebolehpercayaan dan keesahan borang soal selidik ditentukan menggunakan formula kebolehpercayaan alfa dan komposit Cronbach. Data yang dikumpulkan dianalisis menggunakan alat statistik deskriptif seperti min dan sisihan piawai; hipotesis kajian dirumuskan dan diuji dengan menggunakan alat statistik inferensi. Analisis Pemodelan Persamaan Struktur (Structural Equation Modeling, SEM) turut diguna pakai untuk menguji dan membuktikan keesahan konvergen dan keesahan diskriminan. Model Korelasi Pearson (r) dan Pemodelan Persamaan Struktur (SEM) digunakan sebagai analisis statistik inferensi utama untuk kajian ini.

Hasil kajian menunjukkan bahawa pemboleh ubah yang dipilih seperti status sosioekonomi, sokongan sosial dan jangkaan keberhasilan vokasional mempunyai korelasi yang negatif dan signifikan dengan minat pelajar ke atas program TVET. Status sosioekonomi didapati mempunyai korelasi yang kuat secara negatif dengan minat pelajar ($r = -0.653, p < 0.05$).

Sementara itu, sokongan sosial didapati mempunyai korelasi negatif yang kuat dengan minat pelajar ($r = -0.700, p < 0.05$). Jangkaan keberhasilan vokasional juga didapati mempunyai korelasi negatif yang kuat dengan minat pelajar ($r = -0.757, p < 0.05$) dalam program TVET. Berdasarkan analisis PLS-SEM, gabungan ketiga-tiga pemboleh ubah kajian secara signifikan menyumbang 71% ($R^2 = 0.71$) kepada minat pelajar dalam program TVET. Ini bermaksud ketiga-tiga pemboleh ubah tidak bersandar mempunyai pengaruh kuat ke atas pemboleh ubah bersandar. Sementara itu, status sosioekonomi ($\beta = -0.414, p < 0.05$) didapati merupakan faktor yang paling dominan yang menyumbang kepada minat pelajar ke atas program TVET.

Demikian juga, tidak terdapat peranan penyederhanaan efikasi sendiri vokasional antara hubungan sokongan sosial dengan minat ke atas program TVET ($\beta = 0.049, t = 1.034, p > 0.05$) dan jangkaan keberhasilan vokasional dengan minat pelajar ke atas program TVET ($\beta = 0.002, t = 0.851, p > 0.05$). Sebaliknya, efikasi sendiri vokasional memainkan pengaruh penyederhanaan ke atas hubungan antara status sosioekonomi dengan minat pelajar ke atas program TVET ($\beta = 0.114, t = 2.738, p < 0.05$). Oleh itu, model kajian mengesahkan teori bahawa semua faktor ini adalah signifikan dalam membina minat pelajar.

Kesimpulannya, semua faktor yang dipilih menunjukkan hubungan negatif dan signifikan dengan minat pelajar dalam program TVET. Ini menunjukkan bahawa mereka yang tergolong dalam status sosioekonomi yang sederhana tinggi, mempunyai sokongan sosial yang sederhana tinggi dan jangkaan keberhasilan vokasional yang sederhana tinggi, kurang kecenderungan untuk mengikuti program TVET. Oleh itu, dapatan kajian ini memberikan implikasi

penting bagi penggubal dasar pendidikan di Pakistan untuk mendorong minat dalam kalangan pelajar sekolah agar menyambung pendidikan dalam bidang TVET dan mendedahkan mereka kepada program ini seawal peringkat menengah rendah, selain menyediakan program pengembangan kerjaya dalam bidang TVET melalui perkhidmatan kaunseling.



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I certify that a Thesis Examination Committee has met on 4 June 2021 to conduct the final examination of Nazia Azeem on her thesis entitled "Moderating Effect Of Vocational Self-Efficacy on the Relationship between Socioeconomic Status, Social Support, Vocational Outcome Expectation and Students' Interest In TVET Program, Pakistan" in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy.

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LIST OF ABBREVIATIONS

CFA	Confirmatory Factor Analysis
SES	Socioeconomic Status
VOE	Vocational Outcome Expectation
TVET	Technical and Vocational Education and Training
OECD	Organization for Economic and Cultural Development
MPSS	Multidimensional Scale of Perceived Social Support
VSE	Vocational Self-efficacy
SEM	Structural Equation Modelling
GTTIs	Government Technical Training Institutes
TTB	Trade Testing Board
PBTE	Punjab Board of Technical Education
NSS	National Skill Strategy
NAVTEC	National Vocational and Technical Education Commission
SPSS	Statistical Package for Social Sciences
PLS	Partial Least Squares

CHAPTER 1

INTRODUCTION

1.1 Introduction

This chapter presents the introduction of the study. It covers the background of the study that includes: History of Technical and Vocational Education and Training in Pakistan and secondary education in Pakistan. The discussion continues with the statement of the problems, objectives of the study, research questions, the significance of the study, the scope of the study, the limitations of the study and definition of key terms. This chapter ends with a summary of chapter one.

1.2 Background of the study

Technical and Vocational Education and Training (TVET) has gained attention throughout recent years from both national and international contexts. It is progressively intended to develop a higher-order skill, motivated, industry-responsive and competitive workforce globally (Kizu, Kühn, & Viegelahn, 2019). These objectives transcend basic technical and vocational skills, intensified productivity and economic growth, which accelerate political stability, social mobility and economic liberation. Therefore, helps an individual to work independently, equipped for lifelong learning skills and raises the quality of life in the 21st century (Billett, 2011; Moldovan, 2019).

