

**TAKING AN ACTION APPROACH FOR DEVELOPING INDIVIDUAL
ENTREPRENEURIAL ORIENTATION THROUGH WISE PSYCHOLOGICAL
INTERVENTIONS**



**Thesis Submitted to
The Superior College Lahore
In Partial Fulfillment of the
Requirement for the Degree of
Doctor of Philosophy in Business Administration**

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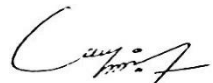
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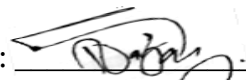
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DEDICATION

I wish to dedicate this thesis to my late sister, Ayesha. Though she is not there to see me accomplish this degree, the inspiration I got from her perseverance throughout her life guided and prepared me to face the challenges with faith and attain this landmark. I also dedicate this work to my supervisor; Dr. Ahmad Raza Bilal who has encouraged me all the way and whose reassurance has made me believe that I have the potential to bring this work to realization. I owe this work to his patient guidance, encouragement, and advice.

ACKNOWLEDGMENTS

In the name of Allah, the Lord of the worlds, the Most Compassionate, the Supreme authority of knowing the ultimate realities, who blessed me with the ability to complete this research work. I would like to express my special appreciation and thanks to my supervisor Dr. Ahmad Raza Bilal, who has been a tremendous mentor for me. I would like to thank him for encouraging my research and for allowing me to grow as a researcher. His advice on research as well as my career has been priceless. He has been an inspiration for me and his guidance in the handling of situations that were difficult to deal with served as a road map to my thesis completion.

A special thanks to my family. Words cannot express how grateful I am to my mother and father for all of the sacrifices that they have made on my behalf. Their prayers for me were what sustained me thus far. Moreover, I express my gratitude to my brother and uncle for their support throughout the thesis work. I would also like to thank all of my friends and colleagues who encouraged me in writing this dissertation and incited me to strive towards my goal.

Lastly, I would especially like to thank the study participants and their concerned authorities for granting data collection permission and supporting me throughout this phase. Without the cooperation of everyone, I would not have been able to attain this milestone.

ABSTRACT

Small and medium scale enterprises (SMEs) are elementary units of the economy in Pakistan because of their contribution toward the attainment of sustainable development goals. Yet the entrepreneurial intention, new start-up rate, and survival trend of SMEs are unsatisfactory in this region. Being mindful of the importance of the SME sector, several attempts have been made by the government and concerned authorities for its sustenance and progression. These top-down initiatives include improving the regulatory framework, extending credit facilities, and business training to foster the SME sector in terms of growth and new start-ups. However, these approaches are found to have trivial results for improving the success rate of operational SME owners as well as for boosting potential entrepreneurial action in youth. This dissertation has built on an emergent promising bottom-up perspective of actionable entrepreneurial psychology that convicts a psychological mindset is the founding element in entrepreneurial actions as well as a solution to greater societal and economic problems. It is grounded in recent evidence that has suggested the role of action-based wise training interventions for building psychological entrepreneurial capabilities in operational and potential entrepreneurs.

This dissertation has built on the tenet of action regulation and suggested individual entrepreneurial intention (IEO) as a precursor of SMEs' success and entrepreneurial intention in undergraduate business students of Pakistan. The dissertation is spanned across four studies, in which the first two are time-lagged surveys and others are embedded mixed-method quasi-experiments. First of all, in study 1, IEO has been deemed as an antecedent of SMEs' success through the mediating role of exploration activities, response performance, access to finance, and active social networking strategies. Through a multi-stage sample of 269 SME owners in Lahore, multiple mediation analysis was done through PROCESS model 4. The results offered support to all direct and indirect hypothesized associations, however, the indirect impact of response performance could not hold. In study 2, IEO was proposed to generate entrepreneurial intention in undergraduate business students through the development of alert scanning and search, association and connection, and evaluation and judgment. A multi-stage sample of 212 undergraduate business students was analyzed on a comparable pattern as study 1.

The findings substantiated the direct relationship and the indirect impacts of alert scanning and search and alert evaluation and judgment, nonetheless, the indirect impact of alert evaluation and judgment was not proved. This affirmed the role of IEO in sustaining success in operational SME owners and entrepreneurial intention in undergraduate business students. Then a prime contribution is made by developing a wise action-based training intervention of IEO and testing it in operational as well as potential entrepreneurs. Study 3 and study 4, used embedded mixed-method experiment to offer empirical evidence that IEO training is useful for entrepreneurs and student sample alike. A total of 85 (Training group: 43; control group: 42) SME owners and 109 (Training group: 53; control group: 56) undergraduate business students were drawn from the multi-stage sample in study 1 and 2 who gave participation consent. The series of independent t-tests and univariate ANCOVAs illuminated that IEO training is successful in generating reaction measures (satisfaction, utility, transfer motivation), IEO learning, behavior, SMEs' success as well as an entrepreneurial intention in the training group. These results were held for pre-test and post-test evaluations along with the group comparison. Contrary to the expectations of the same pre and post-test measures in the control group, the IEO learning, behavior, and SMEs' success deteriorated after training rather than being constant in study 3. Also, the results of the control group in study 4, showed that their entrepreneurial intention reduced overtime. Lastly, a supplementary qualitative insight was offered through a convenience sample of 12 participants in each group of studies 3 and 4, to propound substantiation and explanation of proved and unproved hypotheses. Thus, overall this dissertation has stepped a major milestone in the field of entrepreneurial psychology and action-based wise interventions for an encompassing sample of operational and potential entrepreneurs in the Pakistani context.

Keywords: Individual Entrepreneurial Orientation, Action Regulation, Psychology of Entrepreneurs, Training, Evidence-Based Management, SMEs' Success, Entrepreneurial Intention.

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LIST OF ACRONYMS

EO	Entrepreneurial Orientation
EBMgt	Evidence Based Management
IEO	Individual Entrepreneurial Orientation
SMEs	Small and Medium Scale Enterprises
SMEDA	Small and Medium Scale Enterprises Development Authority
SDGs	Sustainable Development Goals

DEFINITIONS

Individual Entrepreneurial Orientation (IEO): IEO encompasses autonomy orientation, innovativeness, risk-taking, proactive personality, and competitive aggressiveness in the case of operational entrepreneurs. For students' IEO only risk-taking, proactive personality, and innovativeness are considered

Individual Entrepreneurial Orientation (IEO) Training: An action-based intervention for IEO is developed that spanned over 24 contact hours and teaches the IEO to operational and would-be entrepreneurs by practical exercises of learning by doing.

Exploration Activities: Activities of SMEs' owners for the identification and exploitation of opportunities in the market and to pursue improved ways of doing business by alternative structure, content, and governance are known as exploration activities.

Response Performance: The activities of SMEs' owners to utilize the existing resources intelligently, creatively, and timely to respond to the needs of market adaptations are termed as response performance.

Access to Finance: Access to finance refers to the ability of SMEs' owners to obtain the financial resources from external sources and the perceived ease in this process.

Active Social Networking: The actions of SMEs' owners for developing and broadening the relationships with concerned people for extending and growing business are known as active social networking.

Entrepreneurial Alertness: Entrepreneurial alertness comprise three dimensions i.e. scanning and search, association, and connection along with evaluation and judgment.

Kirkpatrick's Training Evaluation Criteria: The IEO training outcomes are measured by Kirkpatrick's (1975) criteria in terms of reaction (the satisfaction of trainees with content and method), learning (knowledge trainees gain about the target variables), behavior (changed attitude of participant regarding the targeted variable), and results (outcomes of trained behavior). For this research the target variable is IEO and the result for operational entrepreneurs is SMEs' success and for would-be entrepreneurs, it is the development of entrepreneurial intention.

SMEs Success: For survey study the perceived success is measured using the indicators of quality and innovation in products, customer satisfaction, employee relations, market penetration, financial management, productivity, profits, and market share. For experimental intervention the success is measured by examining subjective indicators of an increase in sales, profits, employees, and customers.

Entrepreneurial Intention: It is defined as a mental state that directs attention and action of a person toward being self-employed as opposed to opting for a job in an organization.

CHAPTER ONE: THE INTRODUCTION

This chapter gives an introduction to the dissertation topic by highlighting the importance of SMEs' performance and entrepreneurial intention of business students in Pakistan. The problem statement is stated, relevant research gaps are identified and the research objectives and questions are formulated. The chapter continues by elaborating on the rationale of this research by explaining the justification examining individual entrepreneurial orientation (IEO) for operational (SME owners) and would-be entrepreneurs (undergraduate business students) and its link to the success and development of entrepreneurial intention. It gives the arguments for investigating the mediators of IEO and outcomes, and the development of a psychologically grounded IEO training program to foster the entrepreneurial mindset. Moreover, the justification for bifurcating the thesis into four studies and two populations, their interrelationship, and sequence is offered. The significance is explained in terms of theory and practice and conceptualization of key variables is given. The definitions of study variables key concepts is provided. Lastly, an insight into the thesis organization is offered along with a summary.

1.1 Background

Shane and Venkataraman (2000) define entrepreneurship as discovering, evaluating, and exploiting opportunities for the creation of new products and services. It is attributed as “the main vehicle of development” (Anokhin, Grichnik, & Hisrich, 2008, p. 117), “engine of economic growth” (Holcombe, 1998, p. 60) and “job creation” (Burton, Fairlie, & Siegel, 2019, p.1). Developing countries have a poor state of economic progress, health facilities, educational services, unemployment, energy crisis, high poverty rates, and environmental concerns duly reflected in a low Human Development Index (HDI). Such countries are continuously striving for the attainment of economic advancement by enhanced industrial development (HDR, 2018).

Pakistan is an emerging economy with an HDI of 0.56 (150th out of 189 countries), that brings it in the category of developing countries (Index Mundi, 2019). Poverty alleviation and economic growth are two of the prime motives in the United Nations' sustainable development goals (SDGs) (UN.Org, 2015), and developing nations are found more vulnerable in this regard

(Sarvajayakesavalu, 2015). Entrepreneurial activities have a great impact on innovation, employment, and economic development all around the world (Mensmann, 2017). Keeping in view the above-mentioned scenario, entrepreneurial undertakings carry even greater importance for developing countries (Bruton, Ketchen, & Ireland, 2013) like Pakistan. “Doing business report” indicates that Pakistan has reached 108th rank as compared to its 136th position last year. This shows improving the situation for business operations and start-ups, but it is still lower than the regional counterparts like India (63rd rank) and Sri-Lanka (99th rank) and the developed countries i.e., Canada (23rd rank) and USA (6th rank). This means that starting and operating a business is still difficult in this region (Doing Business Rankings, 2020). In this backdrop, the detection of factors that promote the growth of entrepreneurial activities in developing nations is an urgent call (Mensmann, 2017).

Relevant to this issue two population groups are important; one is the operational business owners and others are the potential business owners (Chaoui, 2017; Sutter, Bruton, & Chen, 2019; Piselli, Loni, Colyard, & Nordquist, 2019). Because economic development via business activities relies on improving the present and future business operations (Frese, Gielnik, & Mensmann, 2016). In the operational business domain, the reason for choosing SMEs’ owners is that in Pakistan, this business sector occupies 90% of total non-agricultural business enterprises (SMEDA, 2019). Pakistan needs to spur growth of SMEs for economic development (Ali, 2018; Raza, Minai, Zain, Tariq, & Khuwaja, 2018), as well as, to unlock their potential achieve Sustainable Development Goals (SDGs) of poverty reduction, economic acceleration, and decent work (Chaoui, 2017; Sutter, Bruton, & Chen, 2019). Moreover, with regard to potential business owners, Pakistan has 64% youth population. To accelerate economy, there is a call for developing the entrepreneurial intentions in university students for new business start-up (Farooq et al., 2018; Samo, 2019; UNDP, 2019) and subsequent attainment of SGDs (Piselli et al., 2019). From this perspective business students who are specifically taught the dynamics of not only managing the business as an employee but also to be a business owner are valuable subjects (Egerova, Eger, & Micik, 2017; Hussain, 2018).

In this aspect apart from the external and macro-level factors like government policies, economic conditions, infrastructure, and regulatory mechanisms, there is a need to focus on the micro-level psychological factors by taking a bottom-up approach (Mensmann, 2017). The foundations of this argument are built on the seminal work of Schumpeter (1934) who gave the “individualistic model of entrepreneurship” stating entrepreneurs are the economic agents that

work to realize new ideas and combinations. To have a better comprehension of the factors that spur SMEs' growth in terms of improving the quality and number of business ventures, psychological factors offer an important area of investigation (Frese et al., 2016). Therefore, understanding the psychological mindset of the existing as well as potential business owners is a fruitful avenue because of the importance of individual actions in business actions and outcomes (i.e., start-up and business growth) (Ahmed, Islam, & Usman, 2020; Pettinger, 2019).

The size of the firm determines the extent to which the owners play a role in business operations. In contrast to larger size firms in which structure and multiple decision-makers determine the fate of the business, SMEs' owners are core agents in their business operations (Entrialgo, Fernandez, & Vazquez, 2000). The same is true for business students, who have to make the career choice of being self-employed (Bolton & Lane, 2012). Thus, examining the individual-level entrepreneurial orientation (IEO) of SME owners and business students is a relevant area of interest. Both of them develop strategies, make decisions, and takes actions for their present or future business venture.

IEO is derived from the strategic concept of Entrepreneurial orientation (EO) comprising risk-taking, innovation, and proactive personality emerged as an important variable in deciding the business outcomes (Rauch, Wiklund, Lumpkin, & Frese, 2009). Lately, the individual level conceptualization of EO surfaced as a precursor of SMEs' success (Krauss, Frese, Friedrich, & Unger 2005) as well as entrepreneurial intention (Bolton & Lane, 2012). Orientation determines the beliefs, attitudes, and behaviors of a person relative to a specific subject (Mehrabian, 1967). The individual-level EO construct was referred to as individual entrepreneurial orientation (IEO) made of seven dimensions i.e. autonomy-orientation, learning-orientation, achievement orientation, risk-taking, innovativeness, competitive aggressiveness, and proactive personality (Krauss et al., 2005). The psychological viewpoint on EO claims that the owner of a small or medium scale business determines the mission, vision, culture, strategies, and goals (Frese, Gelderen, & Ombach, 2000). The IEO construct entails the owners' psychological characteristics determining their behavioral, cognitive, and affective components in conducting day to day business operations (Eagly & Chaiken, 1993). Thus, the SME owners that have a strong orientation for learning, achievement, autonomy, innovation, risk-taking, proactiveness, and competitive aggressiveness and depict it in their behaviors and business operations have high IEO.

The conception of IEO is not only beneficial for the existing entrepreneurs (SME owners), but it is equally important for the individuals that aspire to be entrepreneurs (business students). In the present era, business students are one of the major groups representing the future of new start-ups (Sahoo & Panda, 2019). Harris and Gibson (2008) argued individual behaviors and attitudes impact their propensity of business start-up. Therefore, psychological characteristics are determinant of students' entrepreneurial intentions (Keat, Selvarajah, & Meyer, 2011; Marques, Ferreira, Gomes, & Rodrigues, 2012; Robinson & Stubberud, 2014). Students that have more IEO have enhanced entrepreneurial intention (Ibrahim & Lucky, 2014; Sahoo & Panda, 2019). For the population business students, three dimensions of IEO i.e. proactive personality, risk-taking, and innovation are considered as per the conceptualization of Bolton and Lane (2012).

EO research, in general, called for finding the actionable characteristics that act as conduits in linking EO with its outcomes (Li, Huang, & Tsai, 2009; Yeniaras & Unver, 2016; Zhang, Edgar, Geare, & O'Kane, 2016). Most of the research in the field of entrepreneurial psychology lacks adequate emphasis on how the psychological attitudes of entrepreneurs impact their behavior and business outcomes (Kantur, 2016). Based on the Theory of Action Regulation (Frese, 2009), it is important to know what are the exact actions that link IEO with SMEs' success and entrepreneurial intention of business students.

The above arguments indicate the significance of psychological aspects for the development of entrepreneurial activities and maintaining the successful survival of ventures. But this raises a question, 'how operational and potential entrepreneurs can develop their psychological abilities?' Glaub and Frese (2011) presented the answer this question by emphasizing the importance of entrepreneurial training for the development of psychological capabilities in operational and potential business owners. As opposed to the relatively permanent personality characteristics of individuals that have little tendency to change over time, entrepreneurial attitudes tend to change over the period of time depending on the exposure to outside factors (Ajzen & Fishbein, 1977). In the comprehensive critical review of psychological entrepreneurial training programs in the developing world, it was found that operational small business owners and aspiring business owners comprised their participants (Glaub, 2009). Recent scientific knowledge has led to the development of psychological interventions that have proven to be successful as compared to traditional business-oriented training (Campos et al., 2017; Frese & Gielnik, 2014; Glaub, Frese, Fischer, & Hoppe, 2014).

Furthermore, to have a clear link to psychological training programs with desired outcomes, these psychological traits are trained and taught, through evidence-based management (EBMgt) using action regulation theory. SMEs' success occurs because their owners take actions and exploit the market opportunities, thus action is a prime factor in understanding the link of psychological traits of entrepreneurs and their link to individual and organizational outcomes (Rousseau & McCarthy, 2007). Such training interventions are grounded in theory; theoretical knowledge is translated into practice and empirical evidence that training results in desired behavior and tangible business outcomes is obtained (Frese, Rousseau, & Wiklund, 2014).

It offers evidence that a new approach helping developing nations to strengthen their SME sector is action-based, theoretically rigorous psychological training programs (Campos et al., 2017; Glaub et al., 2014). IEO is a psychological construct that is actionable (Frese & Gielnik, 2014) and has proven a relationship with the development of entrepreneurial intention in students and SMEs' success (Bolton & Lane, 2012; Krauss et al., 2005). This makes it a suitable variable to be used in the development of a psychological training program for promoting business stimulation in Pakistan.

Building on the above arguments through the lens of theory of action regulation, this research focuses on IEO as a precursor of SMEs' success and business students' entrepreneurial intention through action characteristics. Moreover, it is claimed that IEO is a trainable construct (as it is an actionable psychological construct with empirical link to business success and entrepreneurial intention of students). Hence, its training is beneficial not only for the SMEs' success but also for developing the entrepreneurial intention in the business students.

1.2 Problem Statement

Pakistan's government committed to the attainment of UNSDGs nearly a half-decade ago (Sheikh, 2016). In this backdrop, the goals of i.e., poverty reduction (goal 1), decent work and economic growth (goal 8), industry innovation and infrastructure (goal 9) pertain to the state of entrepreneurial undertakings (Apostolopoulos, Al-Dajani, Holt, Jones, & Newbery, 2018; UN.org.pk, 2020). Pakistan at present seems to lag behind these goals with around 29.5% of the population living below the poverty line (ADB, 2018) and an unemployment rate of

6.1% (Trading Economics, 2019). Improving the socio-economic landscape requires the improved state of operational and potential business endeavors (Frese, Gielnik, & Mensmann, 2016) in which the role of SMEs and business students is paramount (Farooq et al., 2018). There is an inherent entrepreneurial aversion in Pakistani society (Iftikhar, 2016). Moreover, both of these stakeholders for entrepreneurial stimulation are facing challenges in the Pakistani context. Such that Pakistani SMEs are facing barriers in their growth and survival (Hyder & Lussier, 2016).

As per SBP (2019) the nonperforming loan (NPL) statistics of SMEs show an alarming situation with the present NPL ratio of 16.57% that is much higher than the counterparts in developed nations (See section 2.2.3. for further details). Moreover, the doing business rank of Pakistan has gradually declined over time, and out of 190 nations, Pakistan ranks 136th (Trading Economics, 2019). Apart from the operational entrepreneurs, the ‘Global Entrepreneurship Development Institute’ ranked Pakistan as a 120th (score of 15.6 out of 100) nation based on its aspirations, attitude, and abilities toward entrepreneurship signaling a low entrepreneurial intention (GEDI, 2019) (See section 2.3. for further details). Pakistan has 60% of the population that is below the age of 30 years and the youth mostly have to pursue semi-skilled low paid jobs instead of creating new business ventures (Qureshi & Mian, 2018). As per the number of passing out graduates Pakistan needs 1.3 million job creation each year (Tribune.pk, 2018). This shows the paradox of insufficient job opportunities and a dearth of requisite economic acceleration created by sluggish business growth that occurs in developing economics in which youth is inactive in employment creation (Nyoni, 2018).

Taking a deeper insight into the incapability of existing entrepreneurial set-up in having optimal contribution towards economic progression and ultimate attainment of SDGs, some specific issues are concerning. For the Pakistani SME sector, the economic upheavals, poor law and order situation, institutional and political malpractices have increased the rate of failure. Besides, SMEs are focusing on products that have a low degree of value addition, poor information management, energy issues, low degree of strategic planning, and lack of financial know-how, low skilled human resources, and non-aggressive lending initiatives by banks (SMEDA, 2019). In this regard, this dissertation has focused on some key issues of Pakistani SMEs owners. Firstly, SMEs in all sectors are more focused on being efficient by following standard procedures and imitating the larger counterparts in local and international markets, rather than being innovative.

The stifling innovation and restraints to the exploration of new ideas and active experimentation are some of the reasons for sluggish SMEs' performance (Ahmad, 2018). Secondly, responding to the market changes in a timely fashion is essential for SME survival and an anticipatory capacity to actively seize the market opportunities and adapting to changes is the cornerstone of SMEs' success (Hughes, Hughes, & Morgan, 2007). However, a majority of SME owners are only reactive in responding to changes in demand and technology (Afraz, Hussain, & Khan, 2014; Malik, 2018). Moreover, Pakistani SMEs are not adequately sensitive in adapting to market challenges and being vigilant to competitors' moves (Raza et al., 2018). Thirdly, a World Bank survey on constraints to SMEs' growth indicated access to finance as another barrier in realizing the potential of this sector (Kumar, 2017). Specifically, Pakistani SMEs owners have to face difficulty in accessing adequate financial resources to run business operations (Shah & Syed, 2018; Shaikh & Khoso, 2019). Lastly, in developing markets like Pakistan, the institutional framework is not very strong and informal networking plays an important role in growth and survival of SMEs (Bika & Kalantaridis, 2019; Mubarik, Devadason, & Govindaraju, 2020; Sigmund, Semrau, & Wegner, 2015) but most of the SMEs owners do not actively take steps in this regard (Stam, Arzlanian, & Elfring, 2014).

Pertaining the business student population, it is reported that in developing countries most of the youth are not involved in active scanning, evaluation, and judgment of market information regarding new technologies, government regulations, economic indicators, and changes in consumer trends to develop viable business ideas (Sharma, 2019). For cultivating the entrepreneurial capital of Pakistan it is important that the students actively keep themselves informed about the business opportunities in the market and initiate business prospects (Samo & Hashim, 2016) rather than being passive job seekers (Nyoni, 2018).

For the attainment of greater economic SDGs and betterment of entrepreneurial scenarios, the use of the 'bottom-up' approach is suggested (Apostolopoulos et al., 2018). This requires the improvement in the psychological mindset to take entrepreneurial action (Frese, 2009; Saseendran & Salman, 2019). In this regard, the role of action-based psychological entrepreneurial training for operational as well as potential start-ups is paramount (Campos et al., 2017; Frese, Gielnik, & Mensmann, Gielnik et al., 2015). Referring to the population of this research, for SMEs, Small and Medium Scale Enterprise Development Authority (SMEDA) offers nearly 230 training courses for the development of sector-specific skills (SMEDA, 2019). The prime focus of SMEDA's training programs remained on business skill

development, whereas, the recent evidence has suggested the importance of psychological interventions that have been linked to small business success and outperformed traditional business training programs (Campos et al., 2017).

Also, Higher Education Commission (HEC) and universities are making efforts to improve the entrepreneurial culture for business students by promoting entrepreneurial education, training, and the establishment of incubation centers that offer support services for new startups (Hec.gov.pk, 2018). Although it is an encouraging trend, there is still much to be done for matching international standards of entrepreneurial education that prepares youth to become job creators (Qureshi & Mian, 2020). Moreover, the development of entrepreneurial focus in business students is in the emerging phase and requires further up-gradation and a shift from the extant traditional business curriculum is required in Pakistani business schools (Amjad, Rani, & Sa'atar, 2020a, 2020b). The use of action-based teaching for business students is advocated for improving entrepreneurial alertness as well as for developing the entrepreneurial mindset of students (Mauer, 2019; Zulfiqar, Sarwar, Aziz, Chandia, & Khan, 2019). Moreover, the role of psychological factors in building the entrepreneurial intention of students is an emerging area (Eid, Badewi, Selim, & El-Gohary, 2019). It signals a room for improvement in promoting and nurturing entrepreneurial mindset in business students by using psychological action-oriented teaching of business courses and offering contemporary training programs and workshops (Eid et al., 2019; Javed & Ayub, 2018; Qureshi & Mian, 2018; Zulfiqar et al., 2019).

Taken together, Pakistan is facing the dilemma of the sluggish economy given the underperforming SMEs and passive mindset of youth that is more focused on getting jobs rather than creating them. Extant training and development opportunities in this regard fall short of the latest action-oriented psychological content to resolve this concern. Therefore to realize the full potential of these training initiatives, improvement is required in terms of training methods and content (Campos et al., 2017; Eid et al., 2019). Despite the evidence of problems in SMEs' performance and lower entrepreneurial intention in business students, the research in this regard is still insufficient to offer a workable solution. Past two decades have witnessed interest of entrepreneurship researchers in finding out the causes of success/failure in SMEs (Bilal et al., 2016; Baidoun, Lussier, Burbar, & Awashra, 2018; Moeuf et al., 2020) as well as the factors that develop entrepreneurial intention (Al-Jubari, Hassan, & Linan, 2018; Arranz, Arroyabe, & Fdez, 2019).

The research focused on external factors like economic conditions (Ihwa, 2009; Petzold, Barbat, Pons, & Zins, 2019; Sainidis, Robson, & Heron, 2019), market conditions, institutional support (Franco & Haase, 2010; Forkuoh, Li, Ampadu, & Osei, 2016), government support (Doh, & Kim, 2014; Meshram & Rawani, 2019), government policies (Dosumu, Hussain, & El-Gohary, 2020; Eniola & Entebang, 2015; Hussain, Si, Xie, & Wang, 2010), regulatory requirements (Ali, 2018), competition, crime, logistics (Fatoki, 2014), and corruption (Bilal et al., 2016; Van Vu, Tran, Van Nguyen, & Lim, 2018).

Other internal causes such as managements' knowledge, skills, staff training, and education, staff retention, product/service quality, owners' experience, customer focus, and relations, team management, technical knowhow, firm size, industrial factors, technological factors, access and use of market information (Arasti, 2011; Bala & Feng, 2019; Fatoki, 2014; Hussain et al., 2010; Glas & Ebig, 2018; Radzi, Nor, & Ali, 2017; Seeletse, 2012; Teng, Bhatia, & Anwar, 2011), financial resources (Franco, & Haase, 2010; Kambwale, Chisoro, & Karodia, 2015; Malik, 2019), business planning, effective partnership, professional advice, record keeping (Baidoun et al., 2018; Gyimah, Appiah, & Lussier, 2019; Hyder, & Lussier, 2016), attitude towards technology, supplier relations, innovation, and human capital (Ali, 2018; Malik, 2019) have also been investigated. Entrepreneurs' characteristics have also been studied as potential factors in making SMEs survive or fail i.e., educational qualification, age, and ethnicity (Bala & Feng, 2019; Lussier & Halabi, 2010), gender (Weber & Geneste, 2014; Watson, 2020), entrepreneurial competencies (Ahmad, Ramayah, Wilson, & Kummerow, 2010; Mamun, Nawi, Permarupan, & Muniady, 2018; Malik, 2019). Besides, personality traits of entrepreneurs such as stress tolerance, openness to experience, extroversion, emotional stability, self-confidence, rigidity, optimism carry an important role in deciding whether the business will fail or succeed (Isaga, 2018; Katongole, Ahebwa & Kawere, 2013; Rauch, & Frese, 2007).

About entrepreneurial intention, researchers have ascertained that certain traits like locus of control, self-efficacy, risk-taking propensity, optimism, creativity, ambiguity tolerance, and independence and personal desirability are tied to the intention of business initiation (Brandstatter, 2011; Esfandiar, Sharifi-Tehrani, Pratt, & Altinay, 2019; Fuller, Liu, Bajaba, Marler, & Pratt, 2018; Mufti, Parvaiz, Qadus, & Rahman, 2019; Ozaralli & Rivenburgh, 2016). Furthermore, big five personality traits, personal attitude, and perceived behavioral control have also been investigated (Agolla, Monametsi, & Phera, 2019; Zhao et al.

2010; Saeed et al. 2013). Moreover, motivational factors i.e. drive for money; security, and status have also been linked to the aspiration of being an entrepreneur (Sanchez & Sahuquillo, 2018; Carsrud & Brannback, 2011). Other studies have revealed that family background, social norms, gender, education, and training are important factors in forming entrepreneurial orientation (Jahani, Babazadeh, Haghighi, & Cheraghian, 2018; Mufti et al., 2019; Sanchez, 2011). Contextual factors like relational and structural support (Turker & Selcuk, 2009), culture (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012; Nwuba, 2018; Ozaralli & Rivenburgh, 2016), regional influences (Kibler, 2013) also impact ones' decision of stepping up in the field of entrepreneurship.

Examining the psychological aspects of entrepreneurship is not a new research avenue, as Schumpeter (1934) and later McClelland (1967) have asserted entrepreneurial psychology to be of central importance. But after that, for a long period of time, the research in entrepreneurship was dominated by economic and strategic perspectives (Kirchhoff, 1992). The recent surge in competition, dynamism, and contemporary challenges facing SMEs has made it important to put the 'person to be back in entrepreneurship' (Baum et al., 2014; Frese, 2009; Mooradian, Matzler, Uzelac, & Bauer, 2016; Saseendran & Salman, 2019)

To have a better comprehension of the factors to spur SMEs' growth in terms of improving the quality and number of business ventures, psychological factors offer an important area of investigation (Frese, Gielnik, & Mensmann, 2016). Though past literature has examined some psychological variables i.e., cognitive bias (Baron, 2004; DeCarolis & Saporito, 2006; Mellahi & Wilkinson, 2004; Ucbasaran, Westhead, Wright & Flores, 2010), entrepreneurial passion (Gielnik, Spitzmuller, Schmitt, Klemann, & Frese, 2015), personal initiative (Glaub et al., 2014; Mensmann, 2017), entrepreneurial burnout (DeMol, Ho, & Pollack, 2016) and individual entrepreneurial ordination (Krauss et al., 2005; Bolton & Lane, 2012). Yet, psychology as a predictor of financial and non-financial indicators of business success; as well as a solution to greater societal and economic problems has not attained due attention in empirical research (Palmer, Niemand, Stockmann, Kraus, & Kailer 2019). Some of the models to explain entrepreneurial intention have been developed in early psychological research on entrepreneurship behavior i.e. behavior theory (Ajzen, 1991); social learning theory, self-efficacy paradigm (Bandura & Wessels 1997), and economic-psychological model (Davidsson, 1995). Most researched psychological factors as an antecedent of entrepreneurial intention were creativity, passion (Biraglia & Kadile, 2017), self-efficacy (Hsu et al., 2018),

IEO (Bolton & Lane, 2012), personality traits (Zhao, Seibert, & Lumpkin, 2010), education, gender, (Nowinski, Haddoud, Lancaric, Egerova, & Czeglédi, 2019), and cognitive-styles (e.g., Kickul et al. 2010). However, until recently Ferreira, Fernandes, and Raposo (2018) emphasized the importance of having an integrative psychological model in explaining entrepreneurial intentions and indicated a dearth of such models. They offered a model with proactive personality, risk-taking, and self-efficacy as important elements in developing entrepreneurial intention. Moreover, Esfandiar, Tehrani, Pratt, and Altinay (2019) also indicated socio-psychological variables as an important area of investigation in shaping entrepreneurial intention in undergraduate and postgraduate students still, the research stream in this regard is not well developed.

This dissertation aims to extend the field of entrepreneurial psychology for the success of SMEs as well as for the development of entrepreneurial intention in business students by focusing on the construct of individual entrepreneurial intention (IEO). Most of the previous research has paid attention toward examining the entrepreneurial orientation at the firm level (Baker & Sinkula, 2009; Kautonen, Tornikoski, & Kibler, 2011; Linan et al., 2011; Stam & Elfring, 2008; Wales, 2016; Wiklund & Shepherd, 2005). Organizations, specifically those at small and medium scale, are affected by the behavior of the owner, so it is justifiable to examine the construct at an individual level for operational entrepreneurs (Krauss et al. 2005) and potential entrepreneurs (Bolton & Lane, 2012). Yet it has attained scant attention in entrepreneurial research and a few studies have investigated its impact on entrepreneurial intention (Awang, Amran, Nor, Ibrahim, & Razali, 2016; Bolton & Lane, 2012; Koe, 2016), and business success (Krauss et al., 2005). Furthermore, EO research in the context of Pakistan only focused on its firm-level conceptualization and examined its association with SMEs' performance. The impact of EO on SMEs' performance was examined through the moderating factor family relationship in the manufacturing sector (Akhtar, Ismail, Hussain, & Rehman, 2015). Later on, EO and SME performance links were examined through the mediating role of transformational leadership (Fayaz & Shah, 2017) and total quality management (TQM) (Imran et al., 2018). EO was also investigated as a moderator in learning orientation and SMEs' success by Hussain et al. (2018).

Though the link of IEO and SMEs' success (Krauss et al., 2005) and entrepreneurial intention (Bolton & Lane, 2012; Koe, 2016) has been established in a handful of studies, yet there is need to examine the underlying mechanism that links IEO with its outcomes (Neneh,

2019; Palmer et al., 2019). The theoretical advancements in the field of entrepreneurial psychology have advocated unleashing the role of ‘entrepreneurial actions’ that create an association in psychological orientations and their outcomes (Kantur, 2016). It was stated by Frese (2009) in the theory of action regulation that the psychological factors must translate into actions for bringing out entrepreneurial success or developing entrepreneurial intentions. In this regard, Bolton (2012) emphasized the importance of investigating the mediating mechanisms linking IEO and its outcomes.