Technological advancement is progressing at a rapid pace and added new expectations for the 21st century workforce whose products of technical education are prepared which effectively serve (Goel & Vijay, 2017). The workforce of the 21st century is unique and can help individual only who acquired adequate skills. The unique characteristics of 21st century dynamism comprise of: (i) jet age or high tech demanding efficient use of technology in all areas of life; (ii) scientific and computer world; (iii) an era of highly skilled generalists and practitioners; (iv) an era requiring children to manage with intricacy through scientific and technological skills; and (v) a world where the foundations of education are more based on competence, efficiency, accuracy and effectiveness (Iroriteraye-Adjekpovu, 2013). These distinctive characteristics have made labor force usable in the world of work. In many countries, TVET helps to promote the socio-professional participation of adults and young people. Career pursuit is based on personal life goals and aspirations that help to avoid social exclusion and poverty (Billett, 2004; Virolainen & Stenstrom, 2014).

The developed countries experienced enormous flexibility and autonomy in their educational systems by integrating advanced technology. The nation's physical development is profoundly affected by the skills adopted and its community drawn from the existing educational systems. Most countries had significantly progressed by fostering well-organized TVET system (McGrath, 2012; Obwoye & Kwamboka, 2016). TVET program in the developed countries have been in existence for decades and are now widely known and well substantiated. For example, in Germany and Switzerland, the enrollment of TVET students is 80 percent and 20 percent or more than all 15 to 29-year-olds are enrolled in a work-study program, respectively (OECD, 2017 a).

Additionally, in Austria, the Czech Republic, Poland, the Slovak Republic, and Slovenia, more than half of the population achieved an upper secondary TVET qualification as their highest educational level. Nevertheless, in the Organization for Economic and Cultural Development on average, only 12 percent of all upper secondary school students are enrolled in the TVET program (OECD, 2017 b). Besides, the enrollment rate was 18 percent and 20 percent in Eastern Asia and Southern Asia respectively, which explains they have the lowest shares in terms of the enrollment status (OECD, 2017 b).

Despite the significance of Technical and Vocational Education and Training to rapid economic growth, the programs still seem far from receiving massive acceptance in South Asian countries like Pakistan, Nepal, Afghanistan, Sri Lanka, India, and Bangladesh. They have a low interest in TVET program due to poor perception of the society about TVET, which is eventually responsible for the low enrollment profile (Lee, 2020; Parrya & Hayden, 2015). However, there are two main challenges along with a lot of other numerous issues for the Pakistan and South Asians countries with respect to the skilled labor force. These challenges hamper national development in many developing countries (Sheikh, Sheikh, & Koreshi, 2019).

First and foremost, TVET is misconstrued by different people in the society and has been primarily regarded as occupational education attached to artisans and craftsman (those skilled in using their hands), and do not join in the form of education, which is suitable for the first-class system even though the highest experience and skill is the pre-requisite to have training in a TVET field (Yunos, Sern, & Hamdan, 2017). In the second place, a notion of a notable life has thus been implicitly shaped around the perfect of civilized liberty. In many civilizations working for a living has conventionally been supposed to be lowly paid, sometimes humiliating, and not a worthy way to spend one's time (Billett, 2014; Virolainen & Stenstrom, 2014). A delicate dilemma has emerged over the perceived gap between TVET and liberal academic education. Though the gap has been embedded, a problem of the low interest due to the negative perception of TVET field has expanded to a predominantly intense level. Therefore, attention to the fundamentals of education is the necessary basis for reforms required to make TVET attractive to broad sectors of the population and economy (Agrawal & Agrawal, 2017).

Pakistan is one of the highly populated developing nations of South Asia with the high proportion (64 percent) of the youth is between 15-30 years of age (Population Bureau of Statistics, 2019). Majority of the students aspire to enroll in the mainstream general education schools and only an insignificant segment enrolls in the TVET institutes as shown in Figure 1.1 three percent of enrollment in TVET institutions which is lower than their academic counterparts.

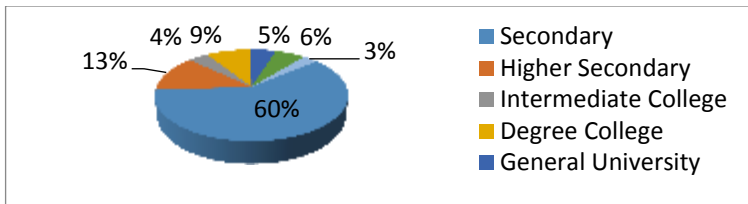


Figure 1.1: Enrollment Of Students In Different Education Sectors In Pakistan [Pakistan Education Statistics 2017-2018]

Another Figure 1.2 also showed only 3 % of students in Pakistan enrolled in TVET from the total population, which is lowest among the other developing nations, such as Sri Lanka, India, and Bangladesh and other Asian countries (World Bank, 2018). Additionally, in technical and vocational institutes, 350,000 Pakistani students are enrolled, while yearly 950,000 above is the demand of TVET graduates (TVETR, 2020).