The research in the field of entrepreneurship (SMEs success, the entrepreneurial intention of business students, entrepreneurial training) needs further improvement in methodological rigor. The mere use of interviews and surveys do not offer a holistic answer to these questions in a methodologically sound manner (Lohrke, Holloway, & Woolley, 2010). Colquitt (2008) emphasized the manipulations in a study that offers strong ground for establishing causality, specifically in cases where complex causal associations exist. Such designs are useful for entrepreneurial scholars to disentangle complex phenomena (Chan & Park, 2015; Kraus, Meier, & Niemand, 2016; Vandor & Franke, 2016; Xiaoyu, Xianxian, Yida, Jinyun, & Wenping, 2019). The use of longitudinal/time-lagged designs has been advocated in as a basis of improving rigor and quality of research results and explaining entrepreneurial outcomes (Delmar & Johnson, 2015; Gielnik, Spitzmuller, Schmitt, Klemann, & Frese, 2015; Sahinidis, Polychronopoulos, & Kallivokas, 2019). The mixed-method research is encouraged in to unravel the complex relationships among variables and to impart a holistic understating of the underlying phenomenon through empirical intricacy (Jose, Azorin, Bergh, Corley, & Ketchen, 2017; Kallmuenzer, Kraus, Peters, Steiner, & Cheng, 2019). The research methodology in business administration and entrepreneurship is still overshadowed with the mono-method and cross-sectional survey designs that cannot adapt to the growing complexity in determinants of SMEs’ success and business students’ entrepreneurial intention (Gorgievski & Stephan, 2016; Najmaei, 2016).

This conception is extended by Glaub, Frese, Fischer, and Hoppe (2014) who indicated that abstract and obscure writing styles in theoretical knowledge specifically in the field of entrepreneurial psychology; lead the managers and business owners to be unable to connect theory with action. Even those who have theoretical knowledge, sometimes fail to translate research recommendations into actions, which aim in achieving their organizational outcomes and signaling it a “knowing-doing gap” (Giluk & Weller, 2012). This gap of theory and action

is one of the likely reasons that much of the research investigating the causes of entrepreneurial failure has remained ineffective in improving the situation. One of the possible solutions to this issue is to incorporate evidence-based management through action principles in research settings (Frese, Bausch, Schmidt, Rauch, & Kabst, 2012).

Till now, the research has just emphasized that the psychology of entrepreneurship impacts the SMEs' success and students' entrepreneurial intention but does not highlight that how the psychological mindset of operational and would-be entrepreneurs can be developed to achieve this. Frese, Hass, and Friedrich (2016) indicated that psychological training programs that are methodologically and theoretically rigorous can be used to overcome this issue. The action-oriented training programs that span over 24 to 36 contact hours termed as “wise” short-term interventions are recommended to impact psychological, organizational, and economic factors (Walton, 2014). Also, most of the training programs are not evaluated as per the Kirkpatrick's criteria (1975) and their impact on reaction, learning, behavior, and results remain unexamined. These handful interventions are scantily being used and remained focused on African regions (Campos et al., 2018; Campos et al., 2017; Frese & Gielnik, 2014; Glaub, 2004; Glaub, 2009; Glaub et al., 2014; Solomon, Frese, Friedrich, & Glaub, 2016; Mensmann, 2017) and west (Frese et al., 2016). One of the firm-level EO training was done in Yemen but lacked methodological robustness (Al-Awlaqi et al., 2018). In Pakistan, the psychological action-oriented training for operational as well as would-be entrepreneurs is still not utilized to overcome the challenges of SMEs and promotion of entrepreneurial intent in students to give a boost to the economy.

1.3 Research Objectives

In light of the above-mentioned rationale and to fill the gaps in the literature and to respond to the identified problems, the dissertation is divided into four studies and research objectives of each study are stated as follows:

1.3.1 Objectives of Study 1 and Study 2

The first two studies are survey-based investigations and have the following objectives:

- To test the impact of IEO on existing entrepreneurs (SMEs owners) success and would-be entrepreneurs (undergraduate business students) entrepreneurial intention
- To test the mediating role of action characteristics (i.e., exploration activities, response performance, access to finance, and active social networking) between IEO and SMEs' success and (i.e., entrepreneurial alertness—alert scanning and search, alert association and connection, alert evaluation and judgment) between IEO and entrepreneurial intention

1.3.2 Objectives of Study 1 and Study 2

Third and fourth studies are experimental interventions and have the following research objectives:

- To investigate either entrepreneurial psychology can be trained or not
- To test the impact of IEO training on participants' satisfaction, perceived utility and transfer motivation, IEO learning, IEO behavior, and results (i.e., SMEs success in existing entrepreneurs (SMEs owners) and entrepreneurial intention in would-be entrepreneurs (undergraduate business students))
- To determine the mediating role of IEO behavior between IEO training and SMEs' success (for existing entrepreneurs) and entrepreneurial intention (for would-be entrepreneurs)
- To test the difference in IEO learning, behavior and results before and after training intervention for existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students)
- To investigate the difference in IEO learning, behavior and results in trained and non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students)
- To elaborate on how the trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) react to IEO training, exhibit IEO learning, behavior and results (SMEs success/entrepreneurial intention)
- To explore how non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) IEO learning, behavior and results (SMEs success/entrepreneurial intention)

- To get insights into the difference in trained and non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) IEO learning, behavior, and results (SMEs success/entrepreneurial intention). To probe the above outcomes in terms of pre-test and post-test evaluations
- To explore the reasons for this difference in pre-test and post-test outcomes within and between the training and control group (SMEs owners and undergraduate business students)

1.4 Research Questions

1.4.1 Questions of Study 1 and study 2

Based on above-mentioned research objectives following research questions are formulated for study 1 and 2:

- What is the impact of IEO on existing entrepreneurs (SMEs owners) success and would-be entrepreneurs (business students) entrepreneurial intention?
- What is the mediating role of action characteristics (i.e., exploration activities, response performance, access to finance, and active social networking) between IEO and SMEs' success and how action characteristics (i.e., entrepreneurial alertness—alert scanning and search, alert association and connection, alert evaluation, and judgment) mediate between IEO and entrepreneurial intention?

1.4.2 Questions of Study 3 and Study 4

Third and fourth studies have the following research questions:

- Either entrepreneurial psychology can be trained or not?
- What is the impact of IEO training on participants' satisfaction, perceived utility and transfer motivation, IEO learning, IEO behavior, and results (i.e., SMEs' success in existing entrepreneurs (SMEs owners) and entrepreneurial intention in would-be entrepreneurs (undergraduate business students)?)

- What is the mediating role of IEO behavior between IEO training and SMEs' success (for existing entrepreneurs) and entrepreneurial intention (for would-be entrepreneurs)?
- What is the difference in IEO learning, behavior, and results before and after training intervention for existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students)?
- What is the difference in IEO learning, behavior, and results in trained and non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students)?
- How the trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) react to IEO training, exhibit IEO learning, behavior, and results (SMEs success/entrepreneurial intention)?
- How the non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) exhibit IEO learning, behavior, and results (SMEs success/entrepreneurial intention)?
- What is the difference in trained and non-trained existing entrepreneurs (SMEs owners) and would-be entrepreneurs (undergraduate business students) IEO learning, behavior, and results (SMEs success/entrepreneurial intention) before and after the training of IEO? Why this difference exist?

1.5 Rationale of the Study

This dissertation has focused on two distinct yet interrelated population groups, one is SME owners and the other is undergraduate business students. The former represents one of the operational entrepreneurial group and the latter represents one of the aspiring To enhance the generalizability of the IEO construct across these population groups, the triangulation of methods is employed with the help of multiple sources and methods of data collection (Heale & Forbes, 2013). The same phenomenon of IEO is examined for SME owners and business students to prove that it is a holistic construct in the field of entrepreneurial psychology that is in its ways applicable in pre-start-up and post-start-up stages. This helps in providing an all-encompassing picture of the construct under examination and provided a guard against the bias emerging from the use of a single methodology (Heale & Forbes, 2013).

The thesis is bifurcated in four studies. First of all, a time-lagged survey of both samples is carried out (quantitative method study 1 and study 2). The aim is to determine on a larger scale field data that in the context of Pakistan, a seven-dimensional IEO construct results in SMEs' success and three-dimensional construct results in the entrepreneurial intention of business students. Agentic training can be developed for the psychological variables that are action-oriented (Frese et al., 2006). Furthermore, these training programs must be based on evidence that a given psychological variable has a proven relationship with business outcomes (Frese et al., 2012). Moreover, based on the Theory of Action Regulation (Frese, 2009), the mediating mechanisms of (i.e., exploration activities, response performance, access to finance, and active social networking) are tested in study 1 and (i.e., entrepreneurial alertness—alert scanning and search, alert association and connection, alert evaluation, and judgment) study 2. This allows complete understating of how IEO results in intended outcomes in both samples. Study 1 and Study 2 were carried out first to fulfill the requirement of action-based training that needs prior empirical evidence of the relationship of the trained variable with the outcomes. EO is a context dependant construct and it has wide applicability in different population groups and national settings (Bolton & Lane, 2012; Frese & Gielnik, 2014; Krauss et al., 2005). Therefore, first, the dimensionality in each sample group, as well as, the IEO and outcome relationship was determined before developing, conducting, and evaluating the IEO training program.

After the empirical evidence of the workability of IEO in both samples, two mixed-method experimental studies are carried out. Study 3 was done for the sample of SME owners and Study 4 was carried out for undergraduate business students (sub-samples of the respective survey sample). The aim is to demonstrate that IEO is a psychological construct that is trainable through action-oriented training interventions. The impact of IEO training on reaction measures, IEO learning, IEO behavior, SMEs' success (only for study 3), and business students' entrepreneurial intention was measured. Subsequently, a mediation analysis was done to ensure that IEO training results in outcomes through the development of IEO behavior. That is a standard method of gauging the success of action-oriented psychological training programs (Glaub, 2009). Interviews from each study's participants were done to supplement the results from the experimental study and to get verification of training outcomes and get validation of training usability. Table 1.1 summarizes the categorization of the dissertation into four studies with the underlying reasons.

Table 1.1: The Rationale for Choice of the Population and Study Methods of Dissertation

Sr. No.	Study Type	Population	Reason
1	Time-lagged survey	SME Owners	▪ To offer empirical evidence that IEO is a determinant of SMEs success through exploration activities, response performance, access to finance, and active social networking
2	Time-lagged survey	Undergraduate business students	▪ To offer empirical evidence that IEO is a determinant of business students' entrepreneurial intention through alert scanning and search, alert association and connection, alert evaluation, and judgment
3	Embedded mixed-method experiment	SME Owners	▪ SMEs' owners can be trained for developing and improving IEO ▪ Training results in IEO behavior ▪ Trained IEO behavior increases SMEs success ▪ The qualitative interviews provide validation to the quantitative findings
4	Embedded mixed-method experiment	Undergraduate business students	▪ Business students can be trained for developing and improving IEO ▪ Training results in IEO behavior ▪ Trained IEO behavior increases business students' entrepreneurial intention ▪ The qualitative interviews provide validation to the quantitative findings

Furthermore, the interrelationship of both population groups, as well as, the four studies and their respective methodologies are demonstrated in Figure 1.1.

Methodological triangulation: For rigorous and valid results

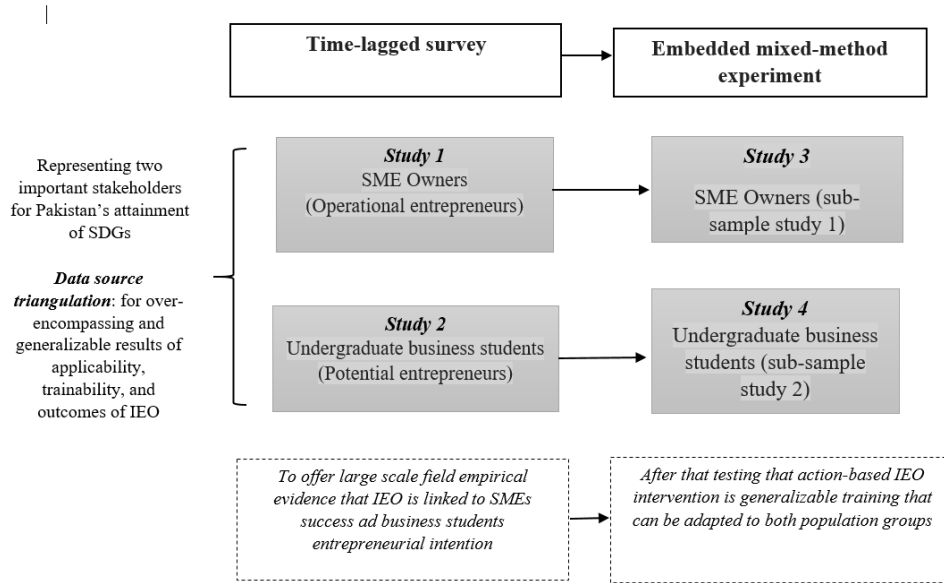


Figure 1.1: Schematic Representation of Interrelationship of both Population Groups and Methodologies across the Four Studies in Dissertation

1.6 Significance of the Study

This dissertation contributes to the theory, policy, and practice in the field of entrepreneurial psychology.

1.6.1 Theoretical Significance

Theoretical contributions of this dissertation are listed as follows:

In contrast to the plethora of research on the firm-level construct of entrepreneurial orientation, this research has extended the literature on the individual-level construct of entrepreneurial orientation that is still in the phase of infancy. Thus, it is emphasized that entrepreneurial orientation can also be conceptualized as a psychological attitude of an individual rather merely an organizational level strategic stance. This research is a contribution to entrepreneurship literature by extending the notion of the importance of psychological factors as an important variable in deciding the success/failure of SMEs in addition to the external factors. Emphasizing the importance of the agentic nature of psychological factors concerning business outcomes we have adopted an action regulation perspective. In this

research, the empirical evidence of psychological attributes as a precursor of developing entrepreneurial intention is offered. As opposed to the prior focus on education, gender, family background, personality traits, culture, and economic impacts as the antecedents of entrepreneurial intention, this research has highlighted the importance of psychological attitude in this regard. This study has further clarified the action-based mediating mechanisms of IEO and its most important outcomes i.e., SMEs' success and entrepreneurial intention based on the theory of action regulation.

This research utilized contemporary scientific developments and the latest knowledge in the field of entrepreneurial psychology that implies the notion of EBMgt and action-orientation. In addition to the much-emphasized achievement motivation (Miron & McClelland, 1979), personal initiative (Glaub, 2009), and a methodologically weak EO training (Al-Awlaqi et al., 2018) in developing nations; in this dissertation principles of EBMgt are used and evidence is offered that IEO is a holistic psychological concept that is linked to entrepreneurial success and students' entrepreneurial intention. Moreover, this research showed that IEO can be trained through action-oriented and theoretically grounded training intervention which is a proven method in improving the quality of entrepreneurship in developing nations. For this purpose, the theory of action regulation is used as a foundation, to posit that IEO training inculcates IEO behavior in the participants and lead to subsequent outcomes.

This research is based on four studies using a triangulation of methods instead of focusing on much used cross-sectional and mono-method studies. This is deemed to be an appropriate choice as the use of time-lagged designs, mixed-methods, and interventions oriented toward action and practice is found appropriate in addressing real-world issues in the field of entrepreneurship. For the first two studies, a three-wave time-lagged survey design was used that helps to overcome common method bias. In third and fourth studies a quasi-experimental research design is used to maximize the meticulousness of research findings. It has employed an untreated control group (pre-test post-test) experimental design based on action-oriented intervention. For experimental studies the data were collected in four waves, at T1 before the intervention, then participants were allocated to control and training groups, and intervention was administrated in the latter group. At T2 data were gathered immediately after intervention from training group and at the same time from the untrained control group, at T3 the data were collected from both groups four months post-intervention in form of

questionnaires and at T4 interviews are carried out to understand the behavior and outcomes of participants in both groups in the fifth month. Thus, the call for the use of contemporary methods in entrepreneurship research to unfold the temporal nature of variables, reduction of the common method bias, and to offer evidence-based insights supported with qualitative insights is answered.

The IEO research is extended in the ignored Pakistani SMEs settings where only a few cross-sectional studies were conducted on firm-level EO construct. Psychologically driven training programs have previously focused on developing nations in the African region (Campos et al., 2017; Frese & Gielnik, 2014; Glaub et al., 2014; Glaub, 2009; Mensmann, 2017) and testing this conception in Pakistan broaden their contextual applicability. In contrast to most of the training programs that either focused on operational entrepreneurs (Glaub et al., 2014; Glaub, 2009; Mensmann, 2017) or students (Nabi & Holden, 2008; Nabi, Walmsley, Linan, Akhtar, & Neame, 2018; Sanchez, 2011; Melendez, Gomez & Gomez, 2016), expanded the applicability of our training program to both populations.

1.6.2 Practical Significance

In addition to academic contributions, this dissertation has broader practical contributions. As opposed to the concept of taking help from outside this approach teaches the small and medium scale business owners to take responsibility for their survival and employment creation thus, making them self-sustaining that is more effective and offers long-lasting outcomes. By IEO training they can have improved IEO and contribute to the achievement of greater economic objectives of growth and business success. The training program of IEO is also beneficial for the students that aim to pursue their careers as entrepreneurs as it will equip them with the required mindset for business start-up. The students will be able to practically learn the psychological attitudes needed for becoming an entrepreneur along with the practical steps, so they will learn by doing that will increase their chances of success when they will start their business.

The educational institutions can reap the advantage of this research, for teaching the courses of entrepreneurship; they can use this training to enhance the entrepreneurial orientation and intention among the students. The short span training with proven evaluation will be well suited within time and cost constraints and enable them to play a part in fostering

graduate entrepreneurship. The policy implications of this training would be useful for government authorities and SMEDA to disseminate benefits for enhancing the entrepreneurial activities and venture survival rate. This will resultantly contribute toward bringing down the rate of poverty, unemployment, and improving the socio-economic condition of Pakistan. They can utilize this management intervention to move a step forward to meet SDGs.

1.7 Conceptualization of Variables

The conceptualization of study variables is given as follows:

1.7.1 Individual Entrepreneurial Orientation (IEO)

The construct of EO was initially established at the level of the firm, to capture the overall strategic stance of management philosophies and behaviors that were entrepreneurial in nature. At the level of organization, EO is referred to as “the strategy-making processes that provide organizations with a basis for entrepreneurial decisions and actions” (Rauch et al., 2009, p. 762). Generally, this conception built on three factors i.e. innovation, risk-taking, and proactivity that showed a firm’ attitude towards success (Rauch et al. 2009; Rosenbusch, Rauch, & Bausch, 2013). Lumpkin and Dess (1996) devised five dimensions of EO i.e. innovation, risk-taking, proactiveness, competitive aggressiveness, and achievement orientation. The concept of entrepreneurial orientation was reintroduced by Krauss et al. (2005) by emphasizing the importance of the psychological state of an individual entrepreneur as paramount for entrepreneurial success specifically in smaller business settings. IEO orientation encompasses autonomy orientation, innovativeness, risk-taking, proactive personality, and competitive aggressiveness in the case of operational entrepreneurs. For students’ IEO only risk-taking, proactive personality, and innovativeness are considered (Bolton & Lane, 2012).

1.7.2 Individual Entrepreneurial Orientation (IEO) Training

In this study, an action-based intervention for IEO is developed that spanned over 24 contact hours and teaches the IEO to operational and would-be entrepreneurs by practical exercises of learning by doing. The participants are taught by concrete examples of all variables and how they can use it in their context. For the operational entrepreneurs, they applied the

IEO behavior in their own business while the students were asked to apply them to a hypothetical business that they would like to start in the future. The training was measured on the reaction, learning, behavior, and results of IEO behavior (Kirkpatrick, 1975).

1.7.3 Exploration activities

Activities of SMEs' owners for the identification and exploitation of opportunities in the market and to pursue improved ways of doing business by alternative structure, content, and governance are known as exploration activities (Abebe & Angriawan, 2012). It furthermore enhances the uncertainty tolerance of firms by imparting better risk management activities of the owner (Yeniaras & Unver, 2016).

1.7.4 Response performance

The activities of SMEs' owners to utilize the existing resources intelligently, creatively, and timely to respond to the needs of market adaptations are termed as response performance. It involves undertaking and implementing the solutions to market problems and being superior in responding to market signals (Hughes et al., 2007).

1.7.5 Access to Finance

Access to finance refers to the ability of SMEs' owners to obtain the financial resources from external sources and the perceived ease in this process (Fatoki & Asah, 2011). This implies the importance of having timely and affordable credit to meet the operational needs of business reasonably. Most of the time commercial and microfinance institutions are the formal source of financing for SMEs and informally the owners get financial resources from friends and family (Tagoe, Nyarko, & Amarh, 2005).

1.7.6 Active social networking

The actions of SMEs' owners for developing and extending the relationships with concerned people for extending and growing business are known as active social networking (Zhao, 2005). These can be relationships with other business owners, friends, family,

acquaintances, institutional, and regulatory authorities, bureaucrats, and political personalities (Hallen & Eisenhardt, 2012).

1.7.7 Entrepreneurial alertness

The recent conceptualization of entrepreneurial alertness has three dimensions i.e. scanning and search, association, and connection along with evaluation and judgment (Tang, Kacmar, & Busenitz, 2012). The first dimension of alert scanning and search indicate a consent quest for environmental scanning for identification of information and changes that are not noticed by others. Alert association and connection refers to obtaining information from diverse sources and using it for the development of new alternatives. Evaluation and judgment incorporate the assessment and judgment reading the identified information and changes and categorizing them as a profitable business opportunity.

1.7.8 Kirkpatrick's Training Evaluation Criteria

The IEO training outcomes are measured by Kirkpatrick's (1975) criteria in terms of reaction (the satisfaction of trainees with content and method), learning (knowledge trainees gain about the target variables), behavior (changed attitude of participant regarding the targeted variable), and results (outcomes of trained behavior). For this research the target variable is IEO and the result for operational entrepreneurs is SMEs' success and for would-be entrepreneurs, it is the development of entrepreneurial intention.

1.7.9 SMEs Success

In the present research for survey study 1 the perceived success is measured using the indicators of quality and innovation in products, customer satisfaction, employee relations, market penetration, financial management, productivity, profits, and market share that is deemed suitable by Bilal et al. (2017). For experimental intervention in study 3, the success is measured by examining subjective indicators of an increase in sales, profits, employees, and customers as suggested by Glaub (2009).

1.7.10 Entrepreneurial Intention

In general, the term ‘intention’ refers to a mental state that directs the attention and action of a person toward a certain decision. More specifically, the entrepreneurial intention is defined as a mental state that directs attention and action of a person toward being self-employed as opposed to opting for a job in an organization (Bird, 1988; Kolvereid, 1996). It is the reflection of the level of interest an individual has for setting up a new venture (Fitzsimmons & Douglas, 2011; Linan & Fayolle, 2015).

1.8 Thesis Structure

The dissertation is done in form four studies in which the first two are time-lagged surveys that determine the impact of IEO on SMEs' success and students' entrepreneurial intention through action characteristics as mediators. The third and fourth studies are psychological interventions to develop IEO in SME owners and students that will improve SMEs' success and students' entrepreneurial intention. The thesis is organized as follows:

Chapter 1 explains the background of the study, followed by a statement of the research problem and gap. The research objectives and questions are formulated for the four distinct studies. The research rationale and significance in terms of the theory and practice are elaborated and conceptualization of constructs is given. The chapter ends with giving an overview of the thesis structure and the summary of the chapter.

Chapter 2 offers contextual information about the national and sector context given the broader level implications of this research. It is a short description of key statistics of Pakistan in terms of the economic, social, geographical, and general domain. The definition, sector overview, and financing data of SMEs are given along with key facts about SMEDA. At last, the Global Entrepreneurship Development Index (GEDI) of Pakistan is discussed and the chapter ends with a brief visual summary.

Chapter 3 entails a detailed review of psychological/business training programs in developing nations. After that, the basic theories and key concepts used in all four studies are

explained. The hypotheses development is separately done for each of the studies to improve clarity. Lastly, the chapter ends with a summary.

Chapter 4 explains the methodology used in the research and for all the four studies research philosophy, the research approach, research design, sampling, data collection methods, instruments, and analysis procedures are identified. In the end, the crux of the chapter is depicted.

Chapter 5 contains the detailed study results for each of the four studies. In the end, the summary of findings is given in terms of which hypotheses are accepted and which are not.

Chapter 6 presents the discussion of all hypotheses in four studies. Then the implications for theory and practice are stated. The limitations and future research directions are given and the chapter ends with a summary.

1.9 Chapter Summary

The summary of chapter 1 is shown in Figure 1.2.

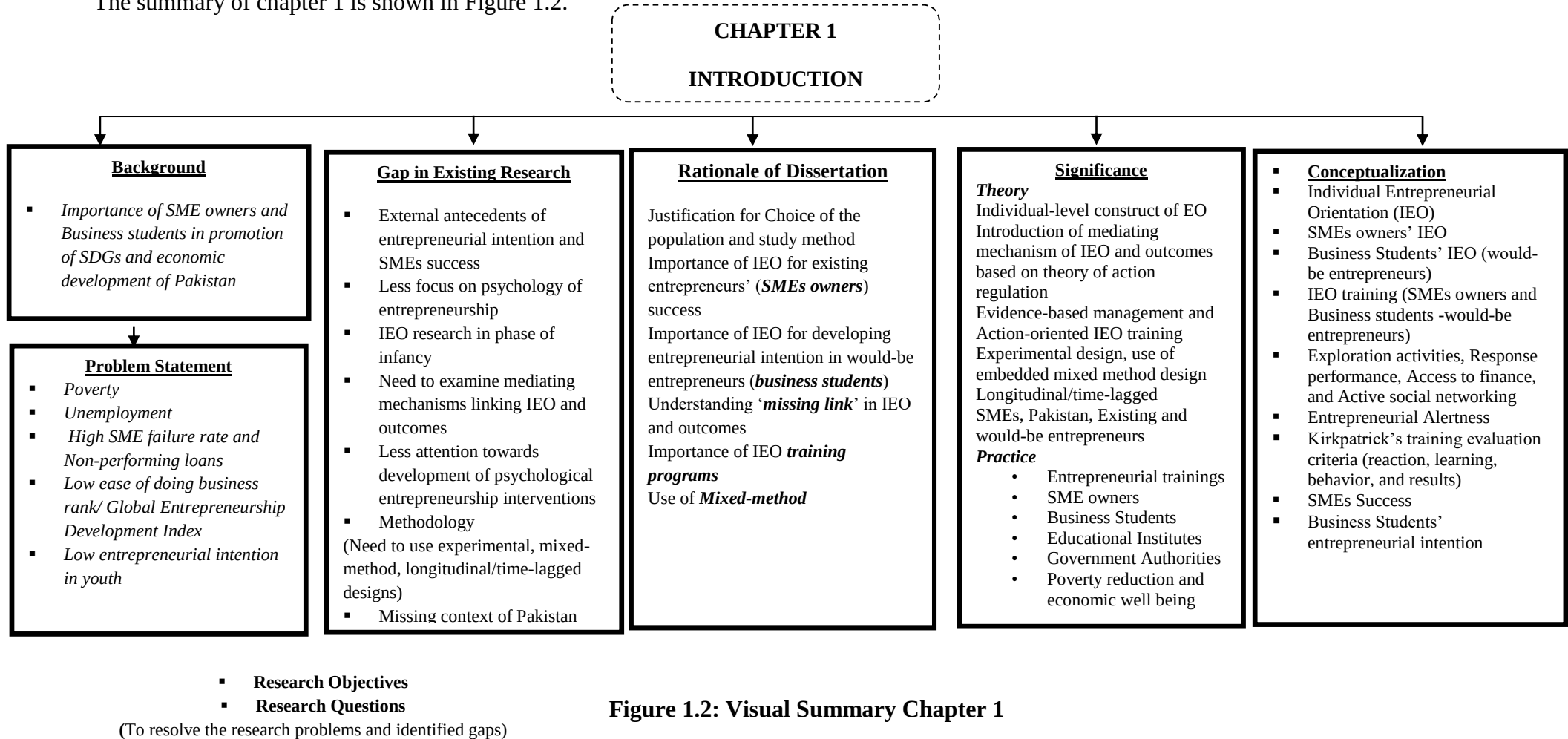


Figure 1.2: Visual Summary Chapter 1

CHAPTER THREE: KEY FACTS AND STATISTICS OF POPULATION

In this chapter, the necessary facts and statistical indicators of Pakistan, as well as small and medium scale enterprises, are given. The implications of this study are not only at the individual and organizational level but also for the SME sector and national economy, so it is important to know about the brief country and sector profile. First of all the economic, social, geographical, and general context of Pakistan are discussed. After that, the definition of SMEs in different contexts, sector overview of SMEs in Pakistan, financing data, and introduction of Small and Medium Enterprise Development Authority (SMEDA) are given. At last, the Global Entrepreneurship Development Index (GEDI) of Pakistan is discussed and the chapter ends with a brief visual summary.

2.1 Brief Country Profile: Pakistan

2.1.1 Economic, Social, Geographical, and General Context

The Islamic Republic of Pakistan is a Muslim majority state that came in to being after the partition of the sub-continent in 1947. Its location makes it a worthy place that links the countries that need resources and that provide resources from the geographical viewpoint and it bridges the gap between South West Asia and South Asia. It's an important means of transportation route through the Arabian Sea and Port of Gawadar for the shipments and trade from China, and Southeast Asian Countries and CARs (Unodc.org, 2019). The main statistics of Pakistan are presented in the below Table 2.1.

Table 2.1: Key Statistics of Pakistan

Key Statistics of Pakistan	
Area	796096 Square Kilometer
Population	207 Million est.
Density of Population	232.6 per Square Kilometer
Capital	Islamabad
Currency	Pakistani Rupee
Main Cities	Karachi; Lahore; Faisalabad; Rawalpindi; Multan; ISLAMABAD (capital)
Date of membership at the United Nations	September 30, 1947

Source: Unodc.org (2019)

The main social indicators of Pakistan are explained in Table 2.2.

Table 2.2: Key Social Indicators

Key Social Indicators	
Human Development Index	0.56 (150 th out of 189 countries)
Growth Rate of Population	2% per year (2017) est.
Population Rank in World	6 (2018)
Median Age	22.7 years (2018)
Literacy Rate	58% (2018)
Rank in Literacy Rate	135 (2016)
Dependency Ratio	65.3% (2018)
Urbanization	36.44 % (2017) est.

Source: *Index Mundi* (2019)

Pakistan ranks 23rd in terms of economy concerning purchasing power parity (PPP), and it ranks 38th according to the gross domestic product (GDP). It has an estimated population of 207 million (ranking 6th in the world), and have a per capita nominal GDP of USD 1,641 (147th rank in the world). Pakistan has been listed in one of the most potential nation's lists capable of becoming the strongest economies in the 21st century (ADB, 2019). The key economic indicators of Pakistan are shown in Table 2.3.

Table 2.3: Key Economic Indicators

Key Economic Indicators	
Income classification	Lower-middle (USD 1,006-3,995 GNI per capita)
Growth Rate of GDP	5.9 % (2017) Yearly
Rate of un-employment	6% (2018) Quarterly
Rate of Inflation	7.48 % (2019)
Rate of Interest	11.7% (2018)
Balance of Trade (BOT)	-452668Million PKR (2018)
Expenditure on Education	2.2% of GDP (2017) est.
Ratio of Debt to GDP	30.4% (2018)

Source: *Trading Economics* (2019)

Pakistan is a semi-industrialized economy with, industrial sector accounting for about 24% of GDP. Cotton, textile, and apparel are amongst the largest industries of Pakistan making 66% of contribution to exports and 40% contribution to GDP. Cement, fertilizers, sugar, edible oil, tobacco, chemicals, food processing, and machinery. The major industrialized cities in

Pakistan are Karachi, Lahore, and Faisalabad. The region-wise distribution of industries in Pakistan is shown in Figure 2.1.

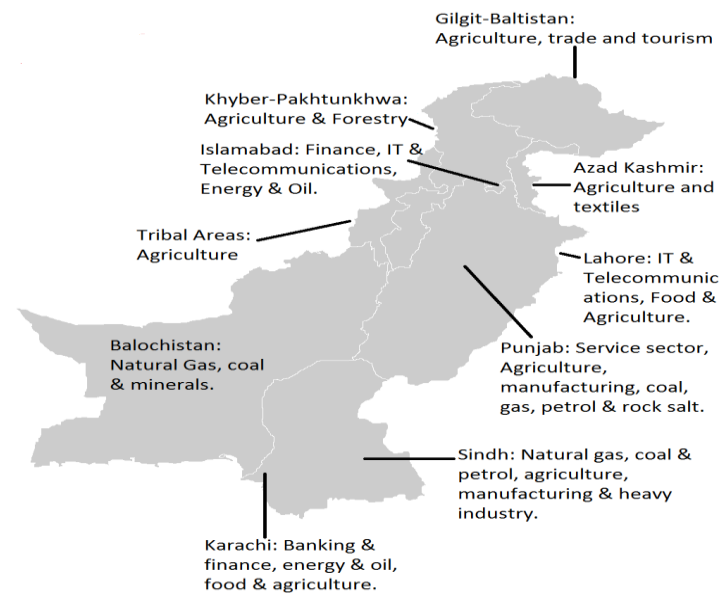


Figure 2.1: Main Industries by Region

The overall geographical location indicates that Pakistan is in an economically and politically important location and ranked as a lower-middle-income economy. The social indicators reveal the nation is not doing much well as reflected in a low HDI and less than average scoring on economic indicators, thus, raking it as a developing nation (World Bank, 2019).

2.2 Small and Medium Scale Enterprise (SMEs) Sector of Pakistan

2.2.1 What are SMEs?

Small and medium scale enterprises (SMEs) are modest-sized business entities, but they play an outsized role in the industrial development of Pakistan by having a major contribution in job creation and economic wellbeing (SMEDA, 2019). SMEs are more resilient as compared to the large scale business and if managed properly, have the propensity to thrive in a turbulent environment (The News, 2018).

SMEs' definitions vary across national contexts and different authorities in respective regional boundaries have defined them as per the number of employees and/or annual turnover criteria. In most of the European nations, any firm having fewer than 50 employees and an annual turnover not exceeding 10 Million EUR is termed as small size and any firm with 50-250 employees and an annual turnover not exceeding 50 Million EUR comes under the realm of medium-sized enterprises, though, for some of the countries this limit is 200 employees (European Union, 2017). Small Business Administration in the United States defines the firms having up to 500 employees as SMEs for the manufacturing sector while this limit is lowered to 100 employees in case of trade and wholesale business (OECD, 2018). In Canada, the businesses having less than 100 employees are considered small scale in case of the manufacturing sector and having less than 50 employees in case of the services sector, the business having more employees than this limit and having fewer than 500 employees come under the premise of medium-scale (Industry Canada, 2018).

World Bank defines small enterprises as having less than 50 employees and an annual turnover not exceeding 3 million USD, while for medium enterprises the limit of employees is 50-300 and annual turnover is restricted below 15 million USD (Berisha & Pula, 2015). In China, SMEs are defined in a complex manner depending on the type of industries as per the SME promotion Law. The number of employees for small enterprises ranges from 100-600 with an annual turnover of 10 million-30 million RMB. Medium-scale enterprises in respective industries should have employees not exceeding 3000 and the annual turnover of 300 million RMB (Ecovis, 2018).

In Pakistan A small scale enterprise is a business that has up to 50 employees including contractual workforce and annual sales turnover of 150 million PKR; while a medium scale enterprise is a business that employs 50-250 employees including contractual workforce in case of manufacturing and service concerns and 50-100 employees including contractual workforce in trading concerns with total sales revenue over 150 million PKR to 800 million PKR (State Bank Prudential Regulations, 2017). Table 2.4 presents the criteria for classification as a small or medium-scale enterprise in different countries.

Table 2.4: SMEs Definition in Different Contexts

Defining Authority	Small Scale Enterprise		Medium Scale Enterprise	
	Number of Employees ¹	Annual Turnover	Number of Employees ¹	Annual Turnover
European Union	Up to 50	10 Million EUR	Up to 250	50 Million EUR
Industry Canada	Up to 100 (Manufacturing Concern) Up to 50 (Services Concern)	--	100 to 500 (Manufacturing Concern) 50-500 (Services Concern)	---
State Bank of Pakistan	Up to 50	Up to 150 Million PKR	50-250 (Manufacturing and Services Concern) 50-100 (Trading Concern)	150 Million-800 Million PKR
SME Promotion Law of China ²	Up to 100-500	10 Million RMB-30 Million RMB	Up to 3000	300 Million RMB
World Bank	Up to 50	3 Million USD	50-300	15 Million USD
Small Business Administration	Small and Medium Scale Enterprises ³			
	Number of Employees ¹		Annual Turnover	
	50 to 500 (Manufacturing Concern) 50-100 (Trade and Wholesale concern)		--	

Notes. 1including contractual employees, 2 The limit varies across sectors, 3As per Small Business Administration the bifurcation of small and medium scale is not done and the criterion of annual turnover is not used. Moreover, this is an average range that varies across all the industrial sectors.

2.2.2 Small and Medium Scale Enterprises Sector Overview.

Out of total SMEs in Pakistan, 53% are operational in wholesale, retail trade, and hotel industry, while, 20% are in the industrial sector (manufacturing, mining, construction, etc) and 22% are in other services. According to the provincial division, most of the SMEs are located in Punjab (65%), followed by Sindh (18%), KPK (14%), and Balochistan (2%) respectively. As per sector-wise division, Punjab has the maximum number of sub-sector representation except for the gas, water, and electricity network that is mainly located in KPK. SMEs in Pakistan have a low level of formal organization, as nearly 96% of them are sole proprietorship, 2% are partnership concerns, and the remaining 2% belong to the corporate sector.

These statistics indicate that most of the SMEs lack professional management. Ideally, SMEs are witnessed as the precursor of future corporate level businesses, but this is not the case in Pakistan and most of the business has low technological use, offers traditional products and services, and has a poor growth rate. This weak structure makes them vulnerable to economic and environmental shocks and resulting in their ultimate disappearance from the scene. Only 4% of the SMEs have maintained their long term survival (25years) while most of the SMEs usually fail in the initial 5 years of their operation. SMEs contribute 40% to the Gross Domestic Product of Pakistan, offer employment to more than 80% of the non-agricultural labor force, makeup 8% of the private business sector, have 174,000 borrowers and contribute 25% towards the manufactured goods' export, and constitute 35% of value addition in the manufacturing sector (PBS, 2019; Pakistan Today, 2018; SMEDA, 2019). Most of the trading SMEs are located in urban areas and the manufacturing SMEs are present in semi-urban and rural areas of Pakistan (Farid, 2016).

The major SMEs' statistics are summarized in Table 2.5. All the above statistics and facts indicate that SMEs constitute the heart of business in Pakistan by being a major booster of the economy and government bodies are taking measures for the growth and development of this sector along with calling for the researchers for offering their academic insights to facilitate in robust policymaking.

Table 2.5: Major statistics of SMEs in Pakistan

Sector-wise break up	Percentage (%)
Wholesale, retail, hotel industry	53
Industrial sector (manufacturing, mining, construction, etc)	20
Other Services	22
Provincial break up	
Punjab	65
Sindh	18
KPK	14*
Balochistan	2
Ownership structure	
Sole proprietorship	96
Partnership	2
Corporate	2
Other indicators	
Contribution to overall business	90
Contribution to GDP	40
Provision of employment to the non-agricultural labor force	80
Long term survival rate (25 years)	4
Failure rate (in 5 years)	60

Source: SMEDA, 2019, Pakistan Today, 2018, PBS, 2019

Notes: * gas, water, and electricity networks are mainly located in KPK

2.2.3 Small and Medium Scale Enterprises Financing Data

Nonperforming Loans (NPL) are one of the indicators signaling SMEs' financial health. It is the sum of money that the borrower fails to repay within the stipulated time period that is usually 90 days (Chowdhury, Azam, & Islam, 2015). In the past ten quarters the NPL ratio of the Pakistani SME sector has declined (27.33% to 16.57%) (SBP, 2019) still it is well above the acceptable level of 2-3% in developing nations. This indicator reflects that despite the constant call to take measures for SMEs improvement in Pakistan the problem is still unsolved. The situation of NPL in SMEs of Pakistan is depicted in the following graph (Figure 2.2.)

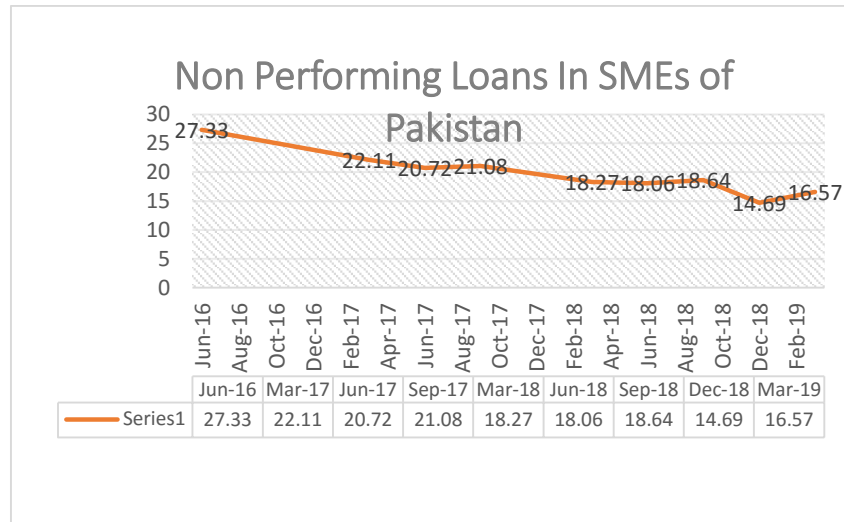


Figure 2.2: Nonperforming Loans in SMEs of Pakistan

2.2.4 Small and Medium Scale Enterprise Development Authority (SMEDA)

SMEs play a paramount role in the creation of employment, diversification of the economy, generation of income, and reduction of poverty, so the Pakistani Government inaugurated Small and medium scale enterprise development authority (SMEDA) in October 1988 for development of this sector. It is an autonomous flagship institute for the governance and provision of support services to SMEs. SMEDA operates under the supervision of the Ministry of Industries and production and makes a significant constitution towards the development of the SME sector of Pakistan by the development of regulatory mechanisms, industrial clusters, and provision of services for the development of business and all management areas. SMEDA conducts an analysis of international and national trends and policies along with other macroeconomic variables that affect SMEs, to create a favorable business environment (SMEDA, 2019). Besides, 48 Small and medium enterprise microfinance banks have been set-up for facilitating the financial requirement of this sector along with the specialized departments for SMEs in commercial banks (Khurram, Bhutta, Rana, & Asad, 2008).

The government is also taking actions for the betterment of regulatory mechanisms, improving the functioning of microfinance institutes, technology leveraging, handholding, easing the tax regime, and simplification of procedures for SME registration and financing. Recently, the State Bank of Pakistan (SBP) governor called for the insights of academicians in

helping the government for improvement of this sector and asked them to share their research for better policymaking for SMEs. Given the importance of this sector SBP has kept the development of SMEs as its foremost agenda, and under the Vision 2020, developed SME policy that has a special focus on the growth and development of this sector and specifically aims to enhance the share of SMEs in the private sector to 17% and increase borrowers by 500,000 (The News, 2018).

Global Entrepreneurship Development Index

Global Entrepreneurship development index (GEDI) is annually published and offers insight into overall entrepreneurial attitudes and aspirations of individuals of a nation through their opportunity perception, startup skills, and acceptance of risk, networking, and support from culture, technology absorption, competition, product and process innovation, growth and internationalization. As per the latest statistics, Pakistan was ranked 120th among 137 nations making it amongst the lowest-scoring countries in the world. This ranking is lower than the neighboring countries where India ranked 68th and Iran ranked 72nd having far better scores. Also, the Global Entrepreneurship Index (GEI) dropped from 2015 to 2017 (see Figure 2.3) with a slight increase in 2018 followed by improvement in 2019 that is far below the regional counterparts and developed nations (GED, 2019).

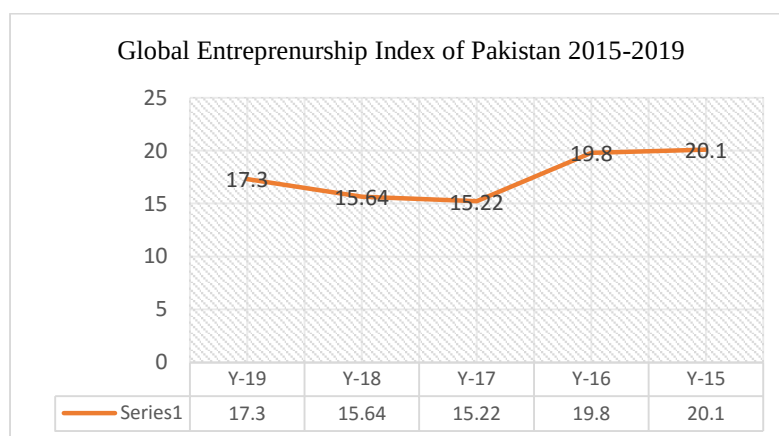


Figure 2.3: Global Entrepreneurship Index Pakistan

2.3 Chapter Summary

The summary of chapter 2 is shown in Figure 2.4.

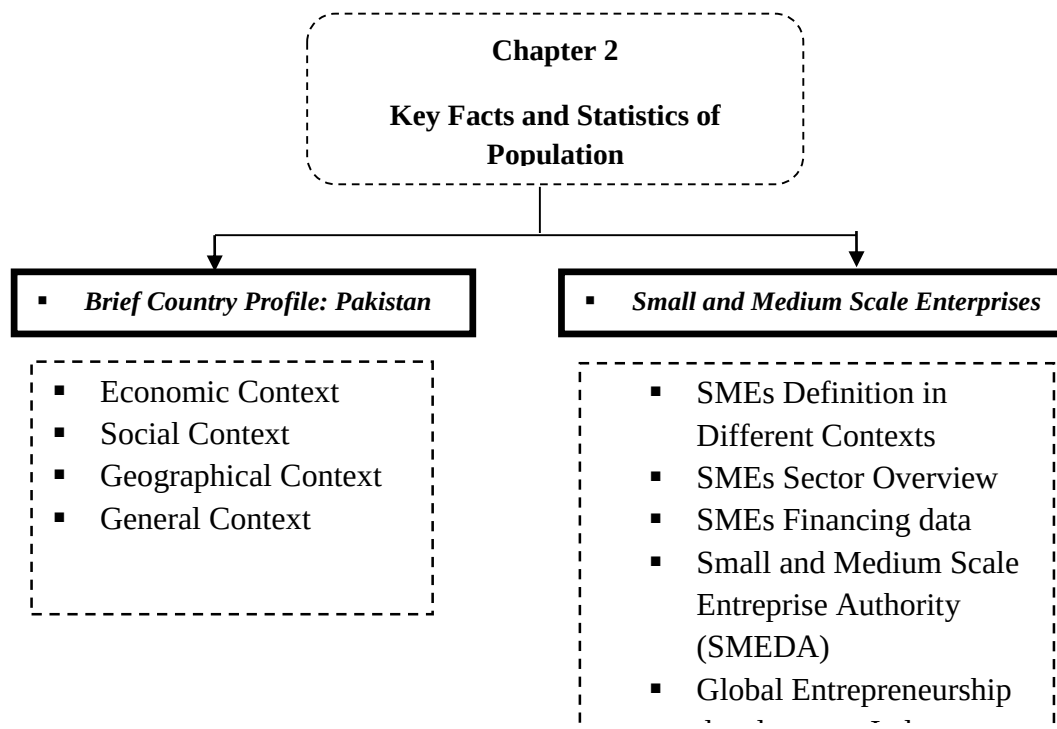


Figure 2.4: Visual Summary of Chapter 2

CHAPTER THREE: LITERATURE REVIEW

This chapter delineates the pertinent literature on the study topic in three sections, (1) the review of psychological and mixed (psychological and business) training programs for entrepreneurs and would-be entrepreneurs in developing nations, (2) the base theories, key concepts and the basic conceptions of all the variables included across four studies, (3) the conceptual framework, and hypotheses development for all studies. The chapter ends with a visual summary of the major contents in the literature review.

3.1 Review of Training Programs Focused at Entrepreneurs and Would-Be Entrepreneurs in Developing Nations

3.1.1 Selection Criteria

To select studies for review, the criteria were based on Glaub and Frese (2011) method of selecting the training programs. The training programs that focused on operational and potential entrepreneurs were targeted in developing nations. Only those training programs were included that had mentioned the training evaluation (quantitative or qualitative). The training programs were based on psychological factors or include psychological portion along with general business training. The databases of Google, Google Scholar, and the relevant training agencies were used for initial screening based on the title, and the studies matching the criteria were re-evaluated by thoroughly reading the selected articles to ensure their relevancy. 12 psychological and 54 business training programs having psychological components matched the criteria in 10 types of training programs. The review was based on the years, the content of training, the total number of participants, participants in training group and control group, evaluation criteria, use of theory, training design, evaluation time, and impact, and country. Figure 3.1 shows the review process.

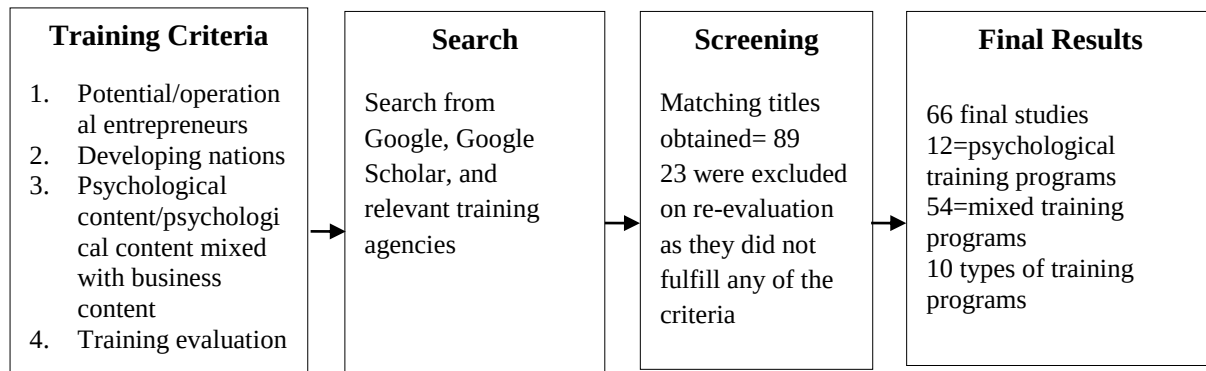


Figure 3.1: Review Process

3.1.2 Psychological Training Programs for Operational Entrepreneurs and Would-be Entrepreneurs

In this section review of psychological training programs have been presented that were carried out in developing nations for the operational entrepreneurs as well as for the development of an entrepreneurial mindset in the students that are potential entrepreneurs. Three psychological training programs are included in this section i.e. personal initiative, achievement motivation, and entrepreneurial orientation.

3.1.2.1 Personal Initiative Training

Personal initiative (PI) is the most carried out psychological training intervention for entrepreneurs in developing nations. The first training was carried out by Glaub (2004) in which there were a total of 84 participants (TG=27, CG=57) in a randomized-controlled pre-test/post-test intervention. The participants were asked to attend a 3 days training workshop in which the action principles were used to teach personal initiative in terms of goal-setting, overcoming barriers, and having a self-starting behavior. The results of the training were measured in four waves i.e. before the intervention, immediately after the intervention, 5-7 months after the intervention, and 2 years after the intervention. It was found that the training group performed better than the control group in 5-7 months measurement after the training. However, marginally significant long-term success impacts were traced in the training group, moreover, the personal initiative was partially the determinant of success in the trained entrepreneurs.

PI training was carried out by Glaub et al. (2009) having a three-day length and 100 participants (TG=47, CG=53) in Uganda. The training impact was measured before the training, immediately after training, 3-4 months after training with a final follow-up after 2 years. The impact was found on the reaction, personal initiative learning and behavior, and economic success of the business (subjective/ objective). The results indicated that the business in the training group had more success and 2.8 new jobs were created for each trainee (a decline of 1.8 persons was found in the control group). None of the participants failed in the training group, whereas, in the control group 8% failure rate was tracked. It was substantiated that the learned personal initiative behavior is the cause of success in the training group.

A three-day personal initiative training was devised by Solomon, Frese, Friedrich, and Glaub (2013) in which 27 small business owners decided to participate in the training, and 30 formed the control group. It was a randomized control experiment conducted in Cape Town. The training was grounded in the theory of action regulation and included the components of time management, goal setting, personal initiative (overcoming barrier), and innovation. The training evaluation showed a significant change in the training satisfaction $M = 2.89$ on the scale of -3 to +3, and the training recommendation was high on the scale of 1 to 5, T2: $M = 4.93$ and T3: $M = 4.92$. The motivation to transfer training was also very high on the scale from 1 to 5, T2: $M = 4.83$. The learning was increased in training group from T1: $M = 8.37$, to T2: $M = 9.89$ and declined in the control group, T1: $M = 7.50$ to T2: $M = 7.37$ (goal-setting knowledge) and increased in training group from T1: $M = 3.52$, to T2: $M = 4.20$ but didn't increase significantly in the control group, T1: $M = 3.58$ to T2: $M = 3.68$ (Time management knowledge). The PI behavior was $\eta^2 = .30$ that indicated significant interaction impact and an increase in PI behavior in the training group as compared to the control group. The sales in training group enhanced from T1: $M = 2.13$ million Rand to T4: $M = 3.53$ million Rand; but control group witnessed a decline in sales T1: $M = 0.61$ million Rand; T4: $M = 0.54$ million Rand. The training did not consider a number of employees and failure rate as success measures and no overall success index was calculated.

Glaub et al. (2014) conducted training for personal initiative having 56 participants in the training group and 36 in the control group that was a randomized-controlled field experiment. The training was grounded in the theory of action regulation and it spanned over the time period of 3 days. Participants were small business owners in Uganda, the participants were asked to work on the entrepreneurial cases and apply this learning to personal projects

and subsequently to their own business. The training was evaluated on the criteria of reaction, learning the development of personal initiative behavior, success (sales, number of employees, business failure). The satisfaction with training was $M = 2.91$ on the scale of -3 to +3, the learning was increased in training group from T1: $M = 2.15$, to T2: $M = 3.06$. The PI behavior was $\eta^2 = .25-.50$ that indicated significant interaction impact and an increase in PI behavior in the training group as compared to the control group. The sales in training group enhanced from T1: $M = 2.660$ million Ugandan shilling to T4: $M = 3.389$ million US\$; but control group witnessed a decline in sales T1: $M = 3.951$ million US\$; T4: $M = 2.808$ million US\$. The similar pattern was observed for the indicator of employees, for training group employees increased from (T1: $M = 7.88$ to T4: $M = 10.67$) and decreased in the control group T1: $M = 6.74$ to T4: $M = 4.98$). Out of all training participants 5 businesses were closed and all belonged to the control group.

A non-randomized quasi-experimental design was used by Frese, Hass, and Friedrich (2016) for training personal initiative to small business owners in Germany with 97 participants in the control group and 36 participants in the training group. The training was built on the theory of action regulation and taught a proactive approach for goal setting, planning, innovation, time management, management of emotions, and overcoming barriers and it spanned over the time period of three days. The behavioral modeling method was used by giving examples of business owners that were successful and those who were not. The reaction was measured by the indicator of satisfaction with training that was reported to be 1.5 on the measurement scale of -3 to +3. The knowledge of PI increased in the training group as compared to the control group shown by significant Wilks-Lambda $F = 51.42$. The higher PI behavior was reported by training group T1: $M = 3.78$ to T2: $M = 3.97$ and the comparison with the control group was not done. The success was measured in terms of an increase in the number of employees that was significant in the training group T1: $M = 11.48$, to T2: $M = 13.73$ but it reduced in the comparison group T1: $M = 11.37$ to T2: $M = 11.16$. The sales and failure rates were not measured as the success indicators.

Mensmann (2017) conducted personal initiative training based on the facet model of PI. The training was carried out in Togo, for the small (micro) business owners and spanned over 4 weeks with 12 sessions of 3 hours each. The minimum time duration for the participation in business was 12 months of operations to rule out the propensity of including the recent start-ups. The training programs were conducted in French and two local languages Ewé and Kabiyé.

For the illiterate participants, training interns helped them in giving the responses by reading out the questionnaires. The basis of training was the theory of action regulation and the aim was to enhance the personal initiative. First of all 20 business trainers were trained to further disseminate the training amongst which 12 of them were finally selected to carry out the actual training program. There were 397 participants in the training group and 408 participants in the control group. The results revealed that the PI behavior resulted from training and translated into business success (quantitative PI: $b=0.91$, $p<.01$) and (qualitative PI: $b=0.77$, $p<.01$). This indicated that the training translated into PI behavior that ultimately resulted in business success. The authors also tested the long term impact of PI training in the training group and found a significant moderating impact of need for cognition ($b=.17$, $p<.05$) in the relationship of time and cognition interaction and a qualitative measure of PI. This shows the training impact decrease over time and individuals having a higher need for cognition can maintain the PI behavior over time.

Campos et al. (2017) compared the traditional business training (basic financial and marketing practices) with personal initiative training (self-starting behavior, identifying and exploiting new opportunities, innovation, goal-setting, overcoming obstacles, planning and feedback cycles) through a randomized controlled experiment in Togo for the micro-enterprise owners. 500 participants were assigned to the control group, 500 were assigned to psychological personal initiative training, and 500 to a leading business training program. The mechanisms through which the training operated were business practices, personal initiative, capital and labor inputs, innovation index, diversified products, and access to finance. The success measures were survival rate, sales, and profits. The follow-up was done in four rounds over the time period of

2 year. The traditional Edge training improved the business practices by 6%, and personal initiative training had an almost comparable increase of 5.4%, the personal initiative was enhanced 65% by traditional training and 1.2% by the personal initiative training, capital and labor inputs were enhanced 32% by the traditional training and 78% by the personal initiative training, innovation index increased by an amount of 1.1% by the and 3.1% by the personal initiative training, the product diversification increased by 4.4%, and 9.2% by the personal initiative training, access to finance was improved 7 % from traditional training and 1.5% from the personal initiative training. The results indicated that profits of firms belonging to personal initiative training enhanced significantly by 30% whereas there was an insignificant

increase of 11% in the firms belonging to the traditional training group. The training of personal initiative was cost-effective that covered its cost over the time period of 1 year.

The personal initiative training programs have proven recently that they surpass the business training in yielding the success measures for small business owners. Campos et al. (2018) further extended the investigation to ascertain that either an exclusive female sample shows the same results or not. It is because women entrepreneurs face higher obstacles as compared to their male counterparts. Besides, they aimed to find out either the existing human capital makes any difference in the impact of training. For this purpose, a field experiment was done in Lomé, Togo. A sample of 789 women entrepreneurs (Personal initiative TG=262/Traditional Business TG=263, CG=264) was used. The impact was measured in four waves, T1=6 months before training, T2=1 month after training, T3=5 months after training, T4=25months after training. The outcomes showed that the training was as effective for women entrepreneurs as it was for a mixed sample regardless of the level of human capital. The outcomes indicated improved survival rate, sales, and profit.

After several years of successful training of personal initiative, the researchers took a step ahead and started to investigate the factors that help in training retention. For this purpose, Mensmann and Frese (2019) carried out a randomized control experiment to investigate the role of need for cognition in retaining the impact of training and the subsequent impact on the well-being of 912 (TG=426, CG=486) small business owners in Lomé, Togo. The results of the training were gauged in four waves, T1=6 months before training, T2=1 month after training, T3=5 months after training, T4=25months after training. The results showcased that the trained entrepreneurs that had a higher need for cognition had better training retention of personal initiative learned from training. Nonetheless, the impact of the need for cognition on the post-training well-being was not substantiated.

3.1.2.2 Achievement Motivation Training (AMT).

Another psychological training was developed decades ago to train the entrepreneurs in India reading the achievement motivation concept in India. This training was developed by McClelland and Winter (1969) and it is used as a part of different entrepreneurship development programs (EDPs) even today, it was theoretically grounded training containing

three factors i.e. moderate risk preference, feedback desire, and initiative. Small Business owners and potential entrepreneurs were the targets with the length of training spanning from 10 to 14 days. There was no pre-selection for the training, but post-training data were gathered from the participants in the form of written progress reports. The training providers reviewed the progress report to evaluate the development of achievement motivation and the reinforcement of the training. During the training different methods were used like self-reflection, lectures, role-modeling, exercises (thematic appraisal), business situation simulations, counseling. The aim of the training was to examine the impact of AMT on the development of achievement motivation and the economic success of the business.

The total sample was 151 operational and potential entrepreneurs, 78 participants were in the training group while two control groups were formed (CG1=35, CG2=38). The data were gathered at three points of time, before training, immediately after training and 1.5 years after training. In order to measure the outcomes of study projective tests, interviews, objective measurement of economic performance, behavior, and subjective as well as an objective measurement of achievement motivation was done. The results indicated the success of the training program as the TG indicated success in all the economic success indicators, in comparison with pre-training measures as well as in comparison to the control groups. Start-up rate TG=22% and CG=8%, rate of job creation TG=5.9, and CG=2.7 employees per participant, the need for achievement in the participants of the study was higher as compared to the control group and pre-training measurements. The increase in achievement motivation played a significant role in enhancing the success of the business on economic indicators. There was no impact of external economic factors on the training and the best results of training occurred for the participants that had lower hope of success in pre-training measurement and showed active approach after training. Although AMT training was also conducted and compared to two other training programs that combined AMT to business training in the USA; given the focus on developing nations that were excluded (Miron & McClelland, 1979).

Followed by the successful results of this program United Nations Industrial Development Organization (UNIDO) expanded the project in five developing nations i.e. Pakistan, Indonesia, Poland, and Iran (Varga, 1977). Similar results were reported by replicating the training results in these nations but no published article regarding the detailed findings of these experiments is available*. After that the content of AMT was used in other

entrepreneurship development programs as a component, rather a keeping it as sole psychological training.

3.1.2.3 Entrepreneurial Orientation

Al-Awlaqi et al. (2018) conducted a training program to develop the entrepreneurial orientation of micro-enterprises in Yemen at a firm-level. The training continued for 2.5 months with 20 sessions of 2 hours each. None of the theoretically sound justifications were offered for the selection of training material. However, it was based on some of the published empirical literature. 342 participants were present in the control group and 382 in the training group. The training impact was measured on the three components of firm-level entrepreneurial orientation i.e. risks taking, innovation, and proactive personality, and positive results were found.

3.1.3 Psychological and Business Training Programs for Operational Entrepreneurs and Would-be Entrepreneurs

Most of the training programs were conducted by combining psychological training with the traditional business training components. In this section eight training programs are included i.e. Entrepreneurship development program (EDP), Start your business (SYB), Competency-based economics through the formation of the enterprise (CEFE), Entrepreneurs' technology (EMPRETEC), Women Entrepreneurship Programme (WEP), Création d'Entreprises et Développement de la Petite Entreprise (CEPE), and TechnoServe.

3.1.3.1 EDP – Entrepreneurship Development Program

In 1970, the Entrepreneurship development program (EDP) was created by the Gujarat Industrial Investment Corporation Ltd. The target was both entrepreneurs in the small business sector and potential entrepreneurs. The aim was to examine the impact of EDP on the creation and economic success of business in India. The conception behind this training was to select those individuals that had already a certain degree of achievement motivation. The training was a mix of psychological factors (Achievement motivation) and business factors (book-keeping, feasibility study, and business planning). The selection of achievement motivation was not

based on any theoretical criteria. As a follow up the participants were helped with different kinds of support i.e. personal counseling, premises provision, provision of raw materials, financial assistance depending on the nature of business and requirements of participants. The training method was used as per the guidelines of AMT for the development of achievement motivation and other factors; multiple methods like talks, lectures, field survey to previous trainees were used. The length and follow-up of training were not reported (Glaub, 2009).

1362 entrepreneurs (operating for more than three years) and would-be entrepreneurs were assigned to training and control groups based on matched samples (TG=67, CG=67). There was one control group for comparison and data were gathered 2 to 6 years after the intervention. The outcomes were measured via interviews as well as objective and subjective measures of economic performance. The results indicated that there was a significant impact of training on the experimental group as their economic performance enhanced (financial performance and growth rate), low failure rate (8%), 0.83 increase in new employment creation per participant and the would-be entrepreneurs had 26% increase in the business start-up as compared to the control group (Awasthi & Sebastian, 1998).

Patel (1981) also implemented the EDP in India, but the aim was to compare two groups who were given financial assistance and comparing the impact of one that also received EDP and others that did not. The overall length of training and follow-up was not reported except for the provision of financial assistance. In total 94 entrepreneurs and would-be entrepreneurs took part in the study and 24 were in the EDP group. Three groups were formed; one was non-treatment, second gave financial assistance to technicians and last was a non-specified target group that was offered financial assistance. The data were collected two points of time post-intervention (i.e. 1 year and 2 years). Only objective success was measured through questionnaires of economic success. The outcomes of training were mixed; the economic success of entrepreneurs that attended ETP in addition to the financial support was higher and also had a lower rate of failure (13%) in comparison to the non-treatment group (24%) and the financial support group (39%). But in the second wave of data collection 2 years after the intervention, however, the non-treatment group had the highest return on investment and was as successful as other groups in terms of profit.

EDP was again tested by Saini and Bhatia (1996) in India to test the performance of the operational business. The length of training was up-to 2 weeks and as a follow-up personal

counseling and access to financial resources were offered to some of the participants. The success was measured 1 year after intervention and 9 years after intervention in the form of interviews and objective measures of economic success. There was one training group and one non-treatment control group having 37 matched participants each. The results indicated that out of 7 measures of economic success, the TG score was higher only in 2 factors (i.e. turnover and employees) and no other significant change was traced in other indicators. The rate of employment creation in TG was 3.4 and in CG it was 1.4.

Another EDP was conducted in India on a similar pattern by Harper and Mahajan (1995) where the aim was to examine success, but the measurement period was not specified. There was no follow up and the length of training was 6 weeks. The study did not report any comparison group and the instruments for the measurement of economic success. It was reported that TG had more profits and employees as compared to the CG and other economic measures did not indicate any significant difference. The same author conducted another intervention for EDP aiming at the examination of resultant economic success in the Indian context. The sample size was 246 (TG=126, CG=120) and the target population was not clear (either entrepreneurs or would-be entrepreneurs). The evaluation was done on a similar pattern (1-9 years) and the economic success was measured by subjective and objective measures. The results indicated similar growth rates in TG and CG, though the business in TG attained breakeven earlier than CG.

Ahmad et al. (2012) examined the impact of EDP in Malaysia on 32 operational business owners. The contents of the program included the psychological construct of entrepreneurial motivation and the business constructs of business planning and strategy development along with program integration and program coordination. All participants showed awareness and understanding of the training content and activities. The outcomes revealed that EDP had the highest impact on motivation and least on program coordination. Galvão, Marques, and Ferreira (2019) evaluated an EDP conducted in Sabor, Portugal. The training content focused on the psychological factors of opportunity recognition and creativity along with the business factors of plan creation and networking. Total of 366 participants (operational and would-be entrepreneurs) enrolled themselves in this program out of which 294 actively participated in the training intervention. 91 participants created their own business and 157 new jobs were created in the evaluation carried out after 7 years of program inception.

3.1.3.2 Start Your Business (SYB)/ Start and Improve your business (SIYB). Start

your business (SYB) was created in the 90s has its roots in the “Improve Your Business” (IYB) program that was established by SwedeCorp for the International Labor Organization (ILO). The program was then made a part of a larger program known as “Start and improve your business” (SIYB) that targeted both the existing and operational entrepreneurs. This was promoted by ILO in nearly 20 countries; the target was the aspiring entrepreneurs that had a business idea. The training was not based on any specific theory and there was no logical reason for the selection of training content. The psychological factors of social competence, self-reflection, and creativity were chosen and the business contents of making a feasibility study, business plan, and business management skills were included. The average length of the training program was 5 days and there were no specific pre-selection or post-selection criteria. Different methods were used to impart training i.e. role-plays, lectures, real-life examples, self-reflection, and games (Glaub, 2009; Glaub & Frese, 2011).

Barwa (2003) conducted the SYB program with the length of training comprising 5 days and no follow-up was recorded. The training was aimed to improve the success of operational and newly started businesses in Vietnam. 258 entrepreneurs and would-be entrepreneurs participated in the training and the measurement was done 9 months after the intervention. No comparison group was chosen, the evaluation was done based on objective and subjective economic success from questionnaires and the behavioral measures were measured subjectively along with the reaction of training. The results indicated a 70% increase in sales, customers, and profits after training, along with a 0.8% increase in employment creation. The behavior in managing the day to day business was also improved in terms of confidence and being more socially competent.

Pharoah and Burton (2001) carried out SYB training in South Africa through a 5 days intervention. The training group comprised 45 would-be entrepreneurs that had a business idea; the evaluation of business was done 2 years post-intervention. The reaction from training was measured; the interview was used to measure the objective economic success. The participants who started the business after the training were examined and a failure rate of 28% was traced.