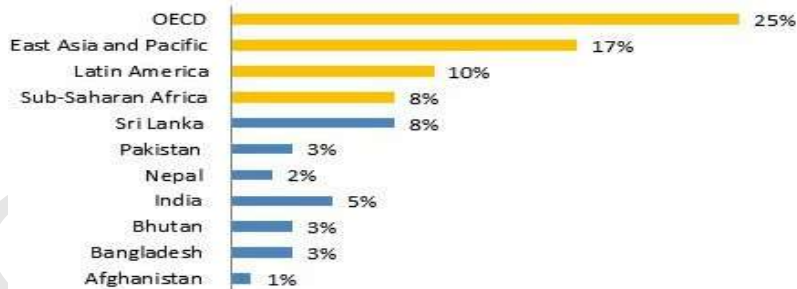


Figure 1.2: Enrollment in TVET by region [World Bank, 2018]

With the fast-growing youth population, Pakistan requires skilled TVET graduates who can fill the modern demands of the labour market and human capital for the development of the country (Akhtar, Yousuf, & Parveen, 2018; Chamadia, & Shahid, 2018). Government of Pakistan released vision 2025; it has been recognized the need for TVET that will spur economic development and help to achieve the vision of making the country a fully developed and industrialized by 2025 (Planning Commission, 2015). Economic development depends on multiple factors contributing to improving productivity, increasing

exports, and maintaining quality standards to compete internationally (Sarastuen, 2020). The sustainable supply of trained and skilled human resources becomes a determining factor and dominating key to achieving the vision 2025.

Technical and Vocational Education and Training is therefore as one of the most effective human resource development strategies that Pakistan needs to grip in order to decrease the demand and supply gap of the technical skilled workforce for fast national development (Nooruddin, 2017). In the Pakistani context, TVET term refers to the program of theoretical and hands-on training for the world of work and focused on the actual attainment of proficiency in manual skills. Skilled workers are generally associated with doing jobs with hands in Pakistan and many of the occupation and trades in TVET are regarded as ignoble and unbecoming. These trades considered for the poor and underprivileged (Alam, 2015). Due to this belief, many parents do not want their children to earn a living as a full-time carpenter, motor-mechanic, plumber, farmer, and brick-layer. Social and cultural issues contribute to low enrolment in TVET program and affecting students' interest in the TVET program (Ayub, 2017).

In Pakistan, TVET is facing many challenges across the country; cultural and social norms play a vital role in developing individual interest and keeping pupils reluctant to enrol in technical institutes (Chamadia & Shahid, 2018). Personal interest is a construct that plays a crucial role in understanding human behavior and motivation. It is acknowledged that individual interest rises in early childhood and is mostly consistent from childhood to young adulthood (Su, Stoll, & Rounds, 2019). The combination of psychological factors, background variables, and social influences can explain the development of individual interest (Wang, Degol, & Henry, 2019). Human development occurs within a context of the system that is formed by one's affiliations (e.g., family, neighbor, school, or childcare), associations of the different social groups, and significant socio-political climate (Osher et al., 2020).

Within the environmental paradigm, socioeconomic status is considered to be among the most influential contextual variables shaping interest, attitudes, and behaviors (Manstead, 2018). In a vocational psychological perspective, socioeconomic status is classified into social classes in terms of income, wealth, educational attainment and occupational prestige (Grusky, 2019). Many research findings have shown the importance of socioeconomic variables like parents' occupation status and education level on career interest, aspiration and expectation (e.g., Carolan & Wasserman, 2015; Jeynes, 2016; Lee & Byun, 2019) and influence multiple dimensions of an individual's life span (Kim et al., 2018).

The importance of social support in the career interest of their children is a critical factor in predicting the career interest of children's and task-related confidence, specifically during the early stages of adolescence (Liu & McMahon, 2017). Proper family support pertains to members who show concern toward each other and are willing to solve problems together (Haslam et al., 2017). Many sociological and psychological theories share the assumptions that parents often transmit their values onto their children and this can shape their children values (Grusec et al., 2000; Van Petegem et al., 2019). Research shows that parents and their young adults are now connected than past generations and children frequently pursue the endorsement of their parents (Corey, 2015). Lauermaun et al., (2017) found that children value support from parents as it is a greater influence on children's interest and career expectations compared to friends and teachers.

An additional determinant of behavior and highly associated with the career interest is vocational outcome expectations (Baglama & Uzunboylu, 2017). Vocational outcome expectations are defined as the inevitable consequences expected if a set of tasks is attempted to produce (Bandura, 1977; Isik, Jones, & Sidorova, 2013; Lent & Brown, 2008). The subpart of vocational outcome expectations is social approval (e.g., social appraisal), physical (e.g., money), generativity (e.g., contribution to others), relational (e.g., time or quality of close relationships) and self-satisfaction (e.g., intrinsic enjoyment) (McWhirter, Ramos, & Medina, 2013). Anticipating that involvement in an activity, such as interest in the subject, will bring positive outcomes (e.g., peer approval, money) and maintains the interest in the activity (Turner et al., 2019).

Among these variables, the most significant predictors of interest in secondary school students include vocational self-efficacy refers to an individual's beliefs in his or her own ability to successfully complete a task (Van Rooij, Jansen, & Van de Grift, 2017). If students do not have confidence in that they cannot be accomplished and succeed in a specific activity, their interests will decline in the activity (Huang, Zhang, & Hudson, 2019). A recent study showed students low self-efficacy towards skill acquisition and lifelong learning in schools and colleges in Nigeria. A larger number of TVET students showed a low level of assurance in their abilities to hold the skills and seldom extremely shy and restrained from going to workshops and laboratories where the machines, working tools and the equipment are fitted. While, some students showed less interest and no motivation in learning the skills and willing to face new challenges (Usono & Etuk, 2016).