Carlsson and Anh (2001) conducted SYB training in Vietnam to examine its impact on the success of the existing business, the creation of new business, and the impact on the performance of the created business. The training length was over 5 days and the follow-up was provided in the form of consultancy, 648 entrepreneurs and would-be entrepreneurs participated in the training and the data was collected immediately after intervention and it was continued to be collected 3 years. The data was collected in the form of interviews, economic success (objective and subjective), behavior, and reaction. After the training, only 15% of the participants started a new business, and 15% of the already operational business reported an increase in the performance in terms of productivity, profit, and sales with 0.3 per participant employment creation rate. The behavioral impact was not significant and even some of the business activities were traced to be declined after training.

Abeyasuriya (2005) carried out SYB training in Sri Lanka for examining its impact on business creation and success. The follow-up was done in the form of consultancy and training. Two samples of potential entrepreneurs were taken but the size of only one group was mentioned (97). The participants were evaluated after 6 months and 1.5 years for short-term success measures in 1st sample, while the second sample was evaluated after the time of 2.5 to 3.5 years but the method of selection was not mentioned. The outcomes were measured in the form of an interview, economic success (objective and subjective), and reaction. For the first sample group, the business start-up rate was found to be 39% with a low rate of job creation 0.2 per participant. It was found that the real start-up was the result of rigorous counseling and follow-up rather than sheer training. The rate of startup was 48% in the second sample group amongst which a 36% failure rate was found.

A similar version of the SYB program was to “generate your business idea” (GYB). Unlike SYB, GYB targeted those aspiring entrepreneurs that had no tangible business idea. The psychological factors included in the training were information search, self-reflection, and creativity. The average length of training was from 3 to 5 days and the training methods of self-reflection, lectures, and creativity were used. The training also focused on helping the participants conduct a feasibility study and generating a business idea. Abeyasuriya (2005) carried out and evaluated a 3 days GYB intervention in the aspiring entrepreneurs (TG1=98, TG2=ns) in Sri Lanka. There was no control group, nonetheless, follow-up consultancy was offered. The evaluation for the first sample was done 0.5 to 1.5-year intervention and for the second sample, it was done 2.5 to 3.5 years after the training. The results showcased an

increase in the start-up rate of the first sample (15%) but 82% of the participants were able to create a concrete business idea. The reported failure rate in the second sample was low (13%).

The tracer studies on the SYB program by ILO in 2010 indicated that overall 2500 training programs were provided globally reporting 4,500,000 participants and 30% of the trainees were capable of starting a new business and on average created 3 jobs per business (USSF.org, 2011). McKenzie, Woodruff, and Mel (2015) reported the results of the SIYB training program in Sri Lanka. The sample was 628 women entrepreneurs that were operational and 628 those women that were planning to start their business, out of which a random selection of 400 participants was done for the training group. The baseline survey was carried out in 2009 and the operational entrepreneurs were given the training for 6 days and the potential entrepreneurs were offered 8 days training. The evaluation was done 3-4 months after training, then 7-8 months after training, then 15-16 months after training, and lastly 24-25 months after the training. The adoption of business practices in record keeping, marketing, stock control, and financial planning was quite low. The outcomes of sales, profit, and capital stock only enhanced in the case of the provision of financial assistance. The impact on business start-up was 20-29% for the participants that attained cash grant and 12% for the participants that only received training. The newly started business reported a 40% sales increase and a 43% profit increase in medium-term; however, the short term results were not significant.

In Pakistan, the SYB program was initiated with the help of public and private universities and 1140 operational and potential entrepreneurs were trained. The impact of training was measured in terms of employment creation that was in total 514 out of which the 253 employments were created by the new business (SYB, 2016). The SIYB (2017) update reported improved training methods through business games and developed new tools of marketing and communication. The tracer study on the global level indicated that overall 10.5 million trainees have participated in the time period of 2011-2015. In five year span, the 2.65 million new start-ups took place and among them, 40% of the business expanded their operations. The training created 9 million jobs all over the world, the training is still expanding and the major target countries are Fiji, Bahamas, Peru, Guatemala, Ethiopia, Colombia, Afghanistan, Bangladesh, India, and Pakistan. However, the detailed evaluation reports are not available for the African, European, South, and Central Asian nations where only the number of trainees is indicated.

3.1.3.3 CEFE - Competency-based Economies through Formation of Enterprise

Another training program was initiated in the 1980s that spread internationally in approximately 89 nations and having over 100,000 trainees known as Competency-based economics through the formation of the enterprise (CEFE). It was created by a training agency in Germany named “German Agency for Technical Cooperation”. The training was created for both operational and potential entrepreneurs. The content of the training was chosen based on some empirical investigations but the theoretical foundations were not clear. The psychological constructs of creativity, self-confidence, motivation, self-reflection, and social competence were included along with the business components of the marketing and development of the business plan. The learning approach adopted in these training programs was based on action orientation including behavior-based exercises such as simulations and role-plays, frilled trips, and case studies (Glaub, 2009; Glaub & Frese, 2011).

Braun et al. (1995) conducted the CEFE training for the operational (N=198) and potential (N=122) entrepreneurs in the Philippines, Vietnam, Brazil, Kenya, and Chile. The duration of the training and control group was not reported and the trainees were offered consultancy as a follow-up. The results of economic success, behavior, and reaction were gauged immediately after the intervention and then two years later. The results in the potential entrepreneurs indicated an improved start-up rate of 32% on average but it was diverse across the national levels i.e. Philippines (52%) and Vietnam (0%), the 86% operational entrepreneurs indicated an increase in turnover, 85% stated changed behaviors, the employment creation rate was 2.1. per trainee and 87% of the respondents indicated that after being trained they changed the way of operating their business based on the content they had learned in training.

The training of CEFE was conducted in Vietnam by Nguyen (2001), the participants were both existing and potential entrepreneurs that summed up to be 106 and the training spanned over 17 days with the consultancy based follow-up. There was no control group and the results of the training were measured 6 months to 4 years after the intervention based on economic success, learning, and reaction. For the potential entrepreneurs, the reported start-ups were 28% and the 68% operational entrepreneurs indicated an increase in sales, and 44% indicated enhancement in employment creation and all the participants indicated learning of business-related knowledge.

Reichert et al. (2000) conducted three studies of the CEFW training program. The first study was conducted in Sri Lanka and the participants were both operational and potential entrepreneurs. The training program aimed to examine the impact of training content on success as well as business creation. There was no control group and no follow-up support was granted to the training participants. The length of training was 8 to 14 days comprising a sample of 207 participants in total. The post-training results were measured 1-1/5 years after the intervention and then 4 years after the intervention and the data on reaction, business start-up, and economic success were measured. For the potential entrepreneurs that took the training program, 40% indicated starting a new venture. Overall 1.4 jobs were created by each participant and 80% of the operational entrepreneurs reported business growth.

Another study of the same training program was conducted by Reichert et al. (2000) in Laos and the reported time of training was 3 to 15 days. This training was exclusively for the operational entrepreneurs (N=40) and there was no control group. The results of reaction, behavior, and success (objective as well as subjective) were measured 1 and 3 years post-intervention. It was found that 44% of participants reported increased sales after one year of training and the job creation of 1.4 people per trainees. It was reported by 88% of the training participants that they had improved skills in managing the business. Reichert et al. (2000) conducted CEFW training to examine the success of 132 operational entrepreneurs in Thailand and there was no control group for comparison. The outcomes of economic success were measured objectively by questionnaire and the behavior and reaction were measured subjectively 6 to 9 months after the training. The participants reported improved trained behavior and its application in business settings that resulted in a success rate of 30%.

Pham (2002) examined the impact of CEFW training on the success of operational entrepreneurs in two groups of poor small business owners women (N=748, N=335) in Vietnam but the time of training was not reported. The participants of the first group were chosen to study the short term impact of training that was measured shortly after the intervention and the second group was selected to measure the long-run impact after the period of seven months. There was no control group and the success of training was measured in terms of business results, reaction and learning measures from all subjects. It was reported by 2/3rd of the participants that their income increased after seven months and they understood and applied the learned content in their business.

More recently in 2014, the evaluation of CEFE was done in Rwanda; it reaffirmed the usability of training in line with the previous studies. The program was implemented with the help of public labor Rwandan in which the participation of 1043 was recorded in 2013. The impacts of training were evaluated one-year post-intervention that revealed the creation of new business was 32.4%; the improvement in operational business was 50.9% and only 7.8% of the training participants remained unemployed. Each participant created one additional job and 79.4% of the respondents indicated an improvement in overall business practices and 92.2% of the trainees gave the credit of improvement to CEFE training (CEFE.net, 2014).

A CEFE based training program was conducted in Albania in 2016 for operational and potential entrepreneurs. The aim of the training was to improve the entrepreneurial and business skills of participants for business improvement and idea generation of a viable business plan. 87 participants undertook a 10-day training program. The evaluation indicated that 62% of the trainees said that the training was as per their business needs and 55% said that they implemented the training in their business operations. 35 % secured access to finance and 74% reported personal/ family investment while 22% gained funding support from the international authorities like the European Union (EU) and United Nations Development Program (UNDP). The trainees said that they had improved skills in making business plans and gained more self-confidence along with openness to new experiences after the training (CEFE.net, 2017).

CEFE training was conducted in 24 cities and towns in Bosnia in 2018 for the time period of 294 training days and the delivery of the training was followed-up by 200 days of mentoring and consultation. There was no reporting of the control group and the participants were taught business skills, business plan development, and the psychological concepts of communication improvement and self-confidence. The training had 665 participants (potential entrepreneurs) who were trained via experiential learning based on local business examples. The training resulted in 173 successful business start-up ideas and 250 jobs were created (CEFE. net, 2018).

3.1.3.4 Entrepreneurs' Technology (EMPRETEC)

Entrepreneurs' technology (EMPRETEC) training program was created back in the 80s that has been spread over 20 countries from Latin America to the Middle East having 70,000 trainees. This program was initiated by the United Nations by targeting the operational as well as potential entrepreneurs. This program had no theoretical foundation but the basis of content was relevant empirical studies. It was a blend of psychological (Persuasion, commitment, initiative, self-confidence, independence, risk-taking, and business-related factors (quality and efficiency demand, setting goals, networking, business plan development, opportunity, and information seeking, planning, and monitoring). On average the training spanned over 2 weeks and the participants were given follow up in the form of advice and consultancy and they were trained regarding the business skills as needed. The used training methods were discussions, lectures; case studies, self-assessment, videotapes, and exercises based on simulations and role-plays (Glaub, 2009; Glaub & Frese, 2011).

The EMPRETEC training experiment was conducted by Colley (1990) who attempted to find out the factors that make a small business succeed in Malawi. He included the owners of newly created as well as already established small businesses. The overall duration of training was not reported and there was no follow-up. The sample was a mix of existing and new business owners (N=90). There was a training group as well as the control group to which the random assignment of participants was done (TG=45, CG=45). Those participants that did not participate in the training were also assigned to the control group based on the self-selection process. The measurements of results were done before the intervention and then two years after the intervention. The economic success was measured objectively and the measurement of behavior and results was done on a subjective basis by using both questionnaires and interviews. The results revealed that the sales of participants in the training group enhanced but there was no change in the sales of participants in the control group and the cause of improved sales was deemed to be the psychological content in training. Both groups did not indicate any change in the number of employees.

The impact of EMPRETEC was examined on the success of existing and newly developed ventures by Lopez (1999) in an experimental investigation. The sample comprised of 64 new and existing entrepreneurs in small business settings in Brazil. The participants

having entrepreneurial competencies were chosen for a 10 days training program with no follow-up and no comparison group. The impacts of training were measured before the intervention and 6-7 months post-intervention. The evaluation criteria for training were based on objective and subjective economic success and behavior. The training reportedly had no significant impact on the objective performance measure but the participants indicated that there was an increase in the gross business sales (62%) even in the period of economic downturn. Moreover, two-thirds of them reported that the training caused them to use the changed and improved ways of doing business and they had improved psychological capabilities after the training.

Ruffing and Fulvia (1999) used the EMPRETEC training for operational entrepreneurs as well the potential entrepreneurs. The length of the training program was not reported and the control group was not specified in terms of a number of participants, however, it was reported that the post-training consultancy was offered. The sample contained 810 participants from Uruguay, and the selection was based on their entrepreneurial motivation and competencies. The success was measured directly after the training and then 10 years after the training but it was not reported either the success was measured objectively or subjectively. The results indicated that there was an increase in the start-up rate of new ventures (56%) and the employment created by the participants in the training group was 12% in the fourth year but for the control group participants, the employment declined by 28%.

Ruffing and Fulvia (1999) used the concept of EMPRETEC training in creating new business ventures and the improvement of existing business ventures. 692 existing and operational entrepreneurs participated in a 9-day training program that took place in Brazil. The pre-selection of participants was done who had the motivation and entrepreneurial capacities and the follow-up was done in the form of consultancy. The economic results of the training were measured and the instruments were not reported, moreover, there was no comparison group. Only the post-intervention results were measured after 6 months and 2 years of training. The reported new start-ups were at the rate of 9% and none of the business owners failed despite the failure rate of 75% in Brazil.

EMPRETEC training is conducted in many countries each year, though detailed publications are not available, yet the summarized impacts are mentioned in the EMPRETEC annual reports. The training was conducted in 2011 in Argentina, Benin, Botswana, Brazil,

Chile, Dominican Republic, Ecuador, El Salvador, Ethiopia, Ghana, Guatemala, Guyana, Jordan, Mauritius, Mozambique, Nigeria, Panama, Peru, Romania, South Africa, Tanzania, Uganda, Uruguay, Venezuela, Viet Nam, Zambia, and, Zimbabwe for total 240,000 entrepreneurs. The outcomes indicated that after the training there was an increase in business start-up and economic success in terms of increased turnover, employment, income, production, and satisfaction with the training. It was reported that the participants consulted the material taught in training and sought financial aid after participation (EMPRETEC, 2011).

EMPRETEC (2012) reported the training results in selected nations of Argentina, Colombia, El Salvador, Jordan, Mozambique, Nigeria, South Africa, and Venezuela. The results were reported 3 months and one year after the intervention. It was reported that the start-up rate increased in all nations (range 20% to 80%), sales increased in the range of 10% to 50%, employment increased in the range of 5% to 30% and there was an increase in business profitability from 9% to more than 28%. EMPRETEC (2013) annual report offered a snapshot of selected countries statistics, for the training outcomes 3 months and 1 year after the intervention. The impact indicators were reported for 31083 trainees in Argentina, Benin, El Salvador, Jordan, Mauritius, Mozambique, Peru, Nigeria, South Africa, Tanzania, Venezuela, and Zambia. The results were reported 3 months and one year after the intervention. It was reported that the start-up rate increased in all nations and it ranged from 3% to 45%, sales increased in the range of 3% to 80%, employment increased in the range of 2% to 50% and there was an increase in business profitability from 5% to 45%.

EMPRETEC (2014) was conducted in Argentina, Columbia, Ecuador El Salvador, India, Jordan, Mauritius, Saudi Arabia, Peru, South Africa, and Zambia to nearly 28,000 participants. The results spanning 3 months to 1 year period indicated a 3% to 78% increase in sales, 5% to 100 % enhancement in employment, 4.1% to 82% increase in profits, and the reported new ventures were from 4% to 80%. For the year 2015, the selected nations were Argentina, Columbia, Ecuador El Salvador, Gambia, Guatemala, India, Jordan, Mauritius, Saudi Arabia, Venezuela, and Zambia with 24,300 trainees. There was a 2% to 70% increase in sales, 0% to more than 46% change in employment, 2% to 69% increase in profits and the new business started at the ranging from 0% to 57% (reported for 3 months to 1 year after the intervention. Zambia was the only country to show the 0% change in the short term period of 3 months in case of employment creation and new business creation. Overall the rate of

EMPRETEC training has increased over the time period since its inception (EMPRETEC, 2015).

3.1.3.5 WEP – Women Entrepreneurship Programme

Women Entrepreneurship Programme (WEP) was developed in 2002 and it was pilot tested in South Africa, the training was distributed in local areas and spanned on average 6 days. The targets of training were women who owned small businesses and had substantial growth potential. The content of the training was developed on the basis of the published empirical literature. The psychological factors included in the training were creativity, risk-taking, opportunity identification, motivation, social skills, and leadership. The other content included business plan development and information about management skills. These business plans were presented to obtain a loan to the relevant authorities. The follow-up was done in the form of personal counseling. The training was done through the exercises, lectures, role modeling, case studies, visiting the operational entrepreneurs, and active group discussions (Glaub, 2009; Glaub & Frese, 2011).

Botha, Nieman, and van Vuuren (2006) published an experimental study by employing WEP and assessed the impact of this training on the success of newly developed businesses. The target of training was 180 (TG=116 and CG=64) existing entrepreneurs as well as operational entrepreneurs in South Africa. The assignment to training and control group was done on a nonrandom basis and the control group was partially matched. The training had a time period of 6 days and the follow-up was done in the form of personal counseling and the participants were asked to develop business plans. These business plans were later on used to apply for a business loan. The outcomes were measured before the intervention, immediately after the intervention, and 6 months after the intervention. Through questionnaires, economic success (objective and subjective), reaction, and learning were measured. The training group reported better outcomes as compared to the control group on success as well as the learning of psychological and business-related skills.

Petridou and Glaveli (2008) developed a training program for 104 rural women in Greece. The training was a blending of psychological (i.e. locus of control, self-confidence, stress management, time management, facing ambiguity, risk-taking) and business contents

(i.e. managing resources and IT skills). The impacts of training were positive on both business-related outcomes like IT skills, business opportunity identification, resource management, negotiations, and psychological outcomes such as better management of stress and having more self-confidence.

Roomi and Harrison (2010) developed and tested the entrepreneurship training program for women in Pakistan. Out of the 77 participants 65 were operational entrepreneurs and 12 were aspiring to start their business. The training content had business skills (finance, selling, marketing, and management) and psychological factors (confidence building, self-awareness, and networking). The training continued for the time period of three weeks and the outcomes were measured 18 months after the training. The results indicated that they had better skills in managing their business in terms of planning, organizing, decision making, selling, and marketing. The participants reported improved persistence, calculated risk-taking, and innovation post-training and rated 4.08 on the scale of 5 regarding the usefulness of training for the attainment of their entrepreneurial goals. Moreover, 42% of aspiring entrepreneurs reported the initiation of their business.

Lahore University of Management Sciences (LUMS) initiated WEP with the collaboration of U.S State Department in 2015. The three to twelve days program targeted the female entrepreneurs who had at least 5 employees and operated for 2 years. The aim was to develop the psychological capabilities of leadership and team-building along with the business (marketing, supply chain, finance) and operational skills. Till now 88 women have been trained and they reported successful implementation of the training content to their business and attainment of desired objectives (LUMS, 2016, 2017). Institute of Business Administration Karachi introduced WEP having the elements of the business (business plan development, legal matters, money management, and selling) along with the psychological factors (courage, parsimony, humility, and self-efficacy). The program targeted both the newly operational and aspiring entrepreneurs and the training program spanned over the time period of two months. The program has since led to successful business start-ups and improved business performance in the 600 participant women (CED, 2017).

3.1.3.6 CEPE - Création d'Entreprises et Développement de la Petite Entreprise

CEPE program was developed in Senegal in 1995 and combined psychological factors (i.e. initiative, risk-taking, persistence, opportunity and information seeking, commitment) and business content (technical skills, market analysis, legal issues, administration, and human resource management). The training content was selected based on the published empirical literature. The average length of training was 16 days and the participants were provided the follow-up in the form of personal counseling and supervision. The methods of training included role-plays, case studies, and business simulations (Glaub & Frese, 2011). Kouessi (1995) conducted an experiment to find out the impact of CEPE on the creation of business in Senegal in a 10 days training program. There were 31 entrepreneurs and would-be entrepreneurs were in the training group and they did not compare them with control group follow-up was done 9 months after the intervention. The results were measured in the form of subjective and objective success along with the reaction and learning outcomes. The evaluation indicated that there was a business start-up rate of 39% and all the participants reported improved behavior and learning after taking part in the training program.

3.1.3.7 TechnoServe Business Plan Competition

This training program was created by TechnoServe in 2002 and it was promoted in African nations. The training was developed for entrepreneurs and aspiring entrepreneurs to start a business and improve growth. The training was developed to improve the entrepreneurial attitude, business plan development, and management skills, however, no specific reason reported based on which the content of the training was selected. The training had a length of ten days and participants were granted personalized counseling after the training (Glaub & Frese, 2011). Klinger and Schündeln (2007) tested the effectiveness of the “TechnoServe Business Plan Competition” on the development of new business and the performance of the existing business. The training was carried out in Nicaragua, Guatemala, and El Salvador for the time period of 10 days and it had no follow-up. 665 operational and aspiring entrepreneurs took part in the training program (TG=377, CG=278) and the results were measured before training and one year after the training. There was a 25% increase in the business starting activities in the training group and the already operational entrepreneurs rated better on business growth. There was a significant increase in employment created by the training

participants in comparison to the control group. The psychological factors were only found effective in the case of business growth but not in the case of a business start-up.

Since then TechnoServe training is conducted regularly each year. TechnoServe (2008) trained around 3000 people via business plan competitions across 9 Asian, African, and Latin American nations. The participants were successful in launching the business, expanding business and create new jobs. TechnoServe (2009) trained 890 handcraft producers in Swaziland that reported double sales revenue at the year-end. The same training was carried out in Peru for the small mining and food industry business. The 54 trained business owners created more than a hundred jobs as well as had incremental sales of 10.2 million USD. The participating business outperformed the non-participants by a 10% increase in the sales revenue. In 2010 the training of 2400 existing and operational business owners was done in Haiti and Ghana. The sales, profits, and number of employees were reported to increase (TechnoServe, 2010).

In 2011 TechnoServe was carried out in Ghana to train the women in rural areas to improve their income. For this purpose, 4000 women were selected and they were trained to develop an entrepreneurial attitude and basic business skills. The women participants indicated the income to be doubled after putting the training into practice (TechnoServe, 2011). TechnoServe was conducted in 2012 across 30 countries in Asia, Africa, and Latin America. 1540 businesses participated in the training and they had a revenue increment of 26,660,000 USD with the creation of 9,330 new employment opportunities (TechnoServe, 2012).

In 2013, TechnoServe was conducted in Guatemala, Nicaragua, Honduras, and Burkina Faso for the owners of SMEs and helped in the acceleration of 800 businesses that had growth potential. The major contents of the program included training, mentoring, and business plan competition. As a result of training 13 million USD revenue was generated along with the creation of 750 new employments (TechnoServe, 2013). In East Africa, the TechnoServe was done in for creating employment opportunities for youth. The participants were young individuals with an average age of 18 years. The main aim was to provide the needed skills and knowledge for the youngsters to initiate their own business by building on the available economic opportunities. The participants were trained and mentored for basic business skills and development of confidence. Overall 15000 people got self-employed in a time period of 1 year (TechnoServe, 2013).

TechnoServe was conducted in Asian, African, and Latin American nations. The training was given to 2986 business owners and each of the business gained revenues of 5,540 USD and 5610 new employees were reported. Total finance mobilized by the trainees was 12,681,615 USD (TechnoServe, 2014). In 2015 the TechnoServe was carried out in Botswana, Benin, Brazil, Faso, Burkina, Colombia, Chile, El Salvador, Côte d'Ivoire, Ghana, Guatemala, Ethiopia, Honduras, Haiti, India, Malawi, Mexico, Kenya, Nicaragua, Mozambique, South Africa, Peru, Rwanda, Nigeria, Swaziland, South Sudan, Tanzania, Zambia, Uganda, and Zimbabwe. The training participants had a total revenue increase of 75,300,000 USD from 319,000 participants all over the region (TechnoServe, 2015).

TechnoServe was carried out for the SMEs and microfinance business in India, West Africa, East Africa, South Africa, and Latin America. The impact indicated 45 million USD revenues for 11000 businesses and 5000 new jobs were created and 4 million USD finance was mobilized (TechnoServe, 2016). TechnoServe (2017) was again done in the same region and the training was given to 469,000 people and they had a 189 million USD increase in revenue. In 2018 the TechnoServe results indicated an average return of (ROI) of 3.30 USD in for each dollar spent. There was a total of 45000 beneficiaries of the program with an overall return of 57 million USD for the year (TechnoServe, 2018). The review is depicted in Table 3.1

Table 3.1: Review of training programs for entrepreneurs and would-be entrepreneurs in developing nations

Authors	Contents	N	TG/ CG	Evaluation Criteria	Theoretical Perspective	Participants	Evaluation Times	T	Design	Outcomes	Country
1. Personal Initiative Training (Total Trainings=9)*											
Glaub (2004)	Proactivity, overcoming barriers, self-starting	84	TG=27, CG=57	Reaction, learning, behavior, success	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training, T2=immediately after training, T3=5-7 months after training, T4=24 months after training	3 days	Randomized control (Pre-test, post-test)	Increase in the success of TG in short-term and marginal increase in long-term period, personal initiative enhanced in long-term. The personal initiative was partially the determinant of success	Uganda
Glaub (2009)	Proactivity, overcoming barriers, self-starting	100	TG=47, CG=53	Reaction, learning, behavior, success	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training, T2=immediately after training, T3=3-4months after training, T4=24 months after training	3 days	Randomized control (Pre-test, post-test)	Increase in the success of TG, 2.8 new employments created per participant, No failure rate, Increase in success is due to personal initiative	Uganda
Frese, Hass, and Friedrich (2016)	Goal setting, planning, innovation, time management, management of emotions and overcoming the barrier	133	TG=97, CG=36	Reaction, learning, behavior, success	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training, T2=immediately after training, T3=1 year after training	3 days	Non-randomized control group pre-test/post-test	Increase in satisfaction, learning, PI behavior, success (sales)	Germany
Glaub et al. (2014)	Proactivity Overcoming barriers Self-starting	92	TG=36, CG=56	Reaction, learning, behavior, success	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training, T2=immediately after training, T3=4-5 months after training, T4=12 months after training	3 days	Randomized control (Pre-test, post-test)	Increase in satisfaction, learning, PI behavior, success (sales, number of employees, business failure)	Uganda

Solomon, Frese, Friedrich, & Glaub (2013)	Time management, goal setting, personal initiative (overcoming barrier) and innovation	57	TG=30, CG=27	Reaction, learning, behavior, success	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training, T2=immediately after training, T3=5-7 months after training, T4=24months after training	3 days	Randomized control (Pre-test, post-test)	Increase in satisfaction, learning, PI behavior, success (number of employees)	Cape Town
Mensmann (2017)	Qualitative and quantitative personal initiative/long term moderating impacts of need for cognition	805	TG=408, CG=397	Behavior	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=6 months before training, T2=1 month after training, T3=5 months after training, T4=25months after training	4 weeks (12, 3h sessions)	Randomized control (Pre-test, post-test)	Increased Personal Initiative	Togo
Campos et al. (2017)	Business Edge training: accounting and financial management, marketing, human resource management, and formalization. /Personal Initiative: the mindset of self-starting behavior, innovation, identifying and exploiting new opportunities, goal-setting, planning and feedback cycles, and overcoming obstacles.	1500	TG=1000, CG=500	Behavior (business practices, personal initiative, capital and labor inputs, innovation index, diversified products, and access to finance/Succes s: Sales (monthly, weekly)/profits (weekly)	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=before training T2=2.5 years after training	4 weeks	Randomized control (Pre-test, post-test)	Improved business practices, innovation, product diversification, capital and labor inputs, personal initiative, sales, profit, and survival	Togo

Campos et al. (2018)	Personal Initiative/Business Edge training: accounting and financial management, marketing, human resource management, and formalization	789	Personal initiative TG=262/ Traditional Business TG=263, CG=264	Reaction, behavior, success (Business survival, sales, profits)	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=6 months before training, T2=1 month after training, T3=5 months after training, T4=25months after training	12 3 hour sessions	Randomized control (Pre-test, post-test)	Increased personal initiative, sales, profit and survival despite the level of existing human capital	Togo
Mensmann and Frese (2019)	Personal Initiative	912	TG=426, CG=486	Reaction, Behavior	Personal Initiative Theory/ Action Regulation Theory	Entrepreneurs	T1=6 months before training, T2=1 month after training, T3=5 months after training, T4=25months after training	4 weeks (12 3 hour sessions)	Randomized control (Pre-test, post-test)	Increased Personal Initiative and Well-being	Togo
2. Achievement Motivation Training (Total Trainings=2) *											
McClelland and Winter (1969)	Achievement motivation (moderate risk preference, feedback desire and initiative)	78	CG1=35, CG2=38	Behavior: Achievement Motivation/Success: Start-up rates, employment	Achievement Motivation	Entrepreneurs / would-be entrepreneurs	T1= before training, T2=immediate after training, T3=1.5 years	10-14 days	Pre-test/post test	Improved achievement motivation, employment creation, and business start-up	India
Varga (1977)	Achievement motivation (moderate risk preference, feedback desire, and initiative)	ns	ns	ns	Achievement Motivation	Entrepreneurs / would-be entrepreneurs	T1=after training, ns	ns	Post-test	Improved achievement motivation, employment creation, and business start-up	Pakistan, Indonesia, Poland and Iran
3. Firm-Level Entrepreneurial Orientation Training (Total Training=1) *											
Al-Awlaqi et al. (2018)	Risk taking, innovation and proactiveness	724	TG=382, CG=342	Behavior	Not Identified	Entrepreneurs	T1=after training, ns	2.5 months	Post-test	Improved entrepreneurial orientation at firm level	Yemen
4. Entrepreneurship Development Program (EDP) (Total Trainings=7) **											

Patel (1981)	Psychological Factors: Achievement motivation Business Factors: Bookkeeping, feasibility planning, and business planning	94	TG=ns, CG=ns	Objective success (profit, failure rate)	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=1 year after training, T2=2 years after training	ns	Post-test	The EDP and financial support group had the lowest failure rate (13%) as compared to the financial support group (39%) and the non-treatment group (29%). The non- treatment groups had a higher return on investment and profits after 2 years.	India
Harper and Mahajan (1995)	"	120	TG=60, CG=60	Objective success(number of employees, profit)	Not Identified	Ns	T1=after training ns	6 weeks	Post-test	Higher profits and number of employees in the training group	India
Harper and Mahajan (1995)	"	246	TG=126, CG=120	Success (Objective and Subjective)	Not Identified	Ns	T1=after training ns	6 weeks	Post-test	The Training group reached break-even earlier. The same growth rate in the training and control group	India
Saini and Bhatia (1996)	"	74	TG=37, CG=37	Objective success (turnover, number of employees)	Not Identified	Would-be entrepreneurs	T1=1 year after training, T2=2 years after training	2 weeks	Post-test	The training group had more turnover and employment creation rate (3.4 per participant) as compared to the control group (1.4 per participant)	India
Awasthi and Sebastian (1998)	"	134	TG=67, CG=67	Reaction, Subjective and objective economic success, employment creation, growth, business start- up	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=2 years after training, T2=6 years after training	ns	Post-test	Economic performance enhanced (financial performance and growth rate), low failure rate (8%), 0.83 increase in new employment creation per participant and the would-be entrepreneurs had 26%	India

										increase in the business start-up as compared to the control group	
Ahmad et al. (2012)	Psychological Factors: Motivation Business Factors: Business planning, strategy development, programs integration, and programs coordination	32	TG=32, No CG	Reaction and Behavior	Not Identified	Entrepreneurs	T1=after training ns	ns	Post-test	Awareness of content and activities, entrepreneurial motivation, planning, strategy development, program integration, and coordination	Malaysia
Galvão, Marques, and Ferreira (2019)	Psychological Factors: Opportunity recognition and creativity Business Factors: Business plan development, networking	294	TG=294, No CG	Behavior, start-up, new job creation	Not Identified	Would-be entrepreneurs	T1=7 years after training	ns	Post-test	91 start-ups, 157 new jobs, improved behavior	Portugal
5. Start Your Business (SYB)/ Start and Improve Your Business (SIYB) (Total Trainings=9) **											
Pharoah and Burton (2001)	Psychological Factors: social competence, self-reflection, and creativity and the Business Contents: Making feasibility study, business plan, and business management skills	45	TG=45, No CG	Success/Failure	Not Identified	Would-be entrepreneurs	T1=2 years after training, T2=6 years after training	5 days	Post-test	28% failure rate	South Africa
Carlsson and Anh (2001)	"	648		Reaction, behavior, Success/Start-up	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=immediately after training, T2=3 years after training	5days	Post-test	Start-up rate=15%, Productivity, profit and sales increase=15%, employment creation=0.3 per participant, Overall low impact.	Vietnam

Barwa (2003)	258	TG=258, No CG	Reaction, behavior, Success	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=9 months after training	5 days	Post-test	Sales, customers and profits=70%, Job creation= 0.8 per participant	Vietnam
Abeyasuriya (2005)	ns	TG1=97, TG2=ns, No CG	Economic Success (Subjective and Objective)/Rea ction/behavior	Not Identified	Would-be entrepreneurs	T1=.5-1.5 years after training (TG1) and T1=2.5-3.5 years after training (TG2)	5 days	Post-test	TG1=39% start-up rate (mostly due to counseling) and 0.2 jobs created per participant /TG2=48% start-up rate (Failure of 36%)	Sri Lanka
Abeyasuriya (2005)	ns	TG1=90, TG2=ns, No CG	Economic Success (Subjective and Objective)/Rea ction/behavior	Not Identified	Would-be entrepreneurs	T1=.5-1.5 years after training (TG1) and T1=2.5-3.5 years after training (TG2)	3 days	Post-test	TG1=15% start-up rate, improved behavior /TG2=low failure rate (15%)	Sri Lanka
USSF.org, (2011)	45 Lac	TG=45 Lac, No CG	Start-up/New job creation	Not Identified	Would-be entrepreneurs	T1=5 years after training	ns	Post-test	Start-up rate =30%, new employment creation=3 jobs per participant	ns
McKenzie, Woodruff, and Mel (2015)	1,256	TG=400, CG=856	Business practice adoption, profits, start- up, profits of newly started business	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=7-8 months after training, T2= 15-16 months after training, T3=24- 25 months after training	Entrepre neurs=6 days/Wo uld-be entrepren eurs=8 days	Post-test	Business practices adoption=low Sales, profit and capital stock= only increased when financial assistance was given Start-up rate=20-29% for the participants that attained cash grant and 12% for the participants that only received training Profits for new business=no impact in the short term, a 43% increase in medium- term	Sri Lanka