However, in this study vocational self-efficacy is used as moderator which can influence on the relationship between socioeconomic status, social support, vocational outcome expectation and secondary school students' interest in the TVET program in Pakistan. The assessment of vocational self-efficacy as a moderator contributes to the previous literature on students' interest in the TVET program, since previous studies have merely examined the mediating effect of self-efficacy; they have also considered the moderating effect of

vocational self-efficacy but on other variables such as smoking behavior. In light of the above challenges, this study was intended to focus on the aspect of secondary schools students' interest in the TVET program. In addition, the present study aims to contribute to the TVET dialogue and expand the current literature about secondary school students' interest in the TVET program in Pakistan.

1.3 History of Technical and Vocational Education and Training in Pakistan

Pakistan inherited no formal Technical and Vocational Education and Training base at the time of independence in 1947 (Shah, Khan, Bokhari, & Raz, 2011). Technical and Vocational education was introduced in Pakistan in the mid-1950s, by setting up of two polytechnic institutes in Karachi and Rawalpindi. Since then, Pakistan's technical education system has undergone a series of developmental changes (TEVTA, 2004). These eras can be divided into two significant periods concerning technical and vocational education in Punjab, namely Pre-Technical Education and Vocational Training Authority (TEVTA) era in Punjab and Post-TEVTA era in Punjab (Hassan, 2007). However, TEVTA divides the pre-TEVTA period into five phases.

The first phase 1947-1957, was a phase of sensitization and orientation in which the council for Technical Education was set up in 1948 under the guidance of Quaid-e-Azam Muhammad Ali Jinnah (Shaikh & Shah, 2010). In Pakistan, the first Education Conference (1947) introduced technical subjects at the secondary school level to provide chances to the rural-based people and to release pressure on the labor market in cities (Government of Pakistan, 1947). In 1950, a Technical Educational Committee formulated the scope of vocational education at the secondary level. In 1951 is a joint conference of a Central Education Board, Inter-University Board (former University Grants Commission to Higher Education Commission now) recommended that agriculture and commerce should form compulsory part at the secondary level (Govt. of Pakistan, 1957).

The second period in the history of TVET was from 1958-1969, which witnessed the development and it enlarges the technical education program both in size and in range (Government of Pakistan, 1966). Furthermore, the first Polytechnic Institute for women was established in Lahore in 1967 as a technical education initiative (Government of Pakistan, 1969).

In the third period, TVET observed innovation and experimentation between 1970 and 1979. During this period, the one unit administration of West Pakistan was also dissolved, and old provinces of Punjab, Sindh, Khyber Pakhtunkhwa (KPK) Province, and Baluchistan were revived. In 1972, the Government of Pakistan announced Education policy for 1972-1980, which

recommended diversification of secondary education with a distinct stream for technical education at different levels (Education policy, 1972). This policy suggested that by 1980 the enrollment in the technical stream should reach 33%. Another significant development was the introduction of Matric numbers for students' identification purposes (Education policy, 1972; Mustafa, Abbas, Saeed, & Anwar, 2005).

The fourth phase, 1980-90, became the phase of implementation and expansion with the promulgation of the National Training Ordinance in 1980. By 1988, the participation of women in technical education had begun to rise, three women polytechnics were established at Faisalabad, Multan, and Bahawalpur (Janjua & Mohammad, 2008). Moving onto the last period under the classification being considered in this study, the qualitative improvement period in vocational training from 1991 to 1999. Summary of all five phases have shown in Table 1.1 below:

Table 1.1: Development Phases of TVET in Pakistan

Phase	Implementation Period	Level of Implementation
I	1947-1957	Initial Policy Formulation Period
II	1958-1969	Expansion and Development Period
III	1970-1979	Experimentation Period
IV	1980-1990	Second Expansion Period
V	1991-1999	Quality Improvement Period

[Source: Adopted from Hassan (2007)]

In some ways, technical education in Pakistan has made progress. It used to be considered something out of the mainstream of education. Now it has come to be looked upon as an integral part of education. Technical and Vocational Education and Training was almost neglected in the beginning, but as presented in the five phases, it has started gaining attention.

1.31 TVET in developed countries

China stands as a separate entity that had made tremendous progress in vocational education since 1970 and emphasized Technical Education curriculum at the school level. After 1978, a large number of government secondary schools were transformed into technical schools (Ling, 2015). The Czech Republic is among the few countries that enjoy a strong reputation for vocational education. In 2007, around 38 percent of high school students were enrolled in the TVET (UNESCO, 2009). Rather than leaving the system to market forces, the government has granted principals and teachers more flexibility to amend curricula and implement new occupational fields, in contrast to the particular skills related to a specific job. An additional significant feature they adopted 'open pathway' to higher education. The Maturita examination, which is a pre-requisite for university entrance exams,

can be taken by all secondary school students. Besides, some of the new post-secondary training institutions (established over the last ten years) permit students to transfer directly into universities (Maclean & Wilson, 2009), all of which help to boost the enrollment in TVET and contribute to improving the perception of TVET.

The Republic of Korea has devoted extra attention of high-skills manufacturing and export, about 40 percent of secondary level students are in TVET, and the employment rate for four-year college graduates was 56.7 % in 2018 while for vocational high school graduates it was 92 percent (Marope, Chakroun, & Holmes, 2015). Many developing countries and other donors have recognized Korea's Skills Development Program as one of the leading programs that contribute exceptionally to a global society based on their own experience of social and economic development. The program itself has evolved from a hardware approach, which is building infrastructure, to a software-based approach of establishing a sustainable TVET system that leads to employment.

There are three key lessons to be learned from international experience. Firstly, an increasing number of countries are preferred to defer TVET to higher secondary education because students are in best positioned to make rational career decisions (Postiglione & Tang, 2019). Secondly, to lessen the gap between general and vocational education particularly in lower secondary education. Many countries have made their secondary school education more relevant by complementing updated general content in addition to stressing on specific skills in important vocational preparation modules in general secondary education or occupational specific training in TVET institutions. The occupational skills adapt to the labor market's requirements, but usually not have an 'expiration date'.

Thirdly, developing countries can boost enrollment in the TVET program by allowing students to continue their studies or seek employment after the completion of TVET program. Enrollment in the TVET has increased in Norway and Austria, where this "double pathways" approached has been developed. A substitute to this approach adopted in the South Africa, Republic of Korea, Tunisia, Denmark, and Republic of Korea is to have the option for students to continue their education after completing a given TVET cycle (Chankseliani & Anuar, 2019).

1.3.2 Secondary Education in Pakistan

The importance of secondary education cannot be overemphasized in the system of education. It helps the child to acquire added awareness, skills and traits beyond the required level of education and its part as the bridge between primary and higher education (Meyer, Thomsen, & Schneider, 2019). The main factor that calls for the acquisition of secondary education in

Pakistan is that regrettably lower than 20 percent of the youth completes secondary education. In contrast, a meagre percentage of hand skills are acquired (Ministry of Education of Pakistan, 2018). Thus, a pursuing need to plan for developing a robust pool of skills among young people so that they can earn a reputable living for their families (Ministry of Education of Pakistan, 2018).

The education system of Pakistan consists of elementary (primary and middle), secondary, higher secondary, and Tertiary education. Primary school begins at the age of six-year grade first through fifth, after primary school and middle school start in grades 6th through 8th class. Secondary school starts in grade 9th through 10th, and higher secondary is of 11th and 12th class (Amir, Sharf, & Khan, 2020). After higher secondary, tertiary education begins at bachelor and master level. Earlier the degree program was two years at the university level still in recent times. Higher Education Commission phased out two years of Bachelor of Science/Arts degrees and extended its duration from two years to four years. While professional education like medicine and engineering program is acquired from university, has duration of four and five years. Likewise, for other professions, the various programs are offered as bachelors and master's degrees in information technology, agriculture, veterinary sciences and home economics for girls (Janjua & Mohammad, 2008).

Technical and Vocational education is another stream for the preparing of a skilled workforce and middle-level technicians, which comprises three-year education after secondary school. Moreover, different duration (six to eight months) certificate courses in vocational training are also offered in all technological fields for both boys and girls nationwide after class 8th or 10th (Ansari & Wu, 2013). In Pakistan, a transition for a student from general education to TVET is not simple because the TVET has often been related to a stigma that hinders the acquisition of personnel skill and development. One has to make a lot of effort to conquer these obstacles to move upward along the skill path to reach the pinnacle of the skill pyramid (Janjua & Mohammad, 2008).

In Pakistan, the TVET sector is operating in a two-layered pattern. Technical Education and Vocational Training Authorities (TEVTA) functions at the provincial levels. Whereas the National Vocational and Technical Education Commission (NAVTEC) functions at the federal level (Ahmed et al., 2018). Provincial education departments handling vocational institutes; however, provincial labor departments are administering technical training centers, in addition the program are administered by a number of federal-provincial and private agencies (Government Of Pakistan, 2015). Summary of the structure of the education system in Pakistan shown in Figure 1.3 below.