SIYB (2011-2015)		10.5 million	Ns	Start-up, business expansion, new job creation	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=5 years after training	ns	Post-test	New start-ups=2.65 million Business expansion= 40% Job creation= 9 million	ns
"											
SIYB (2016)		1,100	TG=1100, No CG	Start-up and new job creation	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=1 year after training	ns	Post-test	Increase in start-up and creation of 514 jobs	Pakistan
"											
6. Competency-based Economies through Formation of Enterprise (CEFE) (Total Trainings=9) ***											
Braun et al. (1995)	Psychological Factors: creativity, self-confidence, motivation, self-reflection, and social competence Other Factors: Marketing and development of a business plan.	320	TG=320, No CG	Economic Success (Subjective and Objective)/Reaction/behavior	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=immediately after training, T2=2 years after training	ns	Post-test	Start-up rate=32% on average, diverse across the national levels i.e. Philippines (52%), Vietnam (0%) Increase in turnover= reported by 86%, Changed behavior= reported by 85%, employment creation= 2.1. per trainee	Philippines, Vietnam, Brazil, Kenya, and Chile
Reichert et al. (2000)	"	207	TG=207, No CG	Economic Success (Subjective and Objective)/Reaction/behavior	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=1-1.5 years after training, T2=4 years after training	8-14 days	Post-test	Increase in turnover= reported by 40%, business growth= reported by 80%, employment creation= 1.4. per trainee	Sri Lanka
Reichert et al. (2000)	"	40	TG=40, No CG	Economic Success (Subjective and Objective)/Reaction/behavior	Not Identified	Entrepreneurs	T1=1 years after training, T2=3 years after training	3-15days	Post-test	Increase in turnover= reported by 44%, Changed behavior= reported by 88%, employment creation= 1.4. per trainee	Laos
Reichert et al. (2000)	"	132	TG=132, No CG	Economic Success (Subjective and Objective)/Reaction/behavior	Not Identified	Entrepreneurs	T1=6 months after training, T2=9 months training	4-22 days	Post-test	Improved business performance=30% participants, change in behavior reported by all participants	Thailand

Nguyen (2001)	"	106	TG=106, No CG	Economic Success (Subjective and Objective)/Reaction/Learning	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=1.5 to 4 years after training	17 days	Post-test	Start-up=28%, Turnover=64% increase, New employment=44%, Improved knowledge of business plan development in all participants	Vietnam
Pham (2002)	"	1,084	TG=1084, No CG	Economic Success (Subjective)/Reaction/Learning	Not Identified	Entrepreneurs	T1=immediate after training, T2=7 months after training	ns	Post-test	Increase in income=2/3 of participants, all participants indicated the acquisition of business knowledge	Vietnam
CEFE.net (2014)	"	1,043	TG=1084, No CG	Start-up rate, business performance, job creation	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=1 year after training	ns	Post-test	Start-up=32.4%, Improved business performance=50.9%, new job creation, 1 job per participant, Training satisfaction=62%, Implementation=55%, access to finance= 35 %, personal/ family investment=74%, foreign funding=22%.	Rwanda
CEFE.net (2017)	"	87	TG=87, No CG	Reaction, behavior, access to finance, family funding, international funding	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=1 year after training	10 days	Post-test		Albania
CEFE.net (2018)	Psychological Factors: Communication skills and self-confidence Business Factors: Business skills and business plan development	665	TG=665, No CG	Start-up, employment creation	Not Identified	Would-be entrepreneurs	T1=after training, ns	294 days	Post-test	173 successful business start-up ideas and 250 new job creation	Bosnia

7. Entrepreneurs' technology (EMPRETEC) (Total Trainings=9) **

Colley (1990)	Psychological Factors: Persuasion, commitment, initiative, self-confidence, independence, risk-taking Business Factors: quality and efficiency demand, setting goals, networking, business plan development, opportunity and information seeking, planning and monitoring	90	TG=45, CG=45	Economic success (objective), reaction and behavior (subjective)	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=before training, T2=2 years after training	ns	Pre-test/post-test	Sales increased in the training group (mainly due to psychological factors), No change in the number of employees	Malawi
Lopez (1999)	"	64	TG=64, No CG	Economic success (objective) and behavior	Not Identified	Entrepreneurs / Would-be entrepreneurs	T1=before training, T2=6 to 7 months after training	10 days	Pre-test/post test	Sales=62, 2/3rd reported changed in behavior	Brazil
Ruffing and Fulvia (1999)	"	810	TG=810, CG=ns	Economic success	Not identified	Entrepreneurs / Would-be entrepreneurs	T1=before training, T2=10 years after training	ns	Pre-test/post test	Start-up rate=56%, employment creation 12% in training group and -28% in control group	Uruguay
Ruffing and Fulvia (1999)	"	694	TG=810, No CG	Economic success	Not identified	Entrepreneurs / Would-be entrepreneurs	T1= 6 months to two years after training	9 days	Post-test	Start-up rate=9%. Failure rate=0%	Brazil

EMPRETEC (2011)	"	ns	TG=ns, No CG	Start-up, employment creation, growth, productivity	Not identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Increased business start-up and economic success in terms of turnover, employment, income, production, and satisfaction	Argentina, Benin, Botswana, Brazil, Chile, Dominican Republic, Ecuador, El Salvador, Ethiopia, Ghana, Guatemala, Guyana, Jordan, Mauritius, Mozambique , Nigeria, Panama, Peru, Romania, South Africa, Tanzania, Uganda, Uruguay, Venezuela, Viet Nam, Zambia, and, Zimbabwe
EMPRETEC (2012)	"	270,917	TG=270 917, No CG	Start-up rate, sales, employment creation	Not identified	Entrepreneurs	T1=3 months after training. T2=1 year after training	ns	Post-test	Start-up rate=range 20% to 80%, sales =range 10% to 50%, employment creation=5% to 30%, profit=9%-28%	Argentina, Colombia, El Salvador, Jordan, Mozambique , Nigeria, South Africa and Venezuela

EMPRETEC (2013)	"	31,083	TG=31,083, No CG	Start-up, employment creation, profit, sales	Not identified	Entrepreneurs	T1=3 months after training. T2=1 year after training	ns	Post-test	Start-up rate=range 3% to 45%, sales =range 3% to 80%, employment creation=2% to 50%, profit=5% to 45%	Argentina, Benin, El Salvador, Jordan, Mauritius, Mozambique, Peru, Nigeria, South Africa, Tanzania, Venezuela, and Zambia
EMPRETEC (2014)	"	28,000	TG=28,000, No CG	Start-up, employment creation, growth, productivity	Not identified	Entrepreneurs	T1=3 months after training. T2=1 year after training	ns	Post-test	Start-up rate=range 4% to 80%, sales =range 3% to 78%, employment creation=5% to 100%, profit=4.1% to 82%	Argentina, Columbia, Ecuador El Salvador, India, Jordan, Mauritius, Saudi Arabia, Peru, South Africa, and Zambia
EMPRETEC (2015)	"	24,300	TG=24,300, No CG	Start-up, employment creation, growth, productivity	Not identified	Entrepreneurs	T1=3 months after training. T2=1 year after training	ns	Post-test	Start-up rate=range 0% to 57%, sales =range 2% to 70%, employment creation=0% to 46%, profit=2% to 69%	Argentina, Columbia, Ecuador El Salvador, Gambia, Guatemala, India, Jordan, Mauritius, Saudi Arabia, Venezuela, and Zambia

8. Women Entrepreneurship Programme (WEP) (Total Trainings=5) **

Botha, Nieman, and van Vuuren (2006).	Psychological Factors: Entrepreneurial orientation, risk-taking, opportunity identification, motivation Business Factors: Business Skills	180	CG=64, TG=116	Economic Success (Subjective and Objective)/Reaction/Learning	Not Identified	Entrepreneurs /would-be entrepreneurs	T1= before training, T2=immediate after training, T3= 6 Months	6 days	Pre-test/post-test	Improved success, psychological and business skills	South Africa
Petridou and Glaveli (2008)	Psychological Factors: i.e. locus of control, self-confidence, stress management, time management, facing ambiguity, risk-taking Business Factors: i.e. managing resources and IT skills.	104	TG=106, No CG	Business outcomes and behavior	Not Identified	Entrepreneurs	T1=before training, T2=after training (ns)	ns	Pre-test/post-test	Improved business skills and psychological behavior	Greece
Roomi and Harrison (2010)	Psychological Factors: confidence building, self-awareness, and networking). Business Factors: Business skills (finance, selling, marketing, and management)	77	TG=77, No CG	Behaviour, business start-up	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=before training, T2=after 18 months	3 weeks	Pre-test/post-test	Improved psychological and business skills and increased start-up rate	Pakistan
LUMS (2016, 2017)	Psychological Factors: Leadership and team-building Business Factors: Business (marketing, supply chain, finance) and operational skills	88	TG=88, No CG	business success and leadership	Not Identified	Entrepreneurs	T1=after training, ns	3-12days	Post-test	Improved leadership skills and enhanced entrepreneurial capacity	Pakistan
Center of Entrepreneurship Development, IBA (2017)	Psychological Factors: Courage, parsimony, humility, and self-efficacy Business Factors: Business plan development, legal	600	TG=600, No CG	Start-up, Business success, Behavior	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=after training, ns	2 months	Post-test	Improved psychological and business skills and increased start-up rate	Pakistan

matters, money
management, and
selling)

9. Création d'Entreprises et Développement de la Petite Entreprise (CEPE) (Total Training=1) **											
Kouessi (1995)	Psychological Factors: i.e. initiative, risk-taking, persistence, opportunity, and information seeking, commitment) Business Factors: Technical skills, market analysis, legal issues, administration, and human resource management	31	TG=31, No CG	Start-up, Business success, Behavior	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=9 months after training	10 days	Post-test	business start-up rate of 39% and all the participants reported improved behavior and learning	Senegal
TechnoServe Business Plan Competition (Total Trainings=14) **											
Klinger and Schündeln (2007)	Psychological Factors Entrepreneurial attitude Business Factors: Business plan development and management skills	665	TG=377, CG=278	Start-up, Business success, Behavior	Not Identified	Entrepreneurs /would-be entrepreneurs	T1=before training, T2=1 year after training	10 days	Pre-test/post-test	25% increase in business start-up and business growth	Nicaragua, Guatemala, and El Salvador
TechnoServe (2008)	"	3000	TG=3000, No CG	launching business, expanding business sand create new jobs	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=1 year after training	ns	Post-test	Increase in business start-up, sales, employment	Asian, African and Latin American nations
TechnoServe (2009)	"	890	TG=890, No CG	sales	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Sales doubled	Swaziland
TechnoServe (2009)	"	54	TG=54, CG=ns	Sales and job creation	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	sales=1.2 million USD, more than 100 new jobs, 10% better performance than non-participants	Peru

TechnoServe (2010)	"	2400	TG=2400, No CG	sales, profit, and job creation	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=1 year after training	ns	Post-test	Sales, profit, and the number of employees increased	Haiti, Ghana
TechnoServe (2011)	"	4000	TG=4000, No CG	Income	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Income doubled	Ghana
TechnoServe (2012)	"	1540	TG=1540, No CG	Revenue, New employment	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue:26,660,000 USD, New jobs=9330	Asian, African and Latin American nations
TechnoServe (2013)	"	800	TG=800, No CG	Revenue, New employment	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=13 Million USD, New jobs=750	Guatemala, Nicaragua, Honduras, and Burkina Faso
TechnoServe (2013)	"	ns	TG=ns, No CG	Self-employment	Not Identified	Would-be entrepreneurs	T1=1 year after training	ns	Post-test	15000 people self-employed	East Africa
TechnoServe (2014)	"	2986	TG=2986, No CG	Revenue, Finance mobilization, New employment	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=5,540 USD each business, Overall job creation=5610, Funds mobilization=12,681,615 USD	Asian, African and Latin American nations
TechnoServe (2015)	"	319,000	TG=319,000, No CG	Revenue	Not Identified	Entrepreneurs / would-be entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=75,300,000 USD	Botswana, Benin, Brazil, Faso, Burkina, Colombia, Chile, El Salvador, Côte d'Ivoire, Ghana, Guatemala, Ethiopia, Honduras, Haiti, India,

TechnoServe (2016)	"	16000	TG=16000, No CG	Revenue, Finance mobilization, New employment	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=45 million USD, New jobs=5000, Finance mobilization=4 million USD	Malawi, Mexico, Kenya, Nicaragua, Mozambique, South Africa, Peru, Rwanda, Nigeria, Swaziland, South Sudan, Tanzania, Zambia, Uganda, and Zimbabwe. India, West Africa, East Africa, South Africa and Latin America
TechnoServe (2017)	"	469,000	TG=469,000, No CG	Revenue	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=189 million USD	India, West Africa, East Africa, South Africa and Latin America
TechnoServe (2018)	"	45,000	TG=45000, No CG	Revenue, ROI	Not Identified	Entrepreneurs	T1=1 year after training	ns	Post-test	Revenue=57 million USD, ROI=3.3%	India, West Africa, East Africa, South Africa and Latin America

Notes: CG=control group, TG=training group, T1=first measurement, T2=second measurement, T3=Third measurement, T4=fourth measurement, ns=not specified, t=training duration, N=total training participants, "= same as above, **=training having business content and psychological content, *=training having psychological content only

3.1.4 Summary of Training Review

The results of the review revealed that out of 66 training programs only 19 used control groups, 41 had no control group and 6 studies had unspecified control groups. This showed an overall lower trend of using a control group. 30 of the training programs focused on entrepreneurs, 8 on would-be entrepreneurs, and 26 on the mixed sample while the participants were not clear in the rest of 2 training programs. The overall trend suggests a larger focus on entrepreneurs as a training population. 34 of the studies had one-time evaluation after the training, 21 had a two-time evaluation, 4 had three times evaluation and only 7 had a four-time evaluation. This indicates that most of the training programs used single evaluations. Only 5 training programs fulfilled complete Kirkpatrick criteria (Reaction, learning, behavior, success), 13 used (Reaction, behavior, and success), 1 used (Reaction, learning, and success), 2 used (Reaction and behavior), 13 used (Behavior and success), 2 used behavior and 30 used success as evaluation criteria.

A total 18 of the training programs used a pre-test/post-test evaluation and the rest of them used only post-test measures. Only 11 of the training programs reported being based on theoretical foundation while others had content that was not specifically theory-based. 11 of the training programs had time duration less than 7 days, 11 had time duration up to 15 days, 7 had the time duration up to 30 days, 3 spanned up till 60 days and only 2 had time period more than 60 days, while in 32 training programs the time period was not specified. Two training programs were conducted in the time period of 1969-1980, 2 were carried out from 1981-1990, 12 training programs were carried out from 1991-2000, 16 training interventions were conducted in the time period of 2001-2010, and 34 were carried out in 2011-2019, that shows an increasing trend with passage of time. 16 of the training interventions were conducted in multiple developing countries, 6 in India, 4 in Pakistan, Vietnam, and Sri Lanka each, 3 in Uganda and Togo each, 2 in Ghana, Brazil, South Africa and Uruguay and rest of the countries had a one-time occurrence of training.

The overall design rating was also calculated based on 5 criteria (1) more than 20 participants, (2) having a control group, (3) following Kirkpatrick criteria, (4) having pre-test and post-test evaluation, and lastly (5) use of theory. The presence of each of which was indicated by “+” and none was indicated by “×”. The analysis showed only 5 training programs fulfilled “+++++”, 4 fulfilled “++++”, 3 fulfilled “+++”, 13 fulfilled “++” and 39 had “+”, only

one training did not fulfill any of the specified criterion scoring “×”. The summary of trainings is shown in Table 3.2 and Figure (3a-2j).

Table 3.2: Summary of Training Review

Participants	<i>N</i>	Control Group	<i>N</i>
Entrepreneurs	30	Control group	19
Would-be entrepreneurs	8	No control group	41
Both	26	Not specified	6
Not Specified	2	Total	66
Total	66		
Evaluation Times	<i>N</i>	Evaluation Criteria	<i>N</i>
One time	34	Reaction, learning, behavior, success	5
Two times	21	Reaction, behavior, and success	13
Three times	4	Reaction, learning, and success	1
Four times	7	Reaction and behavior	2
Total	66	Behavior and success	13
		Behavior	2
		Success	30
		Total	66
Design	<i>N</i>	Theoretical Perspective	<i>N</i>
Pre-test/Post-test	18	Use of theory	11
Post-test	48	No theoretical foundation	55
Total	66	Total	66
Duration	<i>N</i>	Year	<i>N</i>
up to 7 days	11	1969-1980	2
up to 15 days	11	1981-1990	2
up to 30 days	7	1991-2000	12
up to 60 days	3	2001-2010	16
Above 60 days	2	2011-2019	34
Not Specified	32	Total	66
Total	66		
Number of Participants	<i>N</i>	Rating	<i>N</i>
up to 50	4	+++++	5
up to 100	13	++++	5
up to 150	6	+++	3
up to 200	1	++	13
up to 300	4	+	39
up to 400	1	×	1
up to 500	0	Total	66
up to 1000	12		
up to 5000	10		
Above 5000*	10		

Not Specified	5	
Total	66	
Country		N
Uganda		3
Germany		1
Togo		3
Cape Town		1
India		6
Yemen		1
Malaysia		1
Portugal		1
South Africa		2
Vietnam		4
Sri Lanka		4
Laos		1
Thailand		1
Rwanda		1
Albania		1
Bosnia		1
Malawi		1
Uruguay		2
Brazil		2
Greece		1
Pakistan		4
Senegal		1
Swaziland		1
Peru		1
Ghana		2
East Africa		1
Mixed		16
Not Specified		2
Total		66

**the training programs having more than 5000 participants were conducted in multiple geographical areas, N=number of entries in each category, +=Above 20 participants, +=control group, +=pre-test/post-test measure, +=use of theory, +Kirkpatrick evaluation, ×=none*

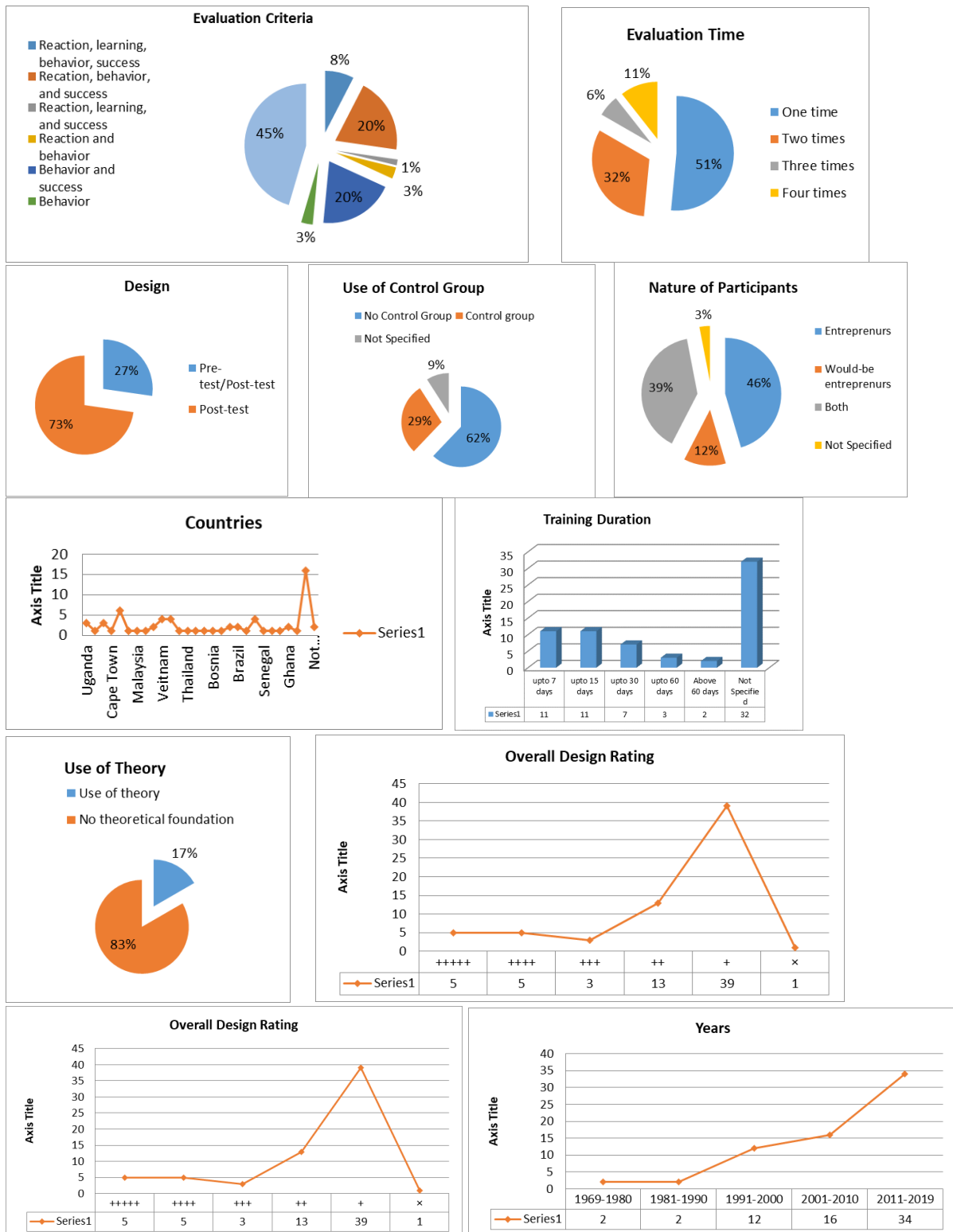


Figure 3.2: Training Evaluation Summary

3.2 Base Theories, Key Variables, and Concepts in the Study

In this section, the key concepts and variables used across all four studies are discussed. First of all the general concept of base theories, agency training, action principles, and specific

IEO training is elaborated followed by the description of independent, mediating, and dependent variables used.

3.2.1 Base Theories

Three major theoretical lenses at individual and firm-level have been used to examine the factors behind entrepreneurial outcomes (Khelil, 2016). The first theoretical lens is the ‘determinist approach’ that emphasizes the outside factors that are unavoidable to a great extent, are responsible for entrepreneurial results. ‘Voluntarist approach’ states that the availability of resources and internal organizational factors contribute towards the entrepreneurial behaviors and outcomes (Cardon, Stevens & Potter, 2011). Lastly, the ‘emotive approach’ places importance on the psychological characteristics of individuals in determining entrepreneurial performance. These theoretical perspectives were originally developed to study the failure of new startups and it was highlighted that the entrepreneurship research should also focus ‘emotive approach’ to finding out which individuals are likely to succeed or fail in entrepreneurial endeavors (Khelil, 2016). Extending this notion, this research has used an ‘emotive approach’ to the entrepreneurial behavior and outcomes pre-startup as well as post-startup.

This perspective asserts that individual motivation, determination, and psychological factors are important in deciding the entrepreneurial behaviors and outcomes. Before starting a business and after start-up, individuals are the prime decision-makers in intention to be an entrepreneur and subsequent decision making in operating small and medium business enterprises. So, the individual psychological factors play an important part in the way business is initiated, operated, and grown (Van Gelder et al. 2007). The present research has its foundation on psychological aspects of entrepreneurship so the basic theoretical lens of the ‘emotive approach’ forms the foundation of the study. Moving ahead, entrepreneurship research explains how psychological factors result in shaping intentions and business outcomes. Frese (2009) contributed towards the extending theoretical base of entrepreneurial psychology by explaining the underlying factors that link psychology with outcomes. He presented the ‘action regulation theory’ for a comprehensive understanding of entrepreneurial psychology and supplemented it with practical actions. He stated, “Any theory of entrepreneurship should use active actions as a starting point — entrepreneurship is the epitome of an active agent in the market (rather than a reactive agent)” (p.438). For this purpose, the

role of actions of individuals for venture start-up and post-startup operations form the core of entrepreneurship (Gartner, 1989). This suggests that entrepreneurship revolves around the ‘actions of entrepreneurs’ either they are aspiring or operational. Individuals take actions to detect and exploit opportunities in the market to have more tendencies to initiate business ventures and run them successfully. Frese (2009) said that all entrepreneurial theories should be built on active actions that lead to entrepreneurial behavior and success. It is suggested that entrepreneurial interventions can be built based on this theory for successful performance in pre-startup, startup, and post-startup phases. IEO forms one of the most important action characteristics for starting a new venture as well as for the success of the existing business ventures (Frese & Gielnik, 2014; Zacher, 2017). Therefore, the theory of action regulation is used in this study to link IEO and outcomes through the role of action characteristics. Figure 3.3 gives a comprehensive account of action regulation perspective:

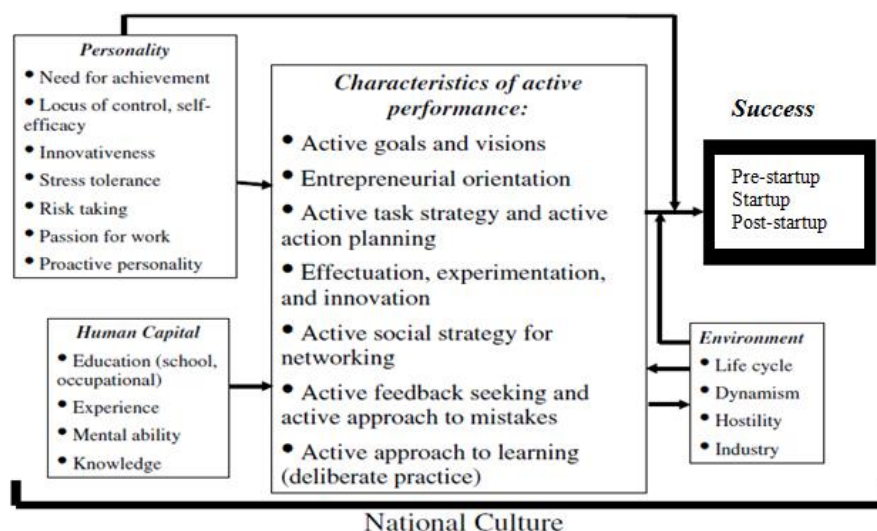


Figure 3.3: Action Regulation Perspective of Entrepreneurship

Source: Adapted from Frese (2009); Frese and Gielnik (2014)

3.2.2 Evidence-based Management, Agency training, and “Wise” Short-Term Interventions

Evidence-based entrepreneurship (EBE) is built on the background of EBMgt; it focuses on employing science-informed practice in the field of entrepreneurship. The foundation of such knowledge is based on meta-analytical evidence and the use of randomized controlled experiments that enables to bridge the ‘knowing-doing’ gap (Frese, Rousseau, &

Wiklund, 2014). Agency training method comprises of five components (Frese & Zapf, 1994). First, the acquisition of knowledge is connected directly with actions, and it requires all the participants to act like entrepreneurs and in case if the participants are business owners, the knowledge is tied with their specific business. Second, operative mental models of action knowledge should be developed via evidenced-based action principles (Glaub et al., 2014) where participants verbalize the firm-specific meanings of action principles. Third, active participation and repetition are essential for the deep understanding and application of training content that is the centerpiece of the conversion of declarative knowledge into operational knowledge. Fourth, both positive, as well as negative feedback, should be sought, the latter is important to inform the participants regarding their shortcomings in actions and allows them to improve their actions to meet the identified gaps and motivates them to put more effort for overcoming the flaws in way of the desired state.

In addition, errors carry unique importance in action regulation theory, when one develops a positive non-emotional response to errors, meta-cognize them (i.e. understanding how and why things did not work out), it leads to enhanced learning (Frese & Keith, 2015). Last, all participants are required to develop a small personal project (Little, 1983) — such as the introduction of a new service or product or adopting any unique marketing tactic. This allows the facilitation of knowledge transfer that is gained in the process of training in situations beyond the training context, for example, introducing new products or services. The action-oriented interventions spanned over 24 to 36 contact hours that are in line with the approach of “wise” short-term interventions that aim to impact psychological, organizational, and economic fact. These training programs comprise face to face activities that exclude all the non-relevant material (Glaub et al., 2014; Walton, 2014).

3.2.3 Action Principles

The five action principles (i.e., goal setting, information seeking, planning, monitoring, and feedback processing) are used for the conversion of IEO into an actionable construct as suggested by Glaub (2009). Goal setting in the action process implies self-developing goals that are specific, challenging, and concrete because these kinds of goals are found to yield maximum outcomes (Locke & Latham, 2002). Information seeking refers to actively making efforts to attain information rather passively waiting for someone to provide information. An active approach to information seeking requires collecting data about the potential threats and

opportunities ahead of others to utilize this information in capitalizing the market prospects (Mensmann, 2017). The component of planning encompasses mentally simulating future actions. As the aim of the plan is to attain the desired goals so the planning should also consider the alternatives in case the actual plan did not work or to amend the plan in case if any new opportunity arises. Thus, the planning should be active and allow a certain degree of flexibility to cope with uncertain situations (Zacher & Frese, 2018). The plan implementation is evaluated constantly to ensure monitoring to access either the plan is working as it should. Feedback seeking should be done actively rather than waiting for the people and situations to offer it. Individuals search for feedback and use it for identification of potential issues that may arise in the future and to capture the market prospects ahead of others. Positive feedback improves self-efficacy and negative feed-back enable corrective actions, both of which play an important role in performance improvement (Keith & Frese, 2008; Mensmann, 2017).

3.2.4 Independent Variables

The independent variables included in this dissertation are SMEs owners' IEO (study 1), business students' IEO (study 2), IEO training for SME owners (study 3), and IEO training for business students (would-be entrepreneurs) (study 4).

3.2.4.1 SMEs owners' Individual Entrepreneurial Orientation (IEO)

Earlier operationalization of individual entrepreneurial orientation mainly focuses on innovation, risk-taking, and proactiveness (Avlonitis & Salavou, 2007; Agca, Topal, & Kaya, 2012; Hughes & Morgan, 2007; Wiklund & Shepherd, 2007). Though, most of the recent research studies still focus on the three-dimensional constructs of individual entrepreneurial orientation (Bolton & Lane, 2012); yet Krauss et al. (2005) conceptualization of individual-level entrepreneurial construct is holistic and it is proven to be a predictor of success in the perspective of small business operating in the developing nations. Therefore, we deem it to be a suitable conceptualization in the context of the present study. It is posited that individual entrepreneurial orientation is a prime psychological variable that has been linked to business success. Therefore, increasing the entrepreneurial orientation of small and medium scale business owners will enhance their learning orientation, achievement orientation, personal

initiative, risk-taking orientation, competitive aggressiveness, autonomy orientation, and innovation orientation that is linked to business success.

3.2.4.1.1 Achievement Orientation

The main goal of any business owner is to realize the achievement of his “new combinations” (Schumpeter, 1934, p. 116). Individuals that rate higher on the need for achievement are more responsible for their actions and they are found to have more success in non-routine activities. They are more keen to set challenging goals and have a quest for continuous improvement (McClelland, 1961). Growth orientation and engagement in challenging tasks and setting higher goals (i.e. ideas to expand the business) display the achievement-oriented behavior of SME owners (Utsch & Rauch, 2000).

3.2.4.1.2 Autonomy Orientation

Business owners are keen to develop an enterprise that is under their command (Schumpeter, 1934). Their need for individuality causes them to dislike to be dominated by superiors by just being a cog in a system of organization. This inculcates the value of self-contained decision making and this decisiveness and imparted by autonomy orientation is one of the prime precedences of business success. The autonomy oriented business owners are self-governed in realizing the business vision (Lumpkin, Cogliser, & Schneider, 2009).

3.2.4.1.3 Competitive Aggressiveness

Business owners have a desire for assertiveness, competition, and victory (Schumpeter, 1934). Being competitive aggressive is one of the prime traits of successful entrepreneurs (Krauss et al., 2005). Competitive aggressive entrepreneurs actively develop strategies to combat competition rather being reactive or avoiding competition altogether. This kind of business owner will make price-cutting strategies and set the budgets for advertisement, quality, and service improvement to win the competition (Swierczek & Ha, 2003).

3.2.4.1.4 Learning Orientation

This dimension of individual entrepreneurial orientation was added by Krauss et al. (2005). It is added in this study because learning orientation the entrepreneurial realization of new combinations (e.g., introducing a work process that is new to the industry) is inescapably linked with the ability to extend one's knowledge (Schumpeter, 1934). Positive as well as negative learning is the centerpiece of successful entrepreneurial behavior (Rhee, Park, & Lee, 2010). This learning can be about consumer needs, changes in market conditions, and moves of competitors (Zehir & Eren, 2007). Learning-orientation improves the mental models of entrepreneurs that is an important factor in learning from experience (Van Dyck, Frese, & Sonnentag, 2005) and enables the SMEs owners to have improved performance based on newly acquired knowledge as well as the learning from past (Fang He et al., 2018).

3.2.4.1.5 Innovative Orientation

Innovation is the core of entrepreneurship (Schumpeter, 1934). An individual having a mindset that is open to new ideas regarding administration, process, products, or services has a high innovative orientation. These ideas may not be radical innovation but they bring novelty in the given environment, market, and specific consumer group. In contrast to the western societies, the patriarchic, high power distance and traditional societies in developing nations lack this orientation, and building innovation orientation can be a point of competitive advantage leading to success (Bolton & Lane, 2012).

3.2.4.1.6 Risk-taking

Starting and sustaining a business inevitably involve risk (Schumpeter, 1934) and business owners that are capable of taking calculated risks have reduced failure probability. The risk-taking behaviors of business owners are linked with their propensity to fail or succeed. It is the degree to which individuals are likely to engage in risky resource commitments (i.e. that have a reasonable chance of failure) (Kreiser, Marino, Dickson, & Weaver, 2010). In entrepreneurship, risk-taking is cautious and calculated rather than being reckless (Kraus, Rigtering, Hughes, & Hosman, 2012). An individual with risk-taking propensity is better able

to manage the unavoidable as well as sought for challenges and risks that are a part of any business operation (Bolton & Lane, 2012).

3.2.4.1.7 Personal Initiative

Personal initiative is a self-initiating, proactive, and persistent attitude towards actively shaping environmental (Frese & Fay, 2001). Small and medium scale business owners require preserving themselves in the face of obstacles and should have an internal motivational drive to shape actions. In contrast to the much talked about component of proactiveness, Krauss et al. (2005) emphasized the use of a comparatively more comprehensive conception that combines proactiveness with persistence in overcoming difficulties (Jacob, Frese, Krauss, & Friedrich, 2019). Personal initiative is now one of the core characteristics of successful entrepreneurs in the present era (Frese et al., 2016; Glaub et al., 2014).