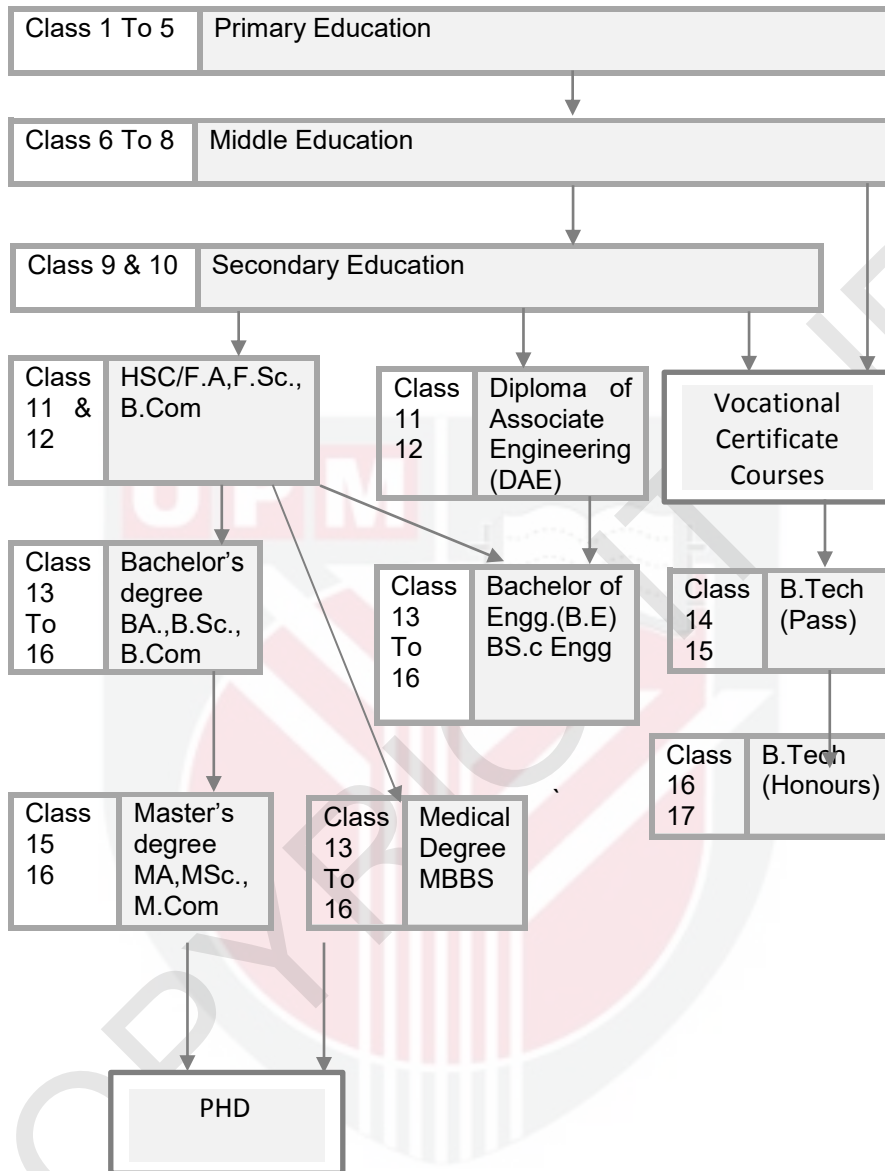


Figure 1.3: Structure of the Educational System in Pakistan [UNESCO, 2015]

1.4 Statement of the Problem

In Pakistan, students' low interest in the TVET program has been one of the main concerns in the field of education due to the lower social status, and an inferior option accorded to TVET in Pakistan (Ayub, 2017; Sheikh et al., 2019), which resulted in a decline in the supply of skilled labor force (Parrya & Hayden, 2015). Despite the government's several reforms, the development of the workforce with technical and professional skills has been the most neglected sector, and the formal government institutes have produced insufficient or a tiny portion of the skilled workforce (Janjua & Irfan, 2008; Nooruddin, 2017). A significant skill gap is faced, which is increasing day by day; such a widening difference is considerably contributing toward rising unemployment in various sectors of the economy (Janju & Irfan, 2008; Shah & Muhammad, 2017). The higher unemployment rate in Pakistan indicates that a large portion of potential human capital is still untapped. TVET is being promoted worldwide and can substantially overcome the threat of increasing unemployment. Most advanced economies also view TVET to reduce youth unemployment (Hanushek, Schwerdt, Woessmann, & Zhang, 2017).

In addition, the National Bureau of Statistics of Pakistan reported that unfortunately less than 20 percent of the youth complete secondary education in contrast, a small percentage of acquires hand skills (National Bureau of Statistics, 2019). Pakistan Ministry of education suggests that this issue can be addressed by building a strong pool of skills among young people to earn a respectable living for their families (Ministry of Education, 2018). Without developed human resource capital, specifically in technical and vocational skills, sustainable development goals (SDGs) and the socioeconomic targets of vision 2025 may not be met for Pakistan's population.

Technical and Vocational Education can play a pivotal role in reducing unemployment and poverty in Pakistan by developing interest in TVET program and employable skills in the youth. Students' interest in the TVET program is an area need to be address due to a shortage of professionals to meet emerging needs into the fields of TVET in Pakistan. It has become an overarching concern; there is a pre-requisite to identifying which factors influence students' interest in TVET program (Blattman & Ralston, 2015; Cheema, Khwaja, Naseer, & Shapiro, 2019). Furthermore, it requires a clear understanding of the other factors under the Social Cognitive Career Theory model that influence and discourage their interest in the TVET program.

The emphasis of career-related TVET research in Pakistan has been mainly anchored on facilities, funding, curriculum, enrollment (Chamadia & Shahid, 2018; Siddiqui, Hameed, Akbar, & Khan, 2019; Suleman, Hussain, & Kayani, 2017). There is a theoretical gap found in the literature on students' interest in TVET program as most of the existing literature in this area is based on the theory of planned behavior as these studies more focused on intention (Bhat

& Singh, 2018; Kyari, 2020; Mahmood, Al Mamun, & Ahmad, 2019). Additionally, there have been over 2000 research studies on interest among Holland themes only (Atitsogbe et al., 2018; Kim & Beier, 2020; Perera & McIlveen, 2018; Slot et al., 2020) in the STEM field. Limited attention has been given to examining the social cognitive career theory (Chachashvili-Bolotin, Lissitsa, & Milner-Bolotin, 2019) in TVET program specifically in Pakistan.

Additionally, even existing literature is insufficient to provide information regarding the contextual/environmental factors that influence interest development (e.g., socioeconomic status, vocational self-efficacy, vocational outcome expectations, social support, and student interest) within TVET in Pakistan. In the light of the above challenge, this study examined the social cognitive career theory model to predict the influence of socioeconomic status, vocational outcome expectation, social support, and interest in TVET among secondary school students' in Pakistan and determine the relationship of specific contextual factors on their interest in the TVET program. Certain contextual (e.g., socioeconomic status and perceived social support) and person cognitive (vocational outcome expectation and vocational self-efficacy) variables are selected to examine students' interest in the TVET program.