3.2.4.2 SMEs Owners' Individual Entrepreneurial Orientation Training.

3.2.4.2.1 Action principles for Individual Entrepreneurial Training for SMEs Owners

In an extensive review, Frese and Gielnik (2014) emphasized that entrepreneurial orientation is a psychological and agentic attitude of the individual entrepreneur. Agentic training interventions can be developed for the psychological variables that are action-oriented (Frese, Gielnik, & Mensmann, 2016). Furthermore, these interventions must be based on evidence that a given psychological variable has proven the relationship with business outcomes (Glaub et al., 2014). Building on this notion we argue that individual entrepreneurial orientation is a suitable psychological construct for the development of agentic training given its action-oriented nature and meta-analytic evidence of its relationship with entrepreneurial success (Frese & Gielnik, 2014). Thus, to link the cognitions into actions, a matrix is created by crossing the dimensions of individual entrepreneurial orientation i.e. achievement orientation, learning orientation, risk-taking, autonomy orientation, innovation, competitive aggressiveness and personal with action principles (i.e., goal setting, scanning actively to understand the environment, action planning and execution, monitoring, and feedback-seeking) see Table 3.3. In this way, the action principles for the facets of individual entrepreneurial

orientation as suggested by prior research on the development of agentic training for psychological constructs are obtained (Frese et al., 2016; Glaub et al., 2014).

Table 3.3: Development of Facets of Individual Entrepreneurial Orientation along Action Sequence along with the Training Contents for SMEs Owners

Action sequence	Facets of Individual Entrepreneurial Orientation						
	Achievement orientation	Learning orientation	Autonomy orientation	Innovation	Risk Taking	Competitive aggressiveness	Proactive personality
Goal setting	Active and challenging goals for continuous improvement	Setting goals for learning from experience and development of work-related knowledge base	Independent vision development	Goals for new ideas development	Goals with calculated risks	Competitive goals	Developing goals for future opportunities
	Concrete Example: Acquiring new customers, setting sales target, expanding business	Concrete Example: set goal to learn from the past failed marketing campaign and actively learn new ways to advertise for target consumers	Concrete Example: Being decisive in setting the goal of opening a new outlet in the un-served market	Concrete Example: Setting a goal for introducing unique product offering	Concrete Example: Consider the following points while setting goals: a) Is the innovative offering compatible with core competencies? b) Do you possess enough finances? c) Will the customers keen to buy?	Concrete Example: Setting goals for an improved marketing campaign to capture more market share as compared to rivals	Concrete Example: Set an active goal to acquire new customers by rigorous marketing and sticking to that goal despite the failure

<i>Action principles:</i>	<i>Action principles:</i>	<i>Action principles:</i>	<i>Action principles:</i>	<i>Action principles:</i>	<i>Action principles:</i>	<i>Action principles:</i>
Setting high standard business goals	Being sensitive to work-based knowledge and learn from every experience (positive/negative)	Being autonomous in setting unique goals	Being actively innovative	Develop goals that involve calculated risks	Setting competitive business goals	Ability to self-set the goals and preserve them
<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals
<i>Exercise:</i> Develop challenging goals aimed at continuous improvement for model case study	<i>Exercise:</i> Develop goals for learning from a positive and negative experience	<i>Exercise:</i> Independently develop a vision to pursue innovative business idea based on model case study	<i>Exercise:</i> Develop an idea for a unique offering for model case study	<i>Exercise:</i> Develop goals with calculated risk for model case study	<i>Exercise:</i> Develop competitive goals for model case study	<i>Exercise:</i> Develop an action plan and decide the future potential issues and their solutions to preserve goals for model case study
<i>Application to own business:</i> Develop challenging goals aimed at continuous improvement for own business	<i>Application to own business:</i> Develop goals for learning from a positive and negative experience for own business	<i>Application to own business:</i> Independently develop a vision to pursue innovative business idea based for own business	<i>Application to own business:</i> Develop challenging goals for a unique offering for own business	<i>Application to own business:</i> Develop goals with calculated risk for own business	<i>Application to own business:</i> Develop Competitive goals for own business.	<i>Application to own business:</i> Develop an action plan and decide the future potential issues and their solutions to preserve goals for own business

Information seeking	Seeking information about finding new consumers and venture growth	Activity seeking the information for the development of knowledge base	Being self-directed in searching for information for the pursuit of innovative business vision	Scanning information about the new technologies and market potential for innovation	Actively seeking information for extensive risk assessment, evaluation, and mitigation	Seeking information about market competition	Scanning for the potential opportunities and threats
	Concrete Example: Search ways to approach new customers and look for places to open new business branches, looking business process improvement methods	Concrete Example: Obtaining information about the factors that caused the failure of a marketing campaign and seeking information about the workable and affordable marketing options	Concrete Example: Obtaining information about the untapped markets in the industry and searching for information to exploit that opportunity before others	Concrete Example: Actively searching internet and gathering market information for the methods to introduce unique offering before others.	Concrete Example: Gather information about the business financial position, the consumers' need and competitors moves	Concrete Example: Gather information about the market competition a) Rivals' products b) Rivals' marketing strategy c) Rivals' pricing methods	Concrete Example: Gather information about the opportunities and threats in the industry for developing self-starting goals
	Training Content	Training Content	Training Content	Training Content	Training Content	Training Content	Training Content
	<i>Action principles:</i> Efficient environmental scanning	<i>Action principles:</i> Seek information about positive and negative experiences	<i>Action principles:</i> Self-directed information seeking	<i>Action principles:</i> Active information seeking for innovation	<i>Action principles:</i> Active information seeking for risk analysis	<i>Action principles:</i> Efficient competitor's analysis	<i>Action principles:</i> Actively look for information to influence the environment
	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals	<i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals
	<i>Exercise:</i> Participants indicate the sources and types of information needed for setting challenging goals	<i>Exercise:</i> Participants indicate the sources of	<i>Exercise:</i>	<i>Exercise:</i>	<i>Exercise:</i>	<i>Exercise:</i> Participants indicate the sources and types of information needed for competitors' analysis and	

	<i>Application to own business:</i> Using active information seeking to set challenging business goals aimed at continuous improvement for own business	information about positive and negative learning and seek information about the business-related knowledge for model case <i>Application to own business:</i> Participants indicate the sources of information about positive and negative learning and seek information about the business-related knowledge for own business	Participants indicate the sources to attain information about untapped markets according to model case <i>Application to own business:</i> indicate the sources to attain information about untapped markets according to own business	Participants indicate the sources and types of information needed for developing innovative products for model case <i>Application to own business:</i> indicate the sources and types of information needed for developing innovative products for own business	Participants indicate the sources and types of information needed for setting goals based on calculated risks in the perspective of model case <i>Application to own business:</i> Participants indicate the sources and types of information needed for setting goals based on calculated risks for own business	competitive strategy formulation' <i>Application to own business:</i> Participants indicate the sources and types of information needed for competitors' analysis and competitive strategy formulation for own business	<i>Exercise:</i> Participants indicate the sources and types of information needed to actively influence the environment based on model case <i>Application to own business:</i> indicate the sources and types of information needed to actively influence the environment for own business
Planning	Setting up plans for attracting new consumers and business growth	Developing a plan for seeking work and business-related knowledge	Making plans to realize the self-directed vision	Planning for development of new innovative ideas	Plans for risk mitigation	Action plan for dealing with competitors	Using the opportunities and threats for action planning / contingency planning
	Concrete Example: Set goals to (a) Contract with advertisement agency for design of	Concrete Example: Make a plan to obtain work-based information on the availability of different marketing options	Concrete Example: Make a plan for expanding	Concrete Example: Make a plan for gathering required resources and	Concrete Example: Make risk identification, evaluation and mitigation plan	Concrete Example: Make a plan for identification of key competitors and develop the competitive business plan in	Concrete Example: Make a plan to acquire new customers by rigorous

ads for attracting new customers (b) Renting a place for a new outlet (c) Design of new outlet	based on the learning from the failed marketing campaign	business in an untapped market	processes to launch innovative offering	based on potential the probability and impact	terms of marketing, production, and pricing	marketing i.e. decide target market, devise advertisement plan, seek permission from concerned authorities and developing a back-up plan
<i>Action principles:</i> Ability of excellent plan execution for challenging goals <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Group exercise of developing an action plan for the attainment of challenging goals aimed at improvement based on model case <i>Application to own business:</i> Develop an action plan for the attainment of challenging goals aimed at improvement for own business	<i>Action principles:</i> Develop active learning plans <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Group exercise of developing an action plan for information seeking and learning from mistakes based on model case <i>Application to own business:</i> Develop an action plan for information seeking and learning from	<i>Action principles:</i> Develop self-initiated plans to realize an innovative vision <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Independent self-directed formulation of a plan for realizing innovative vision based on model case	<i>Action principles:</i> Be actively innovative in planning <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of the plan for launching innovative offering based on model case <i>Application to own business:</i> Formulation of the plan for launching	<i>Action principles:</i> Have effective risk planning <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of risk identification, evaluation, and mitigation plan based on model case <i>Application to own business:</i> Formulation of risk identification, evaluation and	<i>Action principles:</i> Have effective competitive planning <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of a competitive plan based on model case <i>business:</i> Formulation of the competitive plan for own business	<i>Action principles:</i> Proactive plan development and execution <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of an action plan based on model case <i>Application to own business:</i> Formulation of

		mistakes for own business	<i>Application to own business:</i> Independent self-directed formulation of a plan for realizing an innovative vision for own business	innovative offering for own business	mitigation plan for own business		the action plan for own business
Monitoring and Feedback	Self-feedback and feedback from customers on the success of challenging goals	Self-feedback on the acquisition of work-based learning	Self-evaluation of vision realization	Monitoring and feedback after the implementation of innovative ideas	Risk evaluation	Monitoring the competitive business position	Development of pre-signals
	Concrete Example: Self-reflection and survey from consumers regarding effective attainment of challenging goals	Concrete Example: Self-reflection and survey from consumers regarding effective attainment of learning goals i.e. effectiveness of new marketing campaign	Concrete Example: Self-reflection and survey from consumers regarding effective attainment of self-directed innovative vision	Concrete Example: Self-evaluation and consumer feedback on a test launch	Concrete Example: Get the feedback from field experts to evaluate the risk and self monitor the risks in carrying out business activities	Concrete Example: Self-reflection and examination of the success of the competitive strategy	Concrete Example: Self-reflection and survey from consumers regarding effective attainment of the action plan, in case the results are not as expected (i.e. not enough consumers are attracted) increase the time period or change method of advertisement

							based on feedback
Training Content	Training Content	Training Content	Training Content	Training Content	Training Content	Training Content	Training Content
<i>Action principles Seek constructive feedback aimed at continuous improvement</i>	<i>Action principles Seek positive and negative feedback on learning and subsequent implementation</i>	<i>Action principles Is self-directed vision realized successfully?</i>	<i>Action principles Evaluation of innovative offering success</i>	<i>Action principles Is the risk evaluation realistic?</i>	<i>Action principles Is competitive strategy realized successfully</i>		
<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>	<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>	<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>	<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>	<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>	<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>		Actively look for feedback to decide if the business is working as planned
<i>Exercise: Based on model case decide which sources can provide constructive feedback and how it can be incorporated</i>			<i>Exercise:</i>	<i>Exercise:</i>	<i>Exercise:</i>		<i>Model: Case studies of two entrepreneurs, one with challenging goals and other with routine goals</i>
<i>Application to own business:</i>	<i>Exercise:</i>	<i>Exercise:</i>					
Decide which sources can provide constructive feedback and how it can be incorporated in your own business for future improvement and setting challenging goals for the future.	Decide based on the model case how positive and negative learning was done from a failed experience	Discuss the realization of the self-directed vision set in the model case	Discuss the ways to monitor the success of innovative offering and the ways to obtain feedback based on model case	Discuss the accuracy of risk in business activities as set in the model case	<i>Application to own business:</i>		
	<i>Application to own business:</i>	<i>Application to own business:</i>	<i>Application to own business:</i>	<i>Application to own business:</i>	Discuss the realization of competitive strategy for own business		<i>Exercise:</i>
	Decide based on own business how positive and negative learning was done from a failed experience	Discuss the realization of self-directed vision set for own business	Discuss the ways to monitor the success of innovative offering and the ways to obtain feedback for own business	Discuss the accuracy of risk in business activities for own business			Discuss the realization of the action plan set in the model case and how the obtained feedback can be used actively in the perspective of the model case.
							<i>Application to own business:</i>

Discuss the realization of the action plan set in the model case and how obtained feedback can be used actively in the perspective.

for own business

3.2.4.2.2 The Individual Entrepreneurial Orientation training concept (SMEs Owners)

The training content ensured that all action principles are clearly understood; entailing goals, information seeking, planning, monitoring, and feedback. Furthermore, learning by doing exercises were employed to establish the hierarchical connection and feedback from the trainer, peers along with self-evaluation by the trainee; positive feedback gives insight into the action principles that have decision-makers while negative feedback tells which aspects of action principles are yet to be improved (Glaub et al., 2014). The training advanced through all steps of an action sequence for each dimension of individual entrepreneurial orientation. Concrete examples of each action sequence and entrepreneurial orientation facet were provided and the participants were given the model case studies i.e. one case of the entrepreneur that was agentic and had higher entrepreneurial orientation and the second for another entrepreneur that was reactive and had a low level of entrepreneurial orientation. The participants were instructed to apply the concepts of action principles to all dimensions of entrepreneurial orientation. The application of action principles was carried out by practical exercise based on the model case studies and then, it was subsequently applied to their business context via a personal project. At last, the provision of feedback from multiple sources enabled comprehensive learning. The combination of learning by doing and reflecting on the action principles allowed the cognition and action connection according to situational demands (Rousseau & McCarthy, 2007).

For example, for the first facet of individual entrepreneurial orientation i.e. achievement orientation a concrete example of goal setting was offered (Acquiring new customers, setting sales target, expanding business), after that a model case study was provided (Case studies of two entrepreneurs, one with challenging goals and other with routine goals) and the participants were asked to develop challenging goals aimed at continuous improvement for the model case study and then develop challenging goals aimed at continuous improvement for own business. For second action principle of information seeking the concrete example was given (Search ways to approach new customers and look for places to open new business branches, looking business process improvement methods), based on the model case, participants were asked to indicate the sources and types of information needed for setting challenging goals and use active information seeking to set challenging business goals aimed at continuous improvement for own business. For the third action principle of planning, a concrete example of developing a plan to contract with an advertisement agency for designing ads and renting a place for a new

outlet to expand the customer base was given. Based on the model case, participants were given group exercise of developing an action plan for the attainment of challenging goals aimed at improvement and then develop another action plan for the attainment of challenging goals aimed at improvement for own business. To train for the action principles of monitoring and feedback concrete example of self-reflecting on goal attainment and conducting a survey from consumers regarding effective attainment of challenging goals was given. Based on model case participants were given the task of deciding which sources can provide constructive feedback and how it can be incorporated and replicate the same exercise according to the context of their own business. The training content for other facets of entrepreneurial orientation was developed on a similar line.

3.2.4.3 Undergraduate Business Students' Individual Entrepreneurial Orientation (would-be Entrepreneurs)

For the student population, a three-dimensional construct of IEO was taken having the dimensions of innovation orientation. According to Bolton and Lane (2012), these three dimensions capture the stance of the individual person comprising the characteristics and attitudes that indicate the propensity of successfully engaging in entrepreneurial activity. IEO is an attitude of an individual which unlike the personality traits can be changed by exposure to external events and educational experiences (Packham, Jones, Miller, Pickernell, & Thomas, 2010). *Innovation* reflects a predisposition for experimentation and creativity (Rauch, Wiklund, Lumpkin, & Frese, 2009). Such individuals like to try new things and approaches rather than focusing on tried and tested methods. The preference for authentic ways of problem-solving and getting things are visible instead of repeating the methods that have already been adopted (Bolton & Lane, 2012). *Proactivity*. It is a behavior where an individual is forward-looking and seeks and acts on the opportunities ahead of others (Rauch et al., 2009). The students take action in advance to deal with the predicted issues, changes, and needs in the future. Planning is done ahead of the work to be done and such person “step-up” and takes lead rather than passively waiting for others to initiate action (Bolton & Lane, 2012).

Risk-taking The capacity of risk-taking imparts the attitude of tolerance towards the unknown and the ability to take bold actions with calculated risk management. In this case, an individual commits resources to an activity that others see as risky (Rauch et al., 2009).

3.2.4.4 Undergraduate Business Students' Individual Entrepreneurial Orientation Training

3.2.4.4.1 Action principles for Individual Entrepreneurial Training for Undergraduate Business Students (would-be Entrepreneurs)

Dinis, Ferreira, Raposo, and Rodrigues (2013) emphasized the importance of psychological traits for developing entrepreneurial intention among students. In their extensive meta-analysis, Frese and Gielnik (2014) found IEO to an agentic characteristic and a predictor of entrepreneurial intention and this holds for student sample (Bolton & Lane, 2012). Combining the fact that entrepreneurial education and training are important in shaping the entrepreneurial behavior of students (Gielnik et al., 2015; Marques, Ferreira, Gomes, & Rodrigues, 2012; Souitaris, Zerbinati, & Al-Laham, 2007) and psychological characteristics play an important role in this regard (Dinis et al., 2013); a training program to inculcate IEO in students is justifiable. For this study three dimensions of IEO i.e. proactivity, innovativeness, and risk-taking are taken to design the training program as suggested by Bolton and Lane (2012). Bell (2015) indicated that for better development of entrepreneurial traits and outcomes in students it is more useful to employ experiential and action-based methods. For this purpose following the same pattern as for the SME owners' IEO training (see heading for details), the three facets of students' IEO were operationalized as per the recommendations of Glaub (2009) see Table 3.4. In this way, the action principles for the facets of IEOP were obtained for the student sample as suggested by prior research on the development of agentic training for psychological constructs (Frese et al., 2016; Glaub et al., 2014).

Table 3.4: Development of Facets of Individual Entrepreneurial Orientation along Action Sequence along with the Training Contents for Undergraduate Business Students (Would-be entrepreneurs)

Action Sequence	Innovation	Risk-Taking	Proactive personality
Goal setting	Goals for new ideas development	Goals with calculated risks	Developing goals for future opportunities
	Concrete Example: Setting a goal for introducing a unique product offering to resolve market issues/ unserved segments.	Concrete Example: Consider the following points while setting goals: a) Is the innovative offering compatible with your competencies? b) Do you possess enough finances? c) Will the customers keen to buy?	Concrete Example: Set an active goal to capture a market opportunity and stick to that goal despite the failure
	<i>Action principles:</i> Being actively innovative <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Develop an idea for a unique offering for model case study <i>Application to proposed business:</i> Develop challenging goals for a unique offering for the proposed business.	<i>Action principles:</i> Develop goals that involve calculated risks <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Develop goals with calculated risk for model case study <i>Application to proposed business:</i> Develop goals with calculated risk for own business	<i>Action principles:</i> Ability to self-set the goals and preserve them <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Develop an action plan and decide the future potential issues and their solutions to preserve goals for model case study <i>Application to proposed business:</i> Develop an action plan and decide the future potential issues and their solutions to preserve goals for the proposed business.
Information seeking	Scanning information about the new technologies and market potential for innovation	Actively seeking information for extensive risk assessment, evaluation, and mitigation	Scanning for the potential opportunities and threats
	Concrete Example: Actively searching the internet and gathering market information for the methods to introduce unique offerings before others.	Concrete Example: Gather information about the business feasibility, the consumers' need and potential competitors	Concrete Example: Gather information about the opportunities and threats in the industry for developing self-starting goals

	Training Content <i>Action principles:</i> Active information seeking for innovation <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and others with routine goals. <i>Exercise:</i> Participants indicate the sources and types of information needed for developing innovative products for model case <i>Application to proposed business:</i> indicate the sources and types of information needed for developing innovative products for the proposed business	Training Content <i>Action principles:</i> Active information seeking for risk analysis <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Participants indicate the sources and types of information needed for setting goals based on calculated risks in the perspective of model case <i>Application to proposed business:</i> Participants indicate the sources and types of information needed for setting goals based on calculated risks for a proposed business	Training Content <i>Action principles:</i> Actively look for information to influence the environment <i>Model:</i> Case studies of two entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Participants indicate the sources and types of information needed to actively influence the environment based on model case <i>Application to proposed business:</i> indicate the sources and types of information needed to actively influence the environment for the proposed business
Planning	Planning for development of new innovative ideas	Plans for risk mitigation	Using the opportunities and threats for action planning / contingency planning
	Concrete Example: Make a plan for gathering required resources and processes to launch innovative offering	Concrete Example: Make risk identification, evaluation and mitigation plan based on potential the probability and impact	Concrete Example: Make a plan to acquire customers by rigorous marketing i.e. decide target market, devise advertisement plan, seek permission from concerned authorities and developing a back-up plan
	<i>Action principles:</i> Be actively innovative in planning <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of the plan for launching innovative offering based on model case	<i>Action principles:</i> Have effective risk planning <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Formulation of risk identification, evaluation, and mitigation plan based on model case	<i>Action principles:</i> Proactive plan development and execution <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals

	<i>Application to proposed business:</i> Formulation of the plan for launching innovative offering for the proposed business	<i>Application to proposed business:</i> Formulation of risk identification, evaluation and mitigation plan for the proposed business	<i>Exercise:</i> Formulation of an action plan based on model case <i>Application to proposed business:</i> Formulation of the action plan for the proposed business
Monitoring and Feedback	Monitoring and feedback after the implementation of innovative ideas	Risk evaluation	Development of pre-signals
	Concrete Example: Self-evaluation and consumer feedback on a test launch	Concrete Example: Get the feedback from field experts to evaluate the risk and self monitor the risks in prospective business activities	Concrete Example: Self-reflection and survey from consumers regarding effective attainment of the action plan, in case the results are not as expected (i.e. not enough consumers are attracted) increase the time period or change method of advertisement based on feedback
	Training Content <i>Action principles</i> <i>Evaluation of innovative offering success</i> <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Discuss the ways to monitor the success of innovative offering and the ways to obtain feedback based on model case <i>Application to proposed business:</i> Discuss the ways to monitor the success of innovative offering and the ways to obtain feedback for the proposed business	Training Content <i>Action principles</i> <i>Is the risk evaluation realistic?</i> <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Discuss the accuracy of risk in business activities as set in the model case <i>Application to proposed business:</i> Discuss the accuracy of risk in business activities for the proposed business	Training Content <i>Action principles</i> Actively look for feedback to decide if the business is working as planned <i>Model:</i> Case studies of two would-be entrepreneurs, one with challenging goals and other with routine goals <i>Exercise:</i> Discuss the realization of the action plan set in the model case and how obtained feedback can be used actively in the perspective of the model case. <i>Application to proposed business:</i> Discuss the realization of the action plan set in the model case and how obtained feedback can be used actively in the

3.2.4.4.2 The individual Entrepreneurial Orientation Training Concept for Undergraduate Business Students (would-be Entrepreneurs)

For the student sample the training was designed similarly as the SME owners (see heading 2.2.4.2.2. for details). The only difference was that the cases for student sample pertained to a student (would-be entrepreneur) with IEO rather a business owner and the training content focused only on the three dimensional IEO construct. The application of action principles and IEO dimensions were sought for the “proposed” business instead of the operational business.

3.2.5 Mediating Variables

The mediating variables included in this dissertation are exploration activities, response performance, access to finance, and active social networking (study 1), entrepreneurial alertness (study 2), IEO behavior of SMEs owners (study 3), and IEO behavior business students (would-be entrepreneurs) (study 4).

3.2.5.1 Exploration activities

Exploration is the behavior of a firm that includes searching, discovering, experimenting, risk-taking, and innovation (He & Wong, 2004). In this aspect, a firm experiments to develop new ideas and alternatives for innovative business models (Bauer & Leker, 2013). It enhances the capacity of business for identification and exploitation of opportunities in the market and to pursue improved ways of doing business by alternative structure, content, and governance (Hamel, 2012). It furthermore enhances the uncertainty tolerance of firms by imparting better risk management (Yeniaras & Unver, 2016). Exploration activities make business in a better position to adapt to the changes in the market and combat competitive pressure (Gupta, Tesluk, & Taylor, 2007).

3.2.5.2 Response performance

Apart from focusing on experimentation and capturing new opportunities, a business must be able to respond to the changes in the market and strategies of competitors by building on the existing opportunities. For this purpose, the ability of a business to utilize the existing resources intelligently, creatively, and timely response to the needs of market adaptations play an important role. It improves the capacity of the undertaking and implementing the solutions to market problems and being superior in responding to market signals (Hughes, Hughes, & Morgan, 2007).

3.2.5.3 Access to finance

Access to finance refers to the actions of SMEs to obtain the financial resources from external/internal sources and the perceived ease in this process (Yoshino & Taghizadeh-Hesary, 2018). This implies the importance of having timely and affordable financial resources to meet the operational needs of business reasonably. Internal source of finance is owners' equity and commercial banks, microfinance institutions, and supplier credit are the formal external sources of financing for SMEs and informally the owners get financial resources from friends and family (Tagoe, Nyarko, & Anuwa- Amarh, 2005).

3.2.5.4 Active Social Networking

For SMEs, the value of having social networks with other businesses, family, friends, political parties, and related institutional authorities cannot be overemphasized (Zimmer, 1986). In developing nations like Pakistan, the institutional framework is weak for smaller-scale businesses and their prosperity depends on the ability of SMEs owner to have relationships with political, institutional, and regulatory actors (Sigmund et al., 2015). The action of networking includes the active measures taken by an individual to make friends and develop beneficial and strong coalitions and alliances (Ferris et al. 2005). Active social networking implies the steps taken by SME owners to use interpersonal skills for developing, extending, and maintaining the relationships with concerned people for the facilitation of business operations and its growing (Frese & Gielnik, 2014; Zhao, 2005).

3.2.5.5 Entrepreneurial Alertness

The entrepreneurship literature is dedicated to the concepts related to the awareness of opportunities (Campos, 2016). In this regard, the theory of entrepreneurship alertness devised by Kirzner (1973) has offered a valuable contribution to the understanding of the process of entrepreneurial opportunity identification. Entrepreneurial alertness makes the business owners more aware of the opportunities they can pursue by building on limited market clues. Entrepreneurial alertness is the ability of an individual to detect opportunities that others may overlook, and having the propensity to envision future based on the identified opportunities (Kerzner, 1985). The entrepreneurial alertness work was extended by Baron and Ensley (2006) who put forth the argument that individuals who are alert use the existing information to resolve the existing issues in marketing and envision new products and services that can resolve the consumer problems. It has been said that identification of a worth pursuing marketing opportunity lies at the heart of entrepreneurship (McMullen & Shepherd, 2006). A person having greater entrepreneurial alertness is more sensitive to his surroundings and has a mindset that enables him to adapt to any given situation (Gaglio & Katz, 2001). The recent conceptualization of entrepreneurial alertness has three dimensions i.e. scanning and search, association, and connection along with evaluation and judgment (Tang, Kacmar, & Busenitz, 2012).

The first dimension of alert scanning and search indicate a consent quest for environmental scanning for identification of information and changes that are not noticed by others. Alert association and connection refers to obtaining information from diverse sources and using it for the development of new alternatives. Evaluation and judgment incorporate the assessment and judgment reading the identified information and changes and categorizing them as a profitable business opportunity. Moreover, it is suggested that “the three dimensions of alertness are distinct and measure different aspects of alertness” (Tang et al., 2012, p. 88). Therefore all three dimensions are taken individually for the purpose of this study as suggested by Campos (2017). The work of Tang et al. (2012) has offered a valid insight into empirically testing the antecedents and outcomes of entrepreneurial alertness. More specifically for the student population, the construct of entrepreneurial alertness has been deemed to be a predictor of recognizing market opportunities (Hu & Ye, 2017; Li, Wang, & Liang, 2015). The major

focus of this stream of research is on the discovery of antecedents as well as outcomes of entrepreneurial alertness (Kirzner, 2009).

3.2.5.6 Individual Entrepreneurial Orientation behavior of SMEs owners

Same as the independent variable in Study 1 (see heading 3.2.4.1. for detail).

3.2.5.7 Individual Entrepreneurial Orientation behavior undergraduate business Students (would-be entrepreneurs)

Same as the independent variable in Study 2 (see heading 3.2.4.3 for detail).

3.2.6 Outcome Variables

The outcome variables included in this dissertation are SMEs owners' success (study 1), business students' entrepreneurial intention (study 2), Kirkpatrick's training evaluation criteria (i.e., reaction, learning, behavior, and results) for SMEs owners (study 3), and Kirkpatrick's training evaluation criteria (i.e., reaction, learning, behavior, and results) for business students (would-be entrepreneurs) (study 4).

3.2.6.1 SMEs' Success

In entrepreneurship research, multiple methods are being adopted for measuring the success of business ventures. Most of the studies rely on objective measures of success (Mueller, Wolfe, & Syed, 2017), some use subjective measures of entrepreneurial survival (Carree & Verheul, 2012; Van Gelderen et al., 2005), while others use the mix of both (Murphy, Trailer, & Hill, 1996). Nevertheless, in the specific context of SMEs in the developing nations, the business records are not well maintained and publically available. Also, the owners' are reluctant to reveal the objective performance indicators further lend this study to use subjective measures of success, which is an acceptable practice in measuring the success of SMEs in developing nations (Bilal, Naveed, & Anwar, 2017; Glaub, 2009). In the present research for survey study 1 the perceived success is measured using the indicators of quality and innovation

in products, customer satisfaction, employee relations, market penetration, financial management, productivity, profits, and market share that is deemed suitable by Bilal et al. (2017). For experimental intervention in study 3, the success is measured by examining subjective indicators of an increase in sales, profits, employees, and customers as suggested by Glaub (2009).

3.2.6.2 Entrepreneurial Intention

Krueger, Reilly, and Carsrud (2000) stated that “the construct of intentions appears to be deeply fundamental to human decision making” (p.53). Intentions, in general, are linked to any kind of voluntary course of action opted by an individual (Krueger, 2017). Entrepreneurial intention plays a vital role in the shaping of forthcoming entrepreneurial behavior and decision (Al-Jubari, Hassan, & Linan, 2018; Nowinski, Haddoud, Lancaric, Egerova, & Czegledi, 2019). Therefore, an entrepreneurial start-up that is deemed to be a planned and intentional endeavor requires a substantial formation of entrepreneurial intention (Nabi, Linan, Iakovleva, Kolvereid, & Stephan, 2011). As stated by Fyolle and Linan (2014) the line of research relating to entrepreneurial intentions needs a thorough rethinking of how this state is attained. For the positive economic and social development, the choice of entrepreneurship as a career carries great importance, especially in the context of developing nations (Smallbone, Welter, & Ateljevic, 2014). Concerning the entrepreneurial intention of students, it is the planning and execution of business ideas through the cognitive process (Gupta & Bhawe, 2007). In this context, the conceptualization of students’ entrepreneurial intentions is established as the intention of a student to opt for entrepreneurship as a future career path (Mustafa, Hernandez, Mahon, & Chee, 2016). For having entrepreneurial intention the students should have a positive disposition in deciding to exploit an identified business opportunity and having the confidence in turning their ideas into a viable business endeavor (Krueger et al., 2017).

3.2.6.3 Kirkpatrick’s Training Evaluation Criteria

Kirkpatrick's (1975) model of training evaluation has set the foundation for measuring the effectiveness of any training intervention. It has proposed that any training results in four kinds of outcomes that determine the level of training success. These levels are i.e. reaction: that indicates how well the trainees have perceived training content, including the factors of

training satisfaction, transfer intention, and perceived utility. The second level of evaluation is termed as learning that implies how much knowledge of IEO is attained after training. The third level is behavior that will measure the changed attitude in terms of autonomy orientation, learning orientation, achievement orientation, innovativeness, risk-taking, personal initiative, and competitive aggressiveness for the SMEs' owners in study 3; but only focus on innovativeness, risk-taking, proactivity in business students (would-be entrepreneurs) sample in study 4. The last level measures the results of training in the form of success (study 3) and entrepreneurial intention (study 4) (see Figure 3.4).

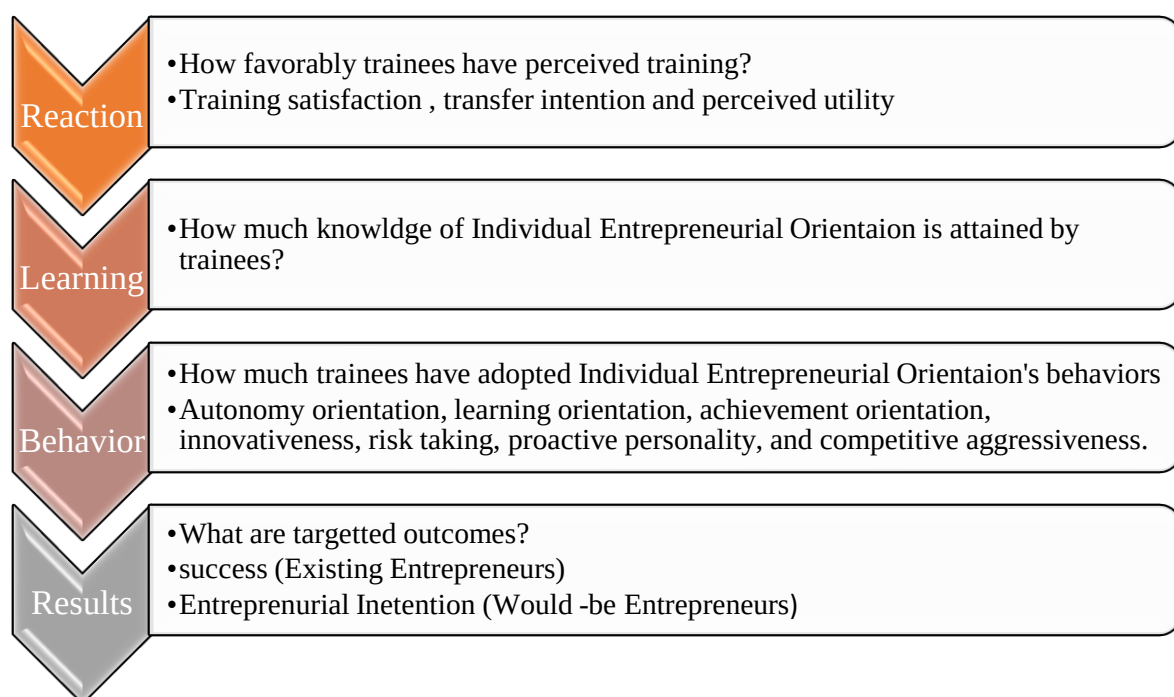


Figure 3.4: Kirkpatrick's model of training evaluation

Source: Adapted from Kirkpatrick (1975) and Glaub (2009).