Hence, the current study used a quantitative approach to examine moderating effect of vocational self-efficacy on the relationship between socioeconomic status, vocational outcome expectation, perceived social support, and secondary school students' interest in TVET program among secondary school students in Pakistan.

1.5 Objectives of the Study

1.5.1 General Objective

The general objective of this research is to examine moderating effect of vocational self-efficacy on the relationship between the independent variables and students' interest in the TVET program among secondary schools in Pakistan.

1.5.2 Specific Objectives

This study examines the students' interest in the Technical and Vocational Education and Training (TVET) program among secondary school students in Pakistan. The objectives are too specifically:

1. To determine the level of socioeconomic status, vocational outcome expectation, perceived social support, vocational self-efficacy and students' interest in the TVET program among secondary schools in Pakistan.
2. To examine the relationship among socioeconomic status, vocational outcome expectation, perceived social support, and students' interest in the TVET program among secondary school students in Pakistan.
3. To determine the predictors (socioeconomic status, perceived social support, vocational outcome expectation) of students' interest in the TVET program among secondary schools in Pakistan.
4. To assess the moderating effect of vocational self-efficacy on the relationship between the socioeconomic status, perceived social support, vocational outcome expectation, and students' interest in the TVET program among secondary school students in Pakistan.

1.6 Research Questions

Based on the primary aim of this study and the accompanying research objectives. The following research questions for the study are outlined below:

1. What are the levels of socioeconomic status, social support, vocational outcome expectation, vocational self-efficacy, and students' interest in the TVET program among secondary schools in Pakistan?
2. Is there a relationship among socioeconomic status, social support, vocational outcome expectation, and students' interest in the TVET program among secondary school students?
3. What are the predictors (socioeconomic status, perceived social support, vocational outcome expectation) of students' interest in the TVET program among secondary schools in Pakistan?
4. Does the vocational self-efficacy significantly moderate the relationship between perceived social support, vocational outcome expectation and students' interest in the TVET program among secondary schools in Pakistan?

1.7 Research Hypothesis

Objective 2: To examine the relationship among socioeconomic status, vocational outcome expectation, social support, and students' interest in the TVET program among secondary school students in Pakistan.

H₁: There is a significant relationship between socioeconomic status and students' interest in the TVET program.

H₂: There is a significant relationship between social support and students' interest in the TVET program.

H₃: There is significant relationship between vocational outcome expectation and students' interest in the TVET program.

Objective 4: Does the vocational self-efficacy significantly moderate the relationship between social support, vocational outcome expectation and students' interest in the TVET program among secondary schools in Pakistan?

H₄: There is a significant moderating effect of vocational self-efficacy on the relationship between socioeconomic status, and students' interest in the TVET program.

H₅: There is a significant moderating effect of vocational self-efficacy on the relationship between vocational outcome expectation and students' interest in the TVET program.

H₆: There is a significant moderating effect of vocational self-efficacy on the relationship between social support and students' interest in the TVET program.

1.8 Significance of the Study

The aim of this study is to examine vocational self-efficacy as a moderator on the relationship between socioeconomic status, vocational outcome expectation, social support, and students' interest in TVET program among secondary schools in Pakistan. It will have theoretical and practical values to the field of education in general and Technical and Vocational Education and Training (TVET) in Pakistan.

Firstly, the findings of the research may assist educationists in knowing the levels of socioeconomic status, perceived social support, vocational outcome expectation, and students' vocational self-efficacy and interest in the TVET program in the Punjab province of Pakistan. At the same time, research would provide TVET administrators and teachers at this site a comprehensive look at students' interest in the TVET program and a platform from which to develop more effective strategies to promote and stimulate interest in the TVET program. Examining the present status of the students' interest in the TVET program also serve as reference material for other people to conduct a research of such magnitude. This study examines the contextual/environmental factors that affect students' interest in TVET might help to understand and facilitate Pakistani students' future academic and

career choices because the existing perception about technical education affects the skilled labor force ratio adversely becomes the source problem for human development agencies of the country.

Secondly, the study will assist in awareness and better understanding of students' interest in TVET program among secondary schools which can assist them to be effectively prepared for smooth transition from school to the changing world labor market. It will be recognized as an upfront source of information on this sensitive topic and will be proved beneficial and helpful for all stakeholders such as policymakers, planner, human resource development officials, concerned NGOs, principals of schools and colleges, labor market representatives and employers of technical jobs to comprehend the significance of the problems. They will share their contribution to uplift the dynamic participation rate of youth in socioeconomic development.

Thirdly, the finding of this research enriches the knowledge about the influence of the selected factors, namely socioeconomic status, social support, vocational outcome expectation, and secondary school students' interest in TVET program. Furthermore, the study would also provide an appropriate methodological approach regarding theories and models as well as a comprehensive and appropriate instrument measuring socioeconomic status, vocational self-efficacy, vocational outcome expectation, perceived social support, and students' interest in the TVET program.

Fourthly, in order to develop future TVET professional and literate society must create awareness of the various opportunities provided about TVET careers for students to consider the possibility of pursuing the TVET program in the future. Lastly, this research could assist psychologists and other professionals in developing appropriate prevention and intervention programs to improve these secondary school students' beliefs about TVET and the development of TVET interest with a positive experience.