3.3 Hypotheses Development and Conceptual Frameworks

3.3.1 Hypotheses Development Study 1

The first study aimed to determine the impact of operational entrepreneurs' IEO and its link to SMEs' success through the mediating role of action characteristics (i.e. exploration activities, responsive performance, access to finance, and active social networking based on

the theory of action regulation. The hypotheses development and theoretical framework of study 1 are elaborated in the following section.

3.3.1.1 Individual Entrepreneurial Orientation and SMEs' Success

In an extensive review, Frese and Gielnik (2014) emphasized that entrepreneurial orientation can be examined from a psychological viewpoint as an attitude of the individual entrepreneur and as an action characteristic. Krauss et al. (2005) created the model of entrepreneurial orientation at the level of individual characteristics of entrepreneurs and found it to be linked to the success of entrepreneurial ventures in developing nations. Individual characteristics of entrepreneurs' specifically: achievement orientation, autonomy orientation, innovativeness, risk-taking, proactive personality, and competitive aggressiveness.

The entrepreneurial climate is characterized by ambiguous information, competitive goals, changing situations, and uncertainty (De Vries & Shields, 2006). In such cases, entrepreneurs with more tolerance to ambiguity, changing situations, and the ability to learn from their mistakes have more chances of survival (Cooper, Estes, & Allen, 2004). Though, most of the recent research studies still focus on the three-dimensional constructs of individual entrepreneurial orientation (Bolton & Lane, 2012); yet Krauss et al. (2005) conceptualization of individual-level entrepreneurial construct is holistic and it is proven to be a predictor of success in the perspective of small business operating in the developing nations. Therefore, we deem it to be a suitable dimensional in the context of the present study.

H₁: There is a significant Impact of IEO on SMEs success

3.3.1.2 The Mediating Role of Action Characteristics Between Individual Entrepreneurial Orientation and SMEs' Success

Entrepreneurial orientation at the firm level has been linked to exploration activities (Kollmann & Stockmann, 2014; Yeniaras & Unver, 2016). In SME business owners are the prime actors to decide the strategic stance their business will take (Krauss et al., 2005) so it is reasonable to consider that the psychological component of IEO will link to the exploration

activities. Exploration is the behavior of a firm that includes searching, discovering, experimenting, risk-taking, and innovation (He & Wong, 2004). Overall it is the action for exploring new ideas and experimenting with new alternatives for the development of new ways of doing business (Bauer & Leker, 2013). In this way, the business has an enhanced ability to identify the new opportunities in the market and find out better ways of doing business through experimenting with the alternatives of content, structure, and governance of the activities that are inherent in exploiting new business opportunities (Hamel, 2012) along with improving the ability of firms to have better risk tolerance and uncertainties (Yeniaras & Unver, 2016). This allows the business to conduct experimentation to keep abreast of changes in the market and effectively dealing with market competition and as a result making a positive contribution towards the performance of the firm (Gupta, Tesluk, & Taylor, 2007). Thus, it is argued that exploration activities have a positive impact on business performance (Yeniaras & Unver, 2016).

H₂: Exploration activities mediate the relationship between IEO and SMEs success

In addition to exploring new opportunities, a business needs to be responsive to the changes in the market, competitors' moves, and exploit the opportunities in the market. The business needs to make maximum utilization of existing resources. In this regard, responsive performance plays an important role in shaping business survival performance (Grewal & Tansuhaj, 2001). The components of IEO will instill an anticipatory capacity in entrepreneurs that allow them to instigate intelligent, timely, and creative responses for adapting to the changes in market conditions. IEO makes the business owners geared to discover and avail opportunities ahead of the rival firms by being risk-taker, autonomous, achievement-oriented, learning-oriented, competitive, proactive, and innovative (Hughes et al., 2007; Krauss et al., 2005). In this way, the business will be able to exploit opportunities through experimentation and probing in the face of a continuously changing environment (McGrath, 2001).

H₃: Responsive performance mediate the relationship between IEO and SMEs success

Moreover, one of the major issues facing SMEs in developing nations is access to resources amongst which finance is the most important (Yoshino & Taghizadeh-Hesary, 2018). It has been found in a review on the antecedents of entrepreneurial success that access to resources is an important factor that can be improved by having psychological motivations of

entrepreneurial orientation (Frese & Gielnik, 2014). The business owner that is innovative, risk-taking, proactive, autonomous, achievement-oriented, learning-oriented, and competitive by having higher IEO (Krauss et al., 2005) can seek resources actively as compared to the competitors (Frese & Gielnik, 2014). Finance is one of the basic resources needed to conduct business operations (Hussain et al., 2018) it is argued that business owners that have higher IEO will be able to access finance more easily as compared to those who have lower IEO.

H₄: Access to finance mediates the relationship between IEO and SMEs success

Lastly, the importance of active social networking in a small business context cannot be overemphasized. The small business owners rely on informal networks i.e. family, friends, businesses for conducting business operations, and reaping the opportunities (Zimmer, 1986). The psychological factors are found to be antecedents of developing social networks in small scale business that ultimately leads to business growth (Zhao, 2005; Zhao et al., 2010). The business owners having entrepreneurial orientation have the innovative ideas, ability to take calculated risks, proactiveness, learning, autonomy, the pursuit for achievement and competitiveness (Krauss et al., 2005) that help them in proactively developing social networks to serve the future business needs (Frese & Gielnik, 2014). The individuals that have entrepreneurial orientation develop and apply the strategies for broadening their social network that plays an important role in the entrepreneurial success (Heavey, Simsek, & Fox, 2015).

H₅: Active social networking mediates the relationship between IEO and SMEs success

The study 1 framework is shown in Figure 3.5.

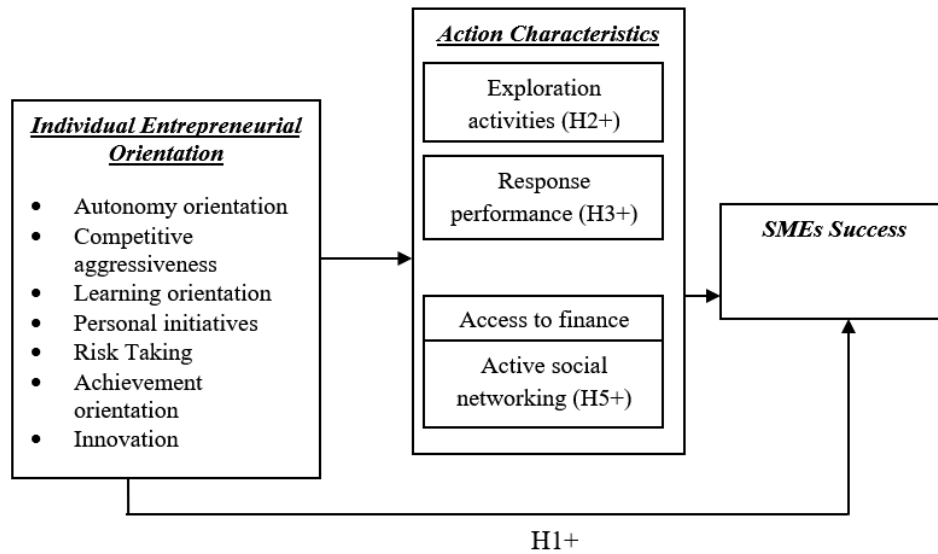


Figure 3.5: Theoretical Framework of Study 1

3.3.2 Hypotheses Development Study 2

The focus of the second study is on finding the impact of undergraduate business students' IEO and the development of their entrepreneurial intention. The role of three dimensions of entrepreneurial alertness (i.e. scanning and search, association and connection, and evaluation and judgment) is taken as a mediator in the above-mentioned relationship based on the theory of action regulation. The hypotheses development and theoretical framework of study 2 are elaborated in the following section.

3.3.2.1 Individual Entrepreneurial Orientation of Undergraduate Business Students and Entrepreneurial Intention

The research stream on entrepreneurial intention has called for examining how ones' choice of becoming an entrepreneur is determined. The importance of uncovering the process by which people have a decisional role in opting for employment creation rather than employment seeking is important in this era (Fyolle & Linan, 2014). To revitalize the research regarding students' entrepreneurial intention, its antecedents and underlying mechanism demand considerable attention (Nowiński et al., 2019). Apart from the personality traits and environmental factors, the IEO of students is found to be one of the predictors of their

entrepreneurial intention (Bolton & Lane, 2012). The innovation component in IEO enables the students to have an experimental approach and urge towards creativity. The future focus is inherent in proactivity that enables the opportunity recognition and exploitation ahead of others. Better risk management and higher tolerance in the face of ambiguity is imparted by the risk-taking dimension (Rauch et al. 2009). In this way, these three components of IEO in students enhance their confidence in identifying the market opportunities and turn them into viable business ventures (Mustafa et al., 2018).

It has been established by past studies that having a proactive personality and creative attitudes increase the likelihood of entrepreneurial desirability (Selznick & Mayhew, 2018). Hansen, Shrader, and Monllor (2011) have strengthened this argument by stating that individuals that act proactively and are innovative have better ability to recognize and build on market opportunities and this spurs their encouragement to be a business owner. Being creative is at the core of forming an entrepreneurial intention; the innovative capacities in an individual shape their pre-startup behavior in a significant manner (Emami & Dimov, 2017). Risk-taking and entrepreneurship go hand in hand (Macko & Tyszka, 2009), thus making the increased propensity of risk-takers to go for business start-up decisions. Bandera, Collins, and Passerini (2018) deem risk-taking propensity as a prime constituent of students' entrepreneurial intention. In this way, it can be witnessed that all three dimensions of students' IEO predict entrepreneurial intention (Bolton & Lane, 2012). Thus, it is posited that:

H₆: The students' IEO has a positive impact on their entrepreneurial intention.

3.3.2.2 The Mediating Role of Entrepreneurial Alertness

The relationship between students' IEO and the entrepreneurial intention was proposed by Bolton and Lane (2012), yet this line of study still lacks clarity about how these two variables link. As called by Mustafa et al. (2018) there is a need to further explore the processes and theoretical foundations in linking the antecedents to entrepreneurial intention. This argumentation is also extended by Nowiński et al. (2019) who asked for further improving the understating of entrepreneurial intention construct. Based on the theory of action regulation (Frese, 2009) it is posited that the IEO will translate into the formation of entrepreneurial intention through the mediating role of action characteristic. It has been put forth by the

research stream in the psychology of entrepreneurship that orientations need certain actions to be translated into the intention of business start-up and entrepreneurial alertness acts as one of such actions (Frese & Gielnik, 2014).

The first component of students' IEO is proactivity (Bolton & Lane, 2012), which is a tendency of an individual to make attempts for influencing the environment rather than waiting to respond reactively (Zampetakis, 2008). Uy et al. (2015) found entrepreneurial alertness to be a significant mediator in linking students' proactive personality and the subsequent boundless career mindset. Proactive individuals are self-starting to identify opportunities in the market, take proactive steps, and have a meaningful impact on the environment rather than being a victim of changes (Bateman & Crant, 1993). For this purpose, they take proactive initiatives to search the information about entrepreneurial opportunities and market changes rather than being passive receivers of such information. On a more specific notion, proactive individuals are seen to have more alertness about the market knowledge and information about entrepreneurial opportunities given their capacity of taking initiatives for initiating this search (Tang et al., 2012).

The second element of students' IEO is being innovative that is a predisposition to creativity and experimentation (Rauch et al., 2009). The innovative aptitude of an individual makes them better searching and using the information sources for opportunity recognition, these include the information from personal as well as internet-based sources and especially a strong empirical connection was found between creativity and scanning and search dimension of entrepreneurial alertness (Campos, 2016; Obschonka et al. 2017).

The third element of students' IEO is a risk-taking tendency that is an individual capacity of indulging in bold actions and endeavoring unknown (Rauch et al., 2009). The research has indicated that it depends on the risk-taking attitude of an individual that either they consider a certain market disruption as an opportunity or a threat. The risk-taking inclination decides whether an individual will consider a change in the market as a viable source of initiating a market search and scanning to pursue a business opportunity or miss it completely (Cui, Sun, Xiao, & Zhao, 2016).

Entrepreneurial alertness is a core component of the entrepreneurial process. It is attention towards the knowledge, evaluation, and orientation of an individual to the changes in

the environment and market settings that are beyond his identity (Uy, Chan, Sam, Ho, & Chernyshenko, 2015). Scanning and search is an important element of entrepreneurial alertness. The individuals that have high entrepreneurial alertness are better in scanning information for recognizing opportunities that others do not recognize or recognize later on (Roundy et al., 2018; Tran, & VonKorflesch, 2016). Alert scanning and search improves the seeking of relevant knowledge and information for capturing entrepreneurial ideas. The business students that are more alert have persistence and unorthodox behavior in searching market information (Samo & Hashim, 2016). Such individuals actively seek information to search for solutions for market problems. This extensive scanning and search impart higher knowledge and information to chalk out potential business plans (Samo & Hashim, 2016). Alert scanning and search concept has been linked to the notion of new venture emergence (Tang et al., 2012) that makes its link to entrepreneurial intention more relevant. Based on the theory of action regulation (Frese, 2009) and taking together the above-mentioned literature it is posited that students' IEO predicts alert scanning and search that makes them more likely to have higher entrepreneurial intention. Therefore, the following hypothesis is proposed:

H_{7a}: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert scanning and search.

IEO imparts proactiveness to individuals that persuade them to have an impact on the environment. It results in initiatives of changing the future course of action and these kinds of people face less situational pressure (Bateman & Crant, 1993). The research on adapting to the environment along with proactive personality has offered evidence that proactivity is linked to entrepreneurial actions and the tendency of business start-up (Uy et al., 2015). Proactive students will not only actively seek the market information about entrepreneurial prospects but they will be actively engaged in developing new associations from the obtained information that will influence the market dynamics. Proactivity enables association and connection of obtained information into viable business ideas by adding, removing, and interpreting the knowledge into new categories to tap market needs (Alvarez & Barney, 2010).

On similar notes the creativity and experimental nature inherent in innovation orientation make the business students connect the obtained information into unique ideas, solutions, and plans. Innovation gives the tendency of an unprecedented connection between the pieces of information and transforming them into ideas that tap the market opportunities.

To engage in entrepreneurial actions, creative activities and innovative mindset play a crucial part (Campos, 2016). The innovativeness makes the students connect the information in a distinct manner that is perceived as unrelated by others (Tang et al., 20112). Obschonka et al. (2017) found that creative behavior link individuals' personality to entrepreneurial alertness i.e., association and connection. Creativity has been linked to entrepreneurial alertness as the individual has novel and useful ways to put together the market information and knowledge into workable business plans (Hu, Wang, Zhang, & Bin, 2018).

When a person has a higher risk-taking mindset he associates and connects those opportunities as profitable options that others will not think of, given the level of risk involved in them (Forlani & Mullins, 2000). Thus, the business students that will have a high risk-taking attitude will put together the pieces of available information into a viable business plan that a risk-averse person will leave. Such individuals will create a link in seemingly risky options for a business idea due to having high and calculated risks in the association process (Tang et al., 2012).

Development of entrepreneurial intention involves concrete planning for preparation and ultimate business start-up to choose entrepreneurship as a profession (Obschonka et al., 2017). It has been argued that individuals having a higher level of entrepreneurial alertness tend to have high entrepreneurial intentions. Specifically, alert association and connection spur the opportunity recognition by connecting seemingly unrelated and overlooked pieces of information into a sketch of new business possibilities (McMullen & Shepherd, 2006). This argument is further strengthened by Li et al. (2015) who deemed entrepreneurial alertness to be an essential element in the development of intention to start one's own business. For the specific student sample, this assertion has been proven that the students having a higher level of entrepreneurial alternates and self-efficacy showed more inclination towards opting entrepreneurship as a career choice. Building on the above-mentioned argumentation and the tenant of the theory of action regulation (Frese, 2009), it is argued that business students that have IEO will be better in the action of alert association and connection and have higher intention to become an entrepreneur.

H_{7b}: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert association and connection.

Lastly, the dimensions of students' IEO i.e., proactivity, innovation, and risk-taking are linked to alert evaluation and judgment that fosters higher entrepreneurial intention in them. The market information and connection in this information needs to be evaluated either as a profitable or non-profitable business option. Research affirms that being proactive results not only in greater initiatives and self-starting actions of seeking market information and connecting this information; but it also helps in making sense of this information to capture profitable market opportunities (Tang et al., 2012). The availability of a profitable business prospect will be positively evaluated by a proactive person based on future envisioning and self-starting approaches in tapping it rather than waiting for others (Hu et al., 2018).

Furthermore, Kirzner (2009) also signified the role of being creative in entrepreneurial alertness and Ardichvili et al. (2003) drew a conceptual link in creativity and alertness. It was stated that innovation inculcates the creative and experimental mindset that is a precursor of evaluating unique and distinct pieces of information as a profitable business idea (Obschonka et al., 2017). The creative individuals will have a judgment of options that offer an unmet market need as a business idea that will offer considerable returns based on their novel thinking (Tang et al., 2012). Moderate to high-risk taking is an essence of entrepreneurship. The risk evaluation and calculated risk analysis will enable an individual to have a positive judgment about the collected information and resultant identification of viable business options (Forlani & Mullins, 2000). The risk-taking will allow for evaluating a risky opportunity as a high return business option (Cui et al., 2016).

Positive evaluation and judgment of a market opportunity as a profitable option was indicated as one of the key predictors of students' entrepreneurial intention (Hu & Ye, 2017). The findings of Hu et al. (2018) indicate that the creative mindset and proactive personality is linked to entrepreneurial intention through the mediating role of entrepreneurial alertness. Such that proactive and creative individuals those market opportunities as profitable that others think to be unrelated or too ambitious. Taking risks has also been found to link with an evaluation of entrepreneurial opportunities as pursuable business prospects (Cui et al., 2016). Entrepreneurial alertness acts as a key path of recognizing the entrepreneurial opportunities and having an intention to act upon them (Roundy et al., 2018). Based on the theory of action regulation, the alert evaluation and judgment created as a result of IEO have been tied to the development of entrepreneurial intention in business students, that is, a self-initiated persuasion

for business start-up and dedication of conscious future planning in this regard (Thompson, 2009).

H_{7c}: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert evaluation and judgment.

The hypothesized relationships of study 2 are indicated in Figure 3.6:

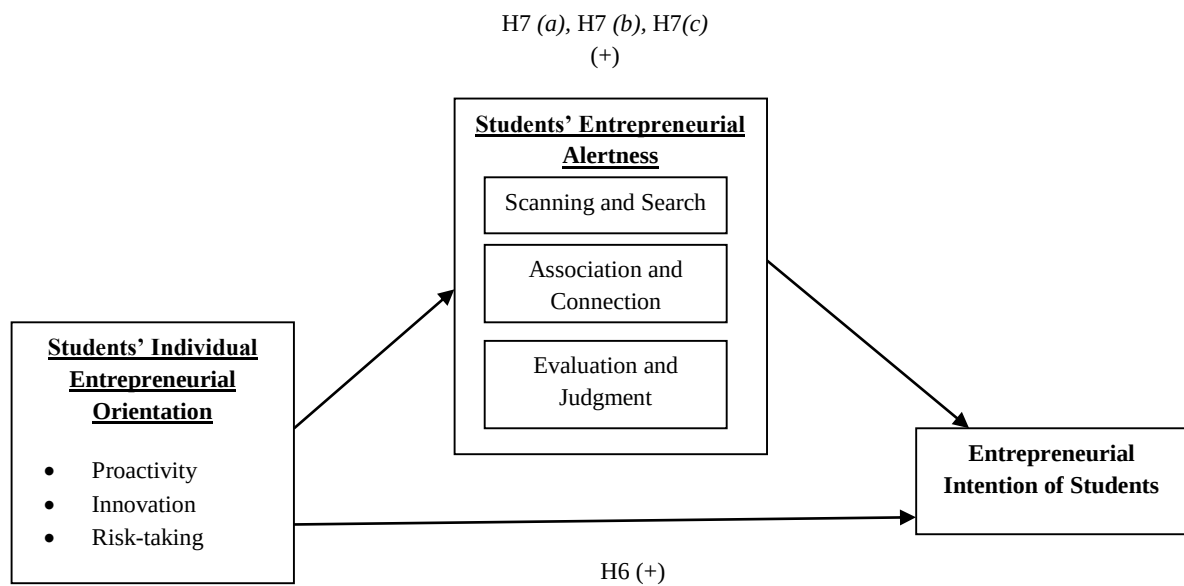


Figure 3.6: Theoretical Framework of Study 2

3.3.3 Hypotheses Development Study 3

The third study is an experimental intervention in which the impact of IEO training for SME owners is evaluated in terms of reaction, learning, behavior, and success measures. The pre-test and post-test comparisons are used and the training group is compared with the control group. Besides, the mediating role of IEO behavior is examined between the IEO training and SMEs' success. The hypotheses development and theoretical framework of study 3 are elaborated in the following section.

3.3.3.1 SMEs Owners' IEO Training and Outcomes

The concept of individual entrepreneurial orientation was built on the “individualistic model of entrepreneurship” presented by Schumpeter (1934). In an extensive review, Frese and Gielnik (2014) emphasized that entrepreneurial orientation can be examined from a psychological viewpoint as an attitude of the individual entrepreneur and as an action characteristic. Krauss et al. (2005) created the model of entrepreneurial orientation at the level of individual characteristics of entrepreneurs specifically: autonomy orientation, learning orientation, achievement orientation, innovativeness, risk-taking, proactive personality, and competitive aggressiveness. They further indicated individual entrepreneurial orientation to be a trainable construct given its action-oriented nature and psychological underpinnings. Training refers to an attempt aimed at improving present or future performance by improving efficiency and ability based on the learning obtained from training. That, in turn, changes the behavior of trainees and improves their knowledge and skill (Noe, & Peacock, 2008). To unleash the mechanism through which training success can be understood, Kirkpatrick's (1975) model of training evaluation offers a useful foundation. It consists of four levels i.e. reaction, learning, behavior, and results of training in form of success (i.e., increase in sales, customers, quarterly profits, number of employees, failure rate) (Glaub et al., 2014).

In the psychological training of entrepreneurs, it is advisable to measure the training outcomes on the stated four levels (Glaub, 2009). The first training evaluation is done immediately after the training in which the satisfaction and perceived training usefulness of the participants are sought. This captures the attitudinal and affective responses of participants post-training and usually self-report measures are used to gauge them (Arthur, Bennett, Edens, & Bell, 2003). The participants' views about their perception of training are asked, either the training program was liked or not like. It captures the overall perception of the trainer as well as the training content (Bezrukova, Spell, Perry, & Jehn, 2016). The trainees' expectations for the program and their experience are probed in terms of the contents covered in the training program and the materials and methods that are used for delivering the training program. Trainees are asked to rate the extent to which they perceive the training met their needs and will be useful for them in practical terms and the motivation they have to apply the trained concepts in their business settings (Kirkpatrick 1975; Kirkpatrick & Kirkpatrick, 2006). The psychological training interventions for entrepreneurs in past have been linked to satisfaction

and perception of training usefulness for their business (Frese et al., 2016; Glaub et al., 2014; Mensmann, 2017). Thus, we argue that the psychological IEO training for the operational SME owners will also impact their immediate reaction in terms of satisfaction, perceived use, and motivation to transfer the training in running their business operations.

H₈: Training of individual entrepreneurial orientation develops reaction measures i.e. satisfaction, perceived utility, and transfer motivation for operational SME owners.

The second evaluation criterion used to measure the training success is the learning resulting from the training (Glaub, 2009; Mensmann, 2017). After the immediate impact, the training influences the learning of participants. Such that they have better knowledge about the aspects of trained content and their skills are upgraded in that specific area (Kirkpatrick, 1975). For measuring the level to which the learning is improved, the participants' knowledge is measured before and after intervention through paper-and-pencil multiple-choice or behavioral tests (Praslova, 2010). Measuring the extent to which the participant has learned is one of the prerequisites in the subsequent display of trained behavior (Arthur et al., 2003). Thus, it is proposed that after the training intervention of IEO for the SME owner they will have a better understanding and knowledge of the key components of achievement-orientation, autonomy-orientation, learning-orientation, competitive aggressiveness, proactiveness, innovation, and risk-taking. This is in line with the other psychological interventions that improved the learning of participants regarding the dimensions of the trained construct (Frese et al., 2016; Glaub et al., 2014; Mensmann, 2017). This leads to the following hypothesis,

H₉: Training of individual entrepreneurial orientation improves the learning of the IEO construct for operational SME owners.

Reaction and learning measures do not ensure that the training content has altered the behavior of participants and they have displayed it in actual work settings (Arthur et al., 2003). For this purpose, the behavior of participants is measured once the training is over and they have the option to practice the learned content in their actual work environment (Kirkpatrick, 1975). This serves as the barometer of the extent to which the trained material has impacted the intended behavior of participants and this change in attitude is reflected in the way actual work is performed (Arthur et al., 2003; Praslova, 2010). This criterion is also subjected to the influence of external factors that are present at the time of the actual transfer of training. It may

be possible that at the time of actual performance of learned behavior certain factors may accelerate or impede this (Bates, 2004). Behavioral criteria have been deemed an important element in measuring the training outcomes in diverse contexts (Bezrukova et al., 2016). Van hove, Herian, Perez, Harms, and Lester (2016) offered meta-analytical evidence that behavioral criteria are an important element to measure the training outcomes.

In the specific context of entrepreneurial training interventions based on psychological factors, evidence has been traced that the action-based training changes the behavior of business owners and they reported improved performance based on the practice of learned content in the day to day business operations (Frese et al., 2016; Glaub, 2009; Glaub et al., 2014; Mensmann, 2017). On similar grounds, we posit that IEO training will improve the behavior of trained SME owners and they will transfer the learned training material by displaying compliant behavior in their business settings. The IEO training will make the attitude of SME owners more achievement and learning-oriented, they will take autonomous decisions and compete aggressively. Moreover, their attitude will display a calculated medium to moderate risk-taking propensity, proactivity, and innovation in business decisions and operations. So, the following hypothesis is put forth,

H₁₀: Training of individual entrepreneurial orientation creates IEO behavior in trained operational SME owners.

The most advanced training evaluation criteria of results measure the impact of training on large scale business outcomes (Bates, 2004). The effect of training on business outcomes is measured (Praslova, 2010). For the sample of operational SME owners, business success is taken to measure the results. It has been well established that entrepreneurial training programs have positive outcomes on the success of business ventures. It was found that out of the training interventions done for business management skills and development of psychological factors; those aimed at later aspect had higher success rates in terms of business survival, sales, and profits (Campos at al., 2017; Nieman, 2001; Klinger & Schündeln, 2011) and proved to have a positive impact on the economic success of entrepreneurs (with greater learning capabilities) in case of small businesses in developing nations (Glaub, 2009; Glaub & Frese, 2011). Thus, it is assumed that the IEO training will impact the SMEs owners' success by improving their sales, profits, expenses, number of employees, and customers as suggested by Glaub (2009). The following hypothesis is proposed;

H₁₁: Operational SME owners who are trained for IEO will be more successful.

3.3.3.2 Mediating Role of IEO Behavior in Linking IEO Training and Success of SMEs

Glaub (2009) proposed that to make sure that the training success is due to the development of the display of trained attitude it is useful to test the mediation model based on trained behavior as a linking mechanism in training and success outcomes. Thereby, it is posited that after undertaking IEO training, the operational entrepreneurs will learn and display the behaviors of autonomy, achievement-orientation, learning-orientation, innovativeness, risk-taking, proactiveness, and competitive aggressiveness that is expected to enhance the rate of success in small and medium scale enterprises. This affirms the theory of action regulation (Frese, 2009) that certain action characteristics are needed to link psychological variables to business success. It is posited that individual entrepreneurial orientation is a prime psychological variable that has been linked to business success. Therefore, increasing the entrepreneurial orientation of small and medium scale business owners will help them to engage in the action characteristic of IEO (Frese & Gielnik, 2014) that is linked to business success (Krauss et al., 2005). To exploit the opportunities present in the environment and to survive the pressure of competition, it is essential to act proactively, take a risk and develop innovative strategies that can be attained by having a great degree of entrepreneurial orientation (Lumpkin & Dess, 1996; Rosenbusch, Rauch, & Bausch, 2013).

To be successful, the development of improved mental models is essential that can be based on learning from experience. The organizations having a high degree of learning from mistakes and past experiences are found to be more successful (Van Dyck, Frese, & Sonnentag, 2005). The business owners of small firms having higher learning orientation outperform their competitors (Fang He et al., 2018). A business owner on a small and medium scale has to deal with all these tasks such as dealing with challenges, setting higher goals (i.e. ideas to expand the business) for themselves and others. Achievement-oriented business owners are more growth-oriented and their challenging goal-setting habit makes them more successful (Kraus, Reiche, & Reschke, 2008; Utsch & Rauch, 2000). Competitive aggressive entrepreneurs actively develop strategies to combat competition rather being reactive or avoiding competition altogether. This kind of business owner will make price-cutting strategies and set the budgets for advertisement, quality, and service improvement to win the competition (Zacca, Dayan, &

Ahrens, 2015). Autonomous business owners are better at the realization of the vision and higher autonomy orientation sets apart managers from entrepreneurs (Gelderen, 2000). Thus, it is hypothesized that the training of IEO will create IEO behavior in the trained SME owners that will ultimately improve their success.

H₁₂: IEO behavior of trained SME owners acts as a mediator between IEO training and the success of SMEs.

3.3.3.3 The Difference in Training Outcomes for Pre-Test and Post-Test Evaluation and the Training Group and Control Group

It has been posited that the psychological interventions for improving entrepreneurial learning, behavior, and outcomes make a difference in pre-test and post-test measurements (Bezrukova et al., 2016). Such as know-how of the trained psychological construct, its reflection in the behavior, and subsequent business outcomes will be improved post-intervention (Glaub, 2009). On a similar notion, it is argued that after IEO training the SMEs owners learning of IEO, their IEO behavior in actual business operations, and the success indices will improve after the training. Moreover, for the intervention-based post-test in the control group almost steady behavior has been reported in extant experimental evidence (De Luca, 2008; Murphy, 2013). It leads to the following hypotheses;

H₁₃: The post-test (a) IEO learning, (b) IEO behavior, and (c) SMEs' success will be improved as compared to pre-test IEO learning, IEO behavior, and SMEs' success in the training group (existing entrepreneurs).

H₁₄: The post-test (a) IEO learning, (b) IEO behavior, and (c) SMEs' success will remain the same in the SME owners (existing entrepreneurs) in the control group.

Another prime evaluation tactic in training programs is comparing the control group with the training group. The underlying assumption is that the training group will be better in the evaluation measurements post-training (Bezrukova et al., 2016). The training will impact the behavior of participants and they will develop the right attitude to manage the business operations in an effective manner (Choen, 2005). It has been indicated by the prior

psychological entrepreneurial training programs that the participants had better outcomes in terms of learning, behavior, and results in the training group, while the participants in the control group showed little or no improvement in these outcomes (e.g., Glaub et al., 2011; Glaub et al., 2014; Mensmann, 2017). Therefore, it is stated that SME owners in the training group will have improved post-test IEO learning, behavior, and success as compared to SME owners in the control group. Therefore, it is postulated,

H₁₅: The post-test (a) IEO learning, (b) IEO behavior, and (c) SMEs' success will be improved in the operational SME owners' training group as compared to the control group.

IEO is a psychological disposition of SME owners (Frese & Gielink, 2014), and researchers have called for the qualitative insights regarding specific settings in which EO is manifested (Wales, 2016). It has been stated by Miller (2011) that knowing the “how and why” of EO through real participants' experiences is needed to supplement the empirical research. Hence, context-specific knowledge regarding how IEO is implemented in the SME sector as per the cultural and demographical factors of Pakistan is deemed suitable in this aspect. Moreover, the outcomes of experimental investigations are better understood if post-intervention qualitative probing is done (Neergaard & Ulhøi, 2007). Therefore, to augment the above-mentioned hypotheses, the following proposition is put forth,

P1: The qualitative insights will substantiate quantitative findings and explain any of the unexpected outcomes in the SMEs' owners in the training group and control group.

The conceptual framework of study 3 is shown in Figure 3.7.

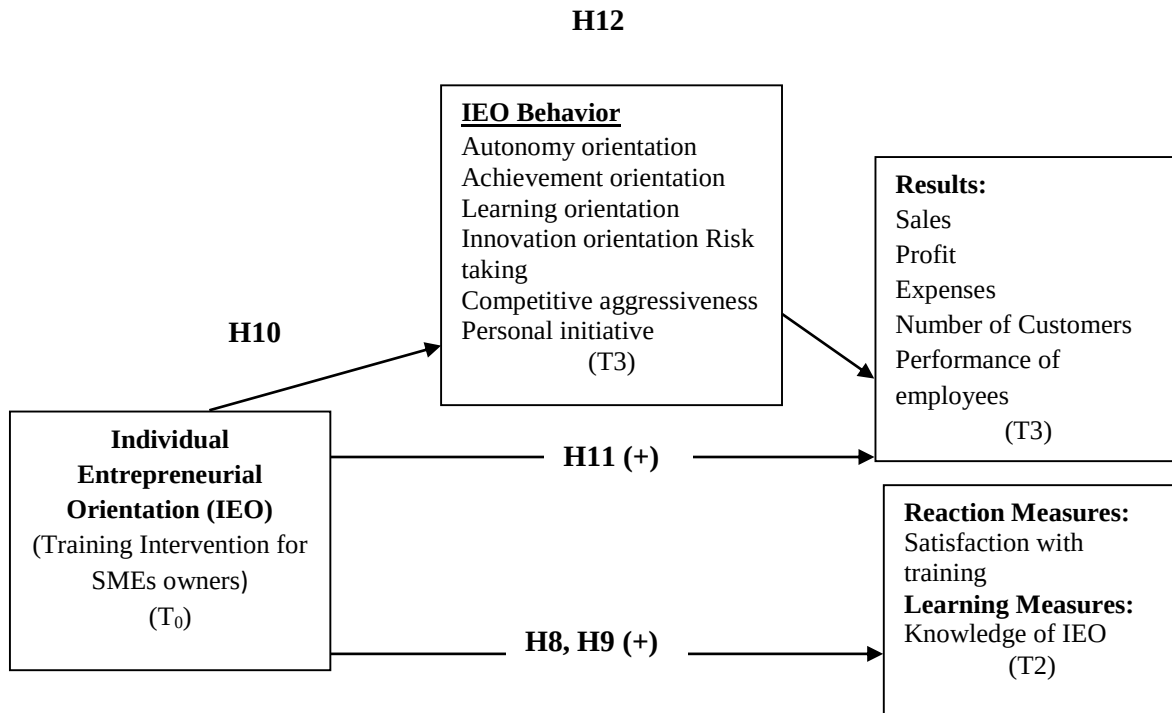


Figure 3.7: Theoretical Framework of Study 3

3.3.4 Hypotheses Development Study 4

The fourth study is experimental and examines the effect of IEO training for business students (would-be entrepreneurs) is evaluated in terms of reaction, learning, behavior, and results. Training group and control group comparison is done along with measuring outcomes before and after the training. Furthermore, the mediating role of IEO behavior is examined between the IEO training and business students' entrepreneurial intentions. The hypotheses development and theoretical framework of study 4 are entailed in the following section.