1.9 Scope of the Study

This study examines students' interest in the Technical and Vocational Education and Training (TVET) program among secondary school students in Pakistan. Pakistan has four provinces and one Federal Territory; the present study is conducted in Punjab province. This study targeted all the public secondary school students from the twelve districts. Three districts were randomly selected from each (four) level of Human Development Index districts of Punjab. Therefore, the generalizability of the findings of the research is limited to students between the ages of 15 to 17 years in the region of Pakistan.

1.10 Limitations of the Study

There are a few limitations in this study. Firstly, only the survey questionnaire is used to obtain data for this research. So, students' response is limited to the items stated in the questionnaire. It also has to be acknowledged that the response given by the students in the questionnaire is based on self-perception, which might not truly portray an accurate picture on the students' interest in the TVET program.

In addition, this research only studied three independent variables and their relationship with student interest in TVET program. Other factors which can contribute to students' interest are yet to be studied. Thus, it is recommended that future research take into account the other unexplored variables so that a more comprehensive understanding concerning students' interest in the TVET program can be obtained.

1.11 Definitions of Key terms

The following key terms are carefully defined TVET, students' interest in TVET program, socioeconomic status, vocational self-efficacy, perceived social support, and vocational outcome expectation to eliminate any ambiguity that may arise from their usage in this study. The next is to inform readers about how these concepts were applied in this particular study.

1.11.1 Technical and Vocational Education and Training

Technical and Vocational Education and Training relates to the aspects of the educational system, in addition to general education which includes studying technologies and related sciences, and the acquisition of practical skills, knowledge, attitudes relating to occupations in different sectors of social and economic life (UNESCO, 2017). In this study, Technical and Vocational Education and Training refer to creativity, working with hands and inclination toward assembling and disassembling things and skills.

1.11.2 Interest in TVET program

Interest defined as being more permanently positive orientation toward a task or a domain that has value for that individual; here, it is less than the activity triggers the engagement than that the individual's prior knowledge, enjoyment and experiences of value in that context determine their interest (Ainley, 2012). In this study, interest in TVET program is viewed as the work-related interest and skills to help guide secondary schools students to a specific occupational area. For operationalizing interest, cognition

(knowledge), affection (enjoyment), and conation (motivation) facets have to be taken into account (Ainley & Ainley, 2012).

1.11.3 Socioeconomic Status

The socioeconomic status refers to an individual's or family's position in society and usually determined by the combination of educational level, occupational status, and income levels (Ovute, 2009). In this study, socioeconomic status is viewed as the social standing or class of secondary school students' or a student parents' economic and social position. For measuring socioeconomic status Socioeconomic Status Questionnaire was used, it was first developed by Agarwal et al., (2005) later modified by Dudeja et al. (2015) with six statements includes income, education, occupation, vehicle possession, number of earning members and number of siblings.

1.11.4 Social Support

Social support viewed as individual's experience of being respected, valued, and loved by others who are present in one's life (Vietze, 2011). In this study, social support refers to any form of encouragement, such as, moral, emotional, and material that secondary school students recognized or considered to be essential to their career which is being received from friends, family, and significant others (Chen et al., 2012; Zimet et al., 1988).

The Multidimensional Scale of Perceived Social Support was developed by Zimet et al., (1988) and also adapted into the Urdu language by Rizwan, (2010). This instrument is a 12 item self-report scale that designed to assess the respondents' perception of social support received from his/her friends, family and significant others (teachers, an adult). These sources of support also comprise the MSPSS's subscales, namely friends (fri), family (fam), and significant other (so).

1.11.5 Vocational Outcome expectation

Vocational outcome expectation referred to as one's beliefs about the prospects of experiencing primary vocational values such as prestige, status, income and productivity (Isik, 2013). In this study, vocational outcome expectation viewed as the academic behavior may be directed by the expectancy of physical, social, and self-satisfaction of secondary school students. Vocational outcome expectation was measured by Vocational Outcome Expectations-Revised (VOE-R) developed by McWhirter and Metheny (2009) with three-dimension physical (money), social (approval) and self-satisfaction was used as the instrument.

1.11.6 Vocational Self-efficacy

Vocational is defined as the acquirement of qualifications related to a specific profession, art or employment that provide skills as well as technical knowledge. Therefore, vocational self-efficacy defined as the confidence enacted when making effective vocational activities and generating positive outcomes regarding vocational development roles. Such roles include competencies concerning accurate self-evaluation, collecting information about vocations, goal setting, planning and problem solving (Betz & Schifano, 2000).

In this study, vocational self-efficacy is viewed as a secondary school student's confidence in completing a variety of vocational tasks. Vocational self-efficacy Questionnaire developed by Ali, McWhirter and Chronister, (2005) with five dimensions that include: self-appraisal, occupational information, goal selection, planning, and problem-solving were used as the instrument to measure vocational self-efficacy in present study. Vocational self-efficacy is interchangeably used with self-efficacy in this study.

1.12 Summary

This chapter includes an introduction, background of the research by looking at Pakistan's current education scenario. This chapter comprises of the general and specific objectives of the study, research questions, problem statement, and significance of the study was highlighted to address the importance of the study. Subsequently, the scope of the study, the assumptions, conceptual and operational definitions are also presented. All the above-raised issues were discussed in the first chapter.

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