3.3.4.1 Students' IEO Training and Outcomes

Kirkpatrick's (1975) four-levels model of training evaluation (i.e. reaction, learning, behavior, and results of training in form of entrepreneurial intention) is used as an outcome of IEO training for business students' sample. In line with the previous investigations of entrepreneurial training effectiveness (Glaub, 2009; Mensmann, 2017), all four levels of evaluations are used in determining the impact of the IEO training of students.

First of all any kind of training results in an immediate reaction in the form of participants' satisfaction with the material being taught. In this phase, the immediate opinion of participants is sought regarding their liking and disliking of the training program. It shows what the trainees perceive about the content and the way training is delivered to them (Langmann & Thomas, 2019). This includes satisfaction with the way the trainer conveyed the concept and the overall usefulness of the training program. At this level mostly the subjective evaluation of participants is sought (Kirkpatrick 1975; Kirkpatrick & Kirkpatrick, 2006). Besides, it also includes the extent to which the training was successful in inspiring the participants to apply the learned content for planning their venture (Praslova, 2010). The IEO training will have an impact on the level of satisfaction the students feel after attending the training program. Moreover, the IEO training will lead to the perception of the usefulness of the training content and the overall methods and manner in which the trainers delivered the whole content. Lastly, it will motivate them for the transfer of trained content for displaying IEO and plan for their business start-up. Thus, it is posited that;

H₁₆: IEO training develops reaction measures i.e. satisfaction, perceived utility and transfer motivation for business students (would-be entrepreneurs)

Secondly, it is indicated that entrepreneurial training programs result in the learning of trained content (Glaub, 2009; Mensmann, 2017). In line with the second level of evaluation in Kirkpatrick's (1975) model, training improves the skills and knowledge of participants and it can be examined by the extent to which the learning objectives are met. In this regard, it is useful to test for the trained material before and after the intervention. For his purpose, behavioral and multiple-choice tests are advocated (Praslova, 2010). Based on this argumentation, it is posited that the training of IEO will result in an increased understating of the concepts of proactiveness, innovation, and risk-taking in the student participants. They will be able to recognize what constitutes proactive behaviors, innovation, and risk-taking in theoretical terms. This guides the following hypothesis;

H₁₇: IEO training leads to IEO learning for business students (would-be entrepreneurs)

Third, the training impacts the desired behavior of trainees and they start displaying the changing attitude to bring about improved performance. This component of Kirkpatrick evaluation is linked more to "transfer of training", as it displays the extent to which learned

content is depicted through the desired actions (Beech & Leather, 2006; Kirkpatrick, 1975; Praslova, 2010). This is a more demanding and important component of training evaluation and it is measured in actual settings when the participants start to demonstrate the learned knowledge to have improved performance (Bates, 2004). Similar training programs based on the psychological content have been found to change the behavioral patterns of the trainees (Frese et al., 2016; Glaub, 2009; Glaub et al., 2014; Mensmann, 2017). Based on the above arguments the following hypothesis is proposed;

H18: IEO training leads to the development of IEO behavior in business students (would-be entrepreneurs) in the training group.

The last level of training evaluation is results that are the most advanced level dealing with the impact training has on a larger level of outcome or profits (Bates, 2004). In this stage, the evaluation is done in terms of the training influence on the business performance or any other intended outcome (Praslova, 2010). For the student sample, the results were deemed to be the entrepreneurial intention of the trained students. In general, the term ‘intention’ refers to a mental state that directs the attention and action of a person toward a certain decision. More specifically, the entrepreneurial intention is defined as a mental state that directs the attention and action of a person toward being self-employed as opposed to opting for a job in an organization (Kolvereid, 1996, 2016). Research has shown that entrepreneurial training of students enhances their chance of adopting self-employment as a career choice (Souitaris, Zerbinati, & Al-Laham, 2007).

Turner and Gianiodis (2018) found that coupling entrepreneurship curriculum with the technical degree involving business incubation, business plan competitions, and entrepreneurial activities increase the entrepreneurial intention among students. Bell (2015) elaborated that the use of experiential learning and action approach is found useful for the students’ entrepreneurial trait development. Although the focus on entrepreneurial training programs for business students remained on teaching them business skills and entrepreneurial know-how (Gielnik et al., 2015), yet it was indicated more than a decade ago by Gürol and Atsan (2006) to focus on the innovation and risk-taking attitudes of students and include these factors in designing education and training programs for the promotion of entrepreneurship. Rodrigues, Dinis, do Paço, Ferreira, and Raposo (2012) added to the “born or made” debate in the entrepreneurship literature. They stated that education and training about entrepreneurship

play a vital role in enhancing entrepreneurial capacities and they are linked to improved outcomes i.e. entrepreneurial intention and start-up rates. It was indicated that apart from the formal entrepreneurial education, it is important to train the students about skills like creativity and innovation. It builds the entrepreneurial ability, self-efficacy, and creates an entrepreneurial vision in the students at an early stage. It was indicated by Souitaris et al. (2007) that students taking entrepreneurial programs are more likely to develop entrepreneurial intention and their rate of becoming nascent entrepreneurs and engaging in a business start-up are higher. Based on this argument, it is posited that after undertaking the IEO program, the students will learn and display the behaviors of innovativeness, risk-taking, proactiveness that will enhance the likelihood of business start-up. Thus, it is postulated;

H₁₉: IEO training leads to the development of entrepreneurial intention in business students (would-be entrepreneurs) in the training group.

3.3.4.2 Mediating Role of Undergraduate Business Students' IEO Behavior in Linking Students' IEO and Entrepreneurial Intention

As conceived by Glaub et al (2009), the training and results have a full or partially mediated relationship based on the depiction of desired behaviors. The training program does not directly result in any larger level tangible outcome unless the participant displays the change in his attitude based on the learned material. Thus, it was found that psychological training interventions for improvement of entrepreneurial outcomes work through the development of change in the trained psychological behavior (Frese et al., 2016; Glaub, 2009; Glaub et al., 2014; Mensmann, 2017). In this regard, it is put forth that IEO training in the student sample will cause them to be more proactive and self-starting, show more creativity and innovation, and take a higher level of risk based on the calculated evaluation.

The broader literature on IEO for the student sample has depicted its impact on entrepreneurial intention (Bolton & Lane, 2012). The proactive students show behavior that is self-starting and linked to a higher level of entrepreneurial desirability (Zampetakis, 2008). Proactiveness is “a dispositional construct that identifies differences among people in the extent to which they take action to influence their environment” (Bateman & Crant, 1993, p. 103). This kind of people rather being influenced by the environment, make active attempts to change

it and it imparts the needed “propensity to act” that is central to the formation of entrepreneurial intent. The students that behave proactively take action to seize the opportunities available in the market ahead of others. The high level of intrinsic motivation and self-determination to improve one’s life outcomes explain the variation in the entrepreneurial intention of students that have proactive behavior (Bolton & Lane, 2012; Zampetakis, 2008). This kind of student tends to opt for self-employment as a career option as compared to working for others despite their families do not own business (Mustafa et al., 2016).

Secondly, being innovative is also deemed to be a predictor of entrepreneurial intention in students (Bolton & Lane, 2012; Zampetakis, 2008). The perceived creative capacity and the ability to generate new ideas are linked to the entrepreneurial intention in students (Zampetakis, 2008) and it is a strong predictor of self-employment motivation (Bolton & Lane, 2012). Innovation is further use of creative thinking in conceiving and implementing new ideas. The students having a higher inclination towards innovation can conceive new ideas and plan to carry out their execution (Carter, Gartner, Shaver, & Gatewood, 2002). Lagua, Moriano, and Gorgievski (2019) found that university students that perceive themselves to be highly creative showed the greater motivation of choosing entrepreneurship as a profession. It has been signified by Bolton and Lane (2012) that students’ tendency towards innovation can be gauged and linked to their prospective career decision.

Risk-taking attitudes are also proven to be measured in student pollution and predict their capacity to pursue the choices that contain high risk and show more tendency of venturing into the unknown (Bolton & Lane, 2012; Rauch et al., 2009). Luthje and Franke (2003) found the propensity to take risks as a prime influence in the process of “making an entrepreneur” and stated that risk-taking is proven to be linked to self-employment aspirations of university students. The risk-taking orientation of students was indicated as an important factor in deciding their career choice as an entrepreneur (Zhang, Wang & Owen, 2014). Risk-taking orientation shows the inclination of students to commit resources into ventures that involve considerable risks and have more likelihood of starting their own business in the future (Marques, Santos, Galvao, Mascarenhas, & Justino, 2018).

The above-mentioned literature offers a connection in the creation of IEO in students as a result of training and its link to the subsequent intention of business start-up. This affirms the conceptualization of Zhang et al. (2014), that students that are exposed to entrepreneurial

programs depict higher entrepreneurial attitudes than those who do not take part in these programs. Moreover, it is also in line with the general assertion of Glaub (2009) who posits that psychological action-based entrepreneurial interventions impact outcomes via the formation of the desired psychological mindset in the participants. Thereby, it is posited that;

H₂₀: IEO behavior of trained business students (would-be entrepreneurs) acts as a mediator between IEO training and entrepreneurial intention

3.3.4.3 The Difference in Training Outcomes for Pre-Test and Post-Test Evaluation and the Training Group and Control Group

It has been indicated that entrepreneurial education and training programs increase the chances of more know-how about the trained construct, change in behavior (Bell, 2015; Gurol & Atsan, 2006; Glaub, 2009) and development of higher chances that trainees will adopt self-employment as a career choice (Souitaris et al., 2007). Thereby in this study, it is put forth that IEO training of business students (would-be entrepreneurs) will improve the learning of IEO, their IEO behavior post-training, and their choice of becoming an entrepreneur. Hence it is hypothesized that;

H₂₁: The post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved as compared to pre-test IEO learning, IEO behavior, and entrepreneurial intention in the business students (would-be entrepreneurs) in the training group.

Based on the pre-test/post-test evaluation of control group participants, the outcomes usually sustain over time, specifically if evaluated after relatively short intervals i.e., less than a year (De Luca, 2008; Murphy, 2013). As the post-test IEO training outcomes in this study are examined after a quarter, therefore it is posited that if no active attempt is made to change the IEO learning, behavior, and entrepreneurial intention it will remain stable in the control group. So, the following hypothesis is put forth,

H₂₂: The post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will remain the same in the business students (would-be entrepreneurs) in the control group.

Beyond the pre-test and post-test evaluation of training, it is advisable to compare the training group outcomes with that of a non-treated control group (Bezrukova et al., 2016). Choen (2005) elaborated that the training participants will have a higher knowledge of the trained content, improved behavior related to it, and the consequential larger-scale outcomes. It has been found that the students who have taken entrepreneurial education and training display a more entrepreneurial mindset and have a higher propensity to adopt entrepreneurship as a profession as compared to those who have not participated in any such activity (Rodrigues et al., 2012). Hence it is argued that business students (would-be entrepreneurs) in the training group will have a high level of post-test IEO learning, behavior, and entrepreneurial intention in comparison to those business students that are not trained. For that reason, it is postulated;

H₂₃: The post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved in the business students' training group as compared to the control group.

Wales (2016) called for the in-depth insights into EO construct as per the specific contextual settings to know the individualized ways in which the EO dimensions are practiced in specific population groups. Therefore, it is argued that the way IEO is practiced by the potential entrepreneurs is different from the way it is exhibited by the operational business owners (Bolton & Lane, 2012). It is important not only to know the impact of IEO on several outcomes in the pre-start-up phase, but it is equally useful to understand how IEO behavior is practiced in actual settings (Miller, 2011; Wiklund & Shepherd, 2011). Neergaard and Ulhoi (2007) advocated that the psychological entrepreneurial perspective renders a qualitative substantiation useful for the exploration of the lived experiences of entrepreneurs. It is suitable to understand the business students' behaviors in the Pakistani context beyond an empirical cause and effect association. It will enhance the understating of training outcomes and their consequences. Thereby, to supplement the above-mentioned hypotheses, the following proposition is asserted,

P2: The qualitative insights will substantiate quantitative findings and explain any of the unexpected outcomes for undergraduate business students in the training group and control group.

The conceptual framework of study 4 is shown in Figure 3.8.

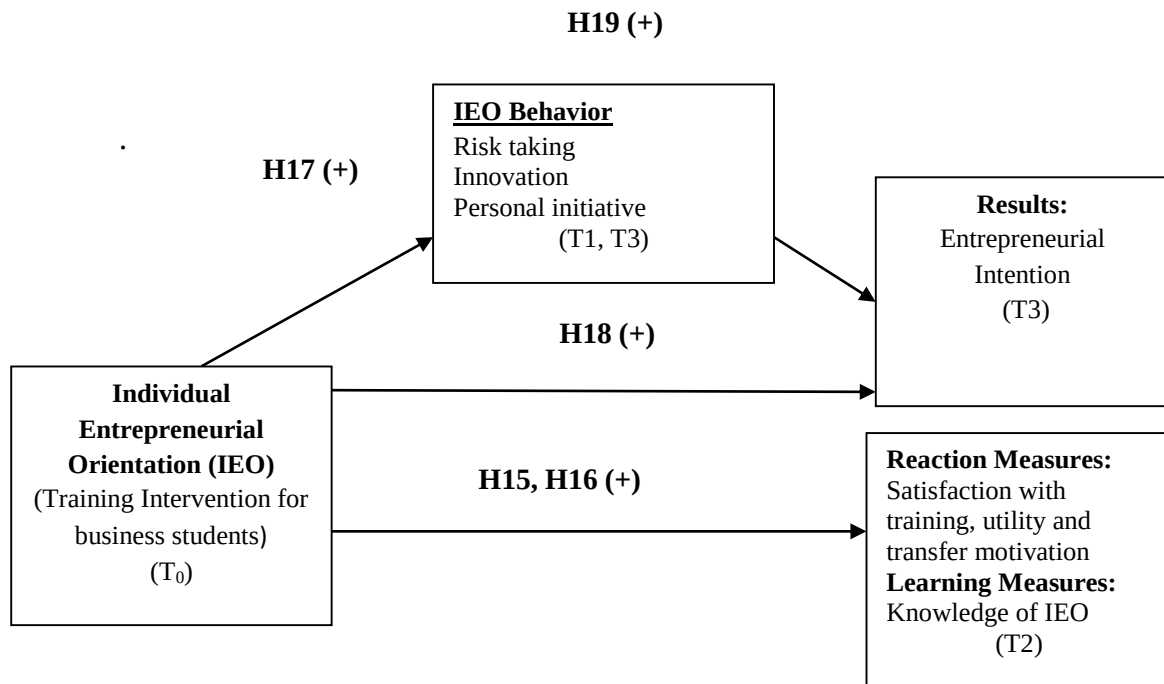


Figure 3.8: Theoretical Framework of Study 4

3.4 Chapter Summary

The snapshot of Chapter 3 is depicted in Figure 3.9.

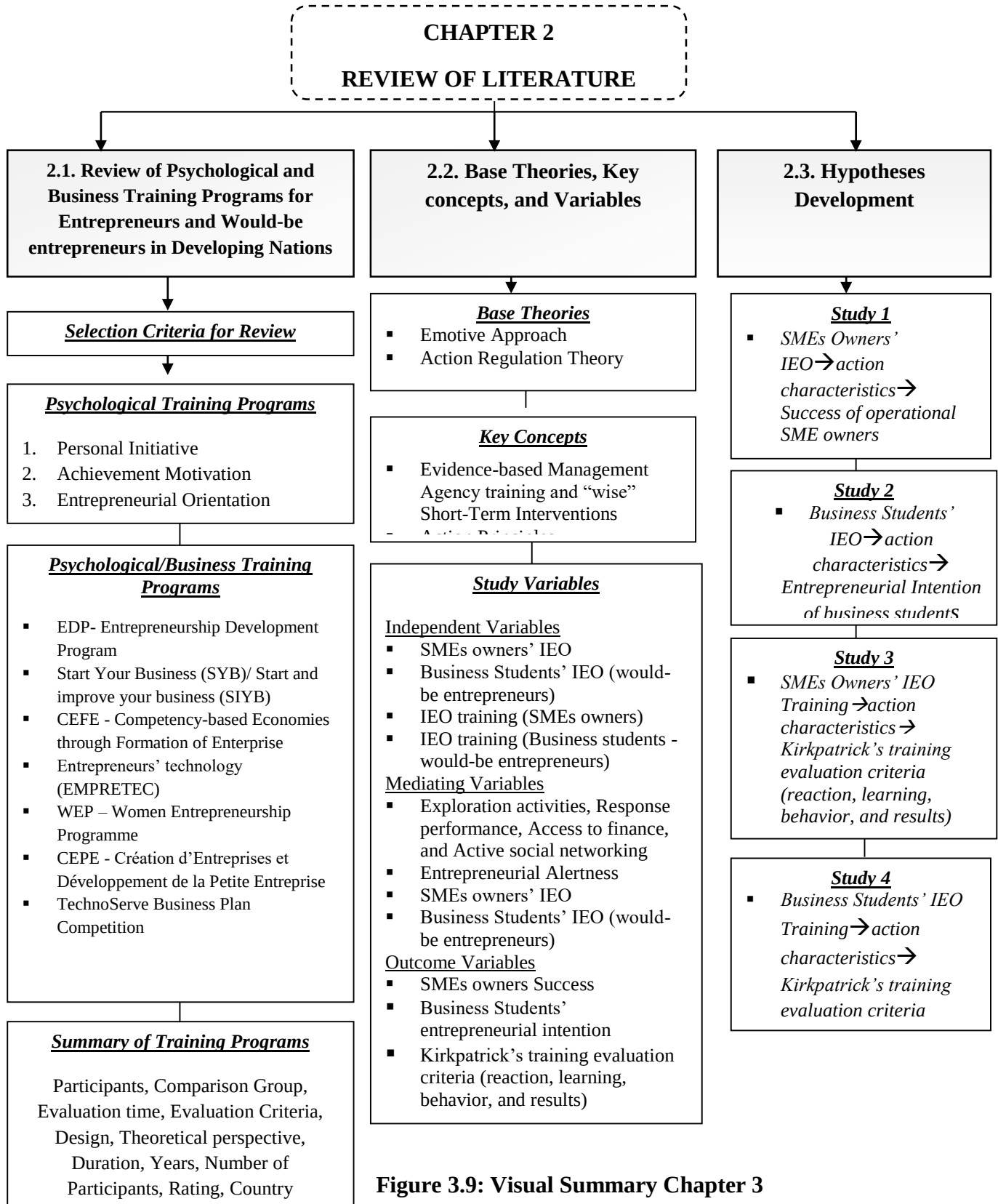


Figure 3.9: Visual Summary Chapter 3

CHAPTER FOUR: RESEARCH METHODOLOGY

This dissertation comprises of 4 studies, two of which are the time-lagged surveys and the other two are embedded mixed-method experiments. This chapter outlines the research methodology in terms of research paradigm, research approach, and research method in general, as well as, specifically with their justification in the context of each study in this dissertation. It further explains the data collection methods as per each of the research paradigm, approaches, and methods and provides the justified basis for the selection of data collection methods suitable for the present research. After that the sampling techniques are discussed (i.e. probability and non-probability) and the method of sample selection for current investigation is outlined. The details of research instruments are offered and justified for the present study. The data collection procedure for all studies as well as the suitable data analysis methods are mentioned. The chapter ends with the summarized visual display of research methods used in this dissertation.

4.1 Research Paradigm

A research paradigm is a world view that explains the structure of values, methods, and beliefs in which the research is done. These are the assumptions that explain what will be investigated and how to investigate the inquiry of research. The three main research worldviews or paradigms identified by Creswell, Clark, Gutmann, and Hanson (2003) are interpretivism, positivism, pragmatism. The paradigm explains which theory will be adopted, that theory will clarify the methodological stance that will guide the data collection analysis and interpretation (Creswell, Klassen, Clark, & Smith, 2011). The research paradigms are characterized by five elements (Guba, 1990):

- Ontology – That entails about the reality of a phenomenon
- Epistemology – The source of knowledge about reality
- Theoretical perspective-Approach to gather knowledge
- Methodology – How will the reality be figured out?

The main characters of the three world views in terms of ontology, epistemology, theoretical approach, and methodology are shown in Table 4.1 below:

Table 4.1: Alternative Research Paradigms

Positivism	Interpretivism	Pragmatism
Main idea: Testing of theory	Main idea: a contextual understanding of phenomena	Main idea: Issue-based (Testing of theory/ contextual understanding of phenomena)
Ontology: Reality is objective that can be comprehended by laws	Ontology: Reality is subjective that can be comprehended by perceptions	Ontology: Reality is both objective/subjective
Epistemology: Knowledge is objective	Epistemology: Knowledge is subjective	Epistemology: Knowledge is subjective/objective
The knowledge will be gained by senses	The knowledge will be gained by the perception of people	The knowledge will be gained by what is adequate to answer the research question (senses/perceptions)
Approach: Deductive	Approach: Inductive	Approach: Inductive/deductive
Methods: Surveys, Experiment, action research, Meta-Analysis	Methods: Phenomenology, Anthropology, case study, narratives, observations.	Methods: Mixed method research

Source: Adapted from Creswell et al. (2003)

4.1.1 Positivism

The proponents of positivism have a belief that the reality is singular, this reality can be known and measured, and they adopt a deductive approach and use quantitative methods for measurement of reality. It is based on deterministic assumptions that imply cause plays a role in determining specific outcomes. The research problems that are examined in positivism are intended to identify and examine the factors that cause a certain effect. This worldview also holds a reductionist nature, as the intent is to condense the ideas at a smaller level that is suitable for discrete testing, by developing the research questions and hypothesis based on the study variables (Bryman & Bell, 2015). The knowledge that is created through the positivist world view is based on vigilant observations and subsequently measuring the extant objective reality. The observations are converted into numeric measures for examining the behavior of individuals. This paradigm is also used to test, refine, and verify the theories and laws that govern the world and leads toward a better understanding. Finally, some laws or theories govern the world, and these need to be tested or verified and refined so that we can understand

the world. Hence, the start is made with a theory and hypothesis development, followed by data collection that ultimately offers the support for theory or rejects it through statistical testing (Creswell et al., 2003).

4.1.2 Constructionism

Constructivists have a viewpoint that the reality or truth is not singular, and the interpretation of reality should be done subjectively through qualitative methods using the inductive approach to gain insight into multiple realities. This paradigm is based on the conception that people want to make sense and understanding the world. This understanding is guided by the subjective meanings of their experiences that shape their perception of certain things and objects. This kind of approach calls for the complex views instead of narrowing down ideas into some categories.

The research should be based on the views of participants according to the situations that are being examined. The research questions are broader and general, which sufficiently allows the participants to express their views and develop the meaning of situations that are forged in interactions and discussions with others. The open-ended questions used in this kind of approach makes the researcher in a better situation to understand and listen to the views and actions of people (Creswell et al., 2003). The views of individuals are based on the interactions in society and the cultural values of their settings. The aim is to examine the interactions among people and within the society and investigate the phenomenon in the specific context where it takes place. The researcher interprets the observation and develops the pattern or theory as guided by the aim of their study. The researchers are directly involved in the collection of data to gain the situational insights and the interpretations of data are shaped by the own experiences and understandings of the researcher as the meanings are generated from the data (Bryman & Bell, 2015).

4.1.3 Pragmatism

The pragmatic worldview suggests that the nature of reality is debated, renegotiated, interpreted constantly and a combined worldview is the best way to resolve the issue using the inductive and deductive method (Cherryholmes, 1992). The major focus of this worldview is

on actions, situations, and outcomes rather than predictive situations. This is a problem-oriented approach that focuses on the application and finding solutions for problems (Patton, 1990). The major point of attention is the problem in research rather than focusing on the method, the aim is to have a better understanding of the problem and finding of a feasible solution using all the needed methods. This builds the philosophical foundation of mixed-method investigations (Morgan, 2014). The core idea is the focus on the problem to be investigated rather than the approaches that derive knowledge about that problem (Tashakkori & Teddlie, 2010). There is no single system and reality rather both qualitative and quantitative approaches can be used as needed and the researcher has freedom of choice in this regard for adopting the method that best matches the requirements of research. The world is not an absolute unity rather multiple approaches can be adopted for collection and analysis of data (e.g., quantitative or qualitative) for the best understanding of research problem when justified (Creswell et al., 2003).

4.1.4 Application for the Present Research

For the two survey-based studies, the positivist paradigm was adopted, because the purpose of Study 1 is to examine the impact of IEO on SMEs' success in operational entrepreneurs through the mediating role of action characteristics (i.e. exploration orientation, response performance, access to finance and social networking). The hypotheses are developed based on the theory of action regulation and the data are collected from the SME owners to test either the hypotheses are supported or not. Moreover, in Study 2 the impact of IEO was examined on the entrepreneurial orientation of undergraduate business students based on the mediating role of entrepreneurial alertness. In the same direction, the hypotheses followed the theoretical conception of the theory of action regulation.

The data collected from both population groups were subsequently tested by the statistical tests to offer the affirmation or rejection of the hypotheses. Hence, both of these studies followed the assumptions of positivism to determine the cause and effect relationship based on the extant theory, and use of quantitative data to test the hypothesis. Their Epistemological Stance indicated that knowledge is objective that can be obtained from five senses, facts, and figures. Moreover, the Ontological Stance of the studies indicates that reality is objective as suggested by (Creswell et al., 2003).

For studies 3 and 4, given their mixed-method nature, pragmatism is adopted as a suitable philosophical worldview. This kind of investigation is based on the worldview of pragmatism. It postulates that there is no single method to investigate the research problem and multiple methods are better at capturing the bigger picture of research (Bryman & Bell, 2015). The present research employed multiple methods (i.e. field experiments, questionnaires, and semi-structured interviews) for testing the methodologically sound training intervention to develop entrepreneurial orientation in existing and to-be entrepreneurs. The Epistemological Stance indicates that the knowledge can be subjective as well as objective that can be obtained from the perceptions of people as well as facts and figures. The Ontological Stance of the study indicates that reality can be subjective and objective (Creswell et al., 2003).

In study 3, the impact of IEO training is first evaluated on the reaction (IEO training satisfaction, utility, transfer motivation), IEO learning, IEO behavior, and results (SMEs' success). Then, the impact of this training is gauged on SMEs' success through the development of IEO behavior based on the theory of action regulation. In the quantitative part of the experimental study, first of all, for determining pre-test/post-test data structured questionnaires were used. Moreover, for the qualitative portion, the semi-structured interviews were used post-intervention to probe in-depth insights into the training outcomes and to find out the validation of quantitative data or explanation of the unexpected outcomes in the quantitative section of the experiment.

A similar stance is used in study 4 for the population of undergraduate business students where it is first evaluated in terms of the reaction measures (IEO training satisfaction, utility, transfer motivation), IEO learning, IEO behavior, and results (entrepreneurial intention). Afterward, the impact of IEO training was examined on the development of IEO behavior and subsequent development of entrepreneurial intention. For the pre-test data, a quantitative method was used and data were obtained via questionnaires. The post-test data were obtained via mixed-method i.e., questionnaires followed by the qualitative interviewing.

4.2 Research Approach

Two approaches govern management research. These are two “broad methods of reasoning” known as the inductive and deductive approaches (Trochim & Donnelly, 2006, p.1).

Though there are two major research approaches the emergence and widespread use of mixed method research studies have given rise to a third approach that is known as abductive reasoning (Wheeldon, 2010).

4.2.1 Deductive Approach

The first approach is deductive, which deals with the testing of theory (Creswell et al., 2003). The deductive approach starts with a specific stance and ends in the generalization of findings. The basis of deductive inquiry is the well-established principles, laws, rules that form the basis of arguments. The researchers using the deductive method “works from the ‘top-down’, from theory to hypotheses to data to add to or contradict the theory” (Creswell & Plano Clark, 2017, p.23). The prime purpose of the deductive method is to test the cause and effect relationship. The foundation of quantitative investigations is built on the deductive method. The development of hypotheses based on theory, the hypotheses are tested based on the statistical tests and it results in the acceptance or rejection of the hypothesis.

4.2.2 Inductive Approach

The process of induction leads from specific to general, and the basis of arguments lies in the observation and subjective experience. The researchers that use the inductive approach work “bottom-up, using the participants’ views to build broader themes and generate a theory interconnecting the themes” (Trochim & Donnely, 2006, p. 23). The inductive inquiries are centered on the idea of generating new theory, viewing any existing issue with a new perspective, or exploring any phenomenon in depth. This kind of approach is linked to qualitative inquiries. The observations result in the development patterns and the formation of tentative propositions that build the foundation for new theoretical conceptions. Nonetheless, some qualitative investigations can have a deductive orientation, based on the nature of their research purpose. Figure 4.1 indicates the steps of induction and deduction.

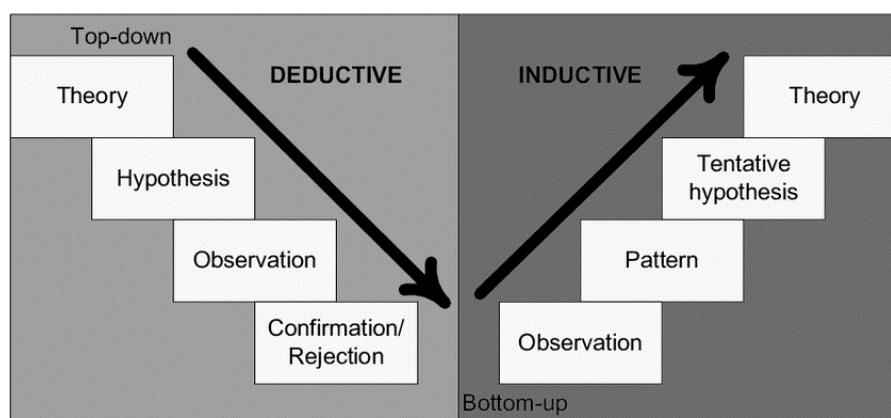


Figure 4.1: Steps in Inductive and Deductive Approach

Source: Adapted from Burney (2008)

4.2.3 Abductive Approach

The abductive approach claims that the understanding of reality and development of knowledge is more important than basing the arguments on the nature and type of knowledge. This approach calls for using a combination of methods that are based on the quantitative reliability and qualitative lived experiences. An abductive approach places value on the experience, intuition, and expertise of the researcher. The abductive reasoning uses the concepts in both the inductive and deductive approaches; the deductive approach uses the quantitative methods of research and employs a top-down method based on a series of well-developed steps. The researchers take an objective stance and try to obtain the findings that are generalizable through the test of hypotheses. On the other hand, the inductive approach adopts qualitative methods for exploring the specific experiences of individuals and their perception of the world and gives general insights about the idea (Wheeldon & Ahlberg, 2011).

Moving beyond these two strict approaches of either being inductive or deductive, mixed-method study departs from this conception and states that based on the objective of investigation both methods can be used. This concept states that numerous social issues that can be well studied by a combination of techniques and methods. A central assumption in mixed-methods research is that many social science issues can be better explored through the combination of different methods and techniques. The Abductive approach uses the combination of inductive as well as deductive reasoning and it is associated with the mixed-method studies. It states that apart from debating about the objectivity or subjectivity of knowledge, the concept of inter-subjectivity should be focused. The researchers should

construct a shared understanding and test their intuitions both theoretically and empirically. The researchers should use the best available information from objective facts and figures and subjective perceptions and experiences. Both hypothesis and tentative propositions can emerge through the data in this process and their subsequent testing should be based on the mix of qualitative and quantitative methods. This allows new ways of investigating important issues in social sciences through robust methods and allowing for multiple realities. This avoids the researchers from using only one approach and offers a better practical method (Wheeldon, 2010). Figure 4.2 explains the three approaches in the summarized form.

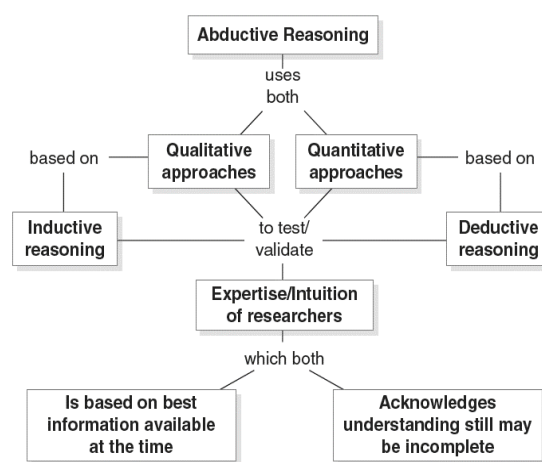


Figure 4.2: The Summary and Interrelationship of three Research Approaches

Source: Wheeldon and Ahlberg (2011)

4.2.4 Application for the Present Research

The choice of research approach depends on the purpose of the study and the questions that researchers aim to answer i.e., testing hypothesis, the establishment of cause and effect, development of theory, or exploration of an idea. For study 1 and study 2 that follow the worldview of positivism, a deductive approach is employed. The reason behind this selection is that the purpose of these investigations is to find the relationship of IEO with the SMEs' success as well as the undergraduate business students' entrepreneurial intention. The development of the hypotheses is based on the theory of action regulation that states that the psychological dispositions of existing and aspiring entrepreneurs are of no use until they translate them into action characteristics (Frese, 2009). The basic element in the deductive approach is the development of hypotheses based on the extant theoretical foundations, and

then deciding on a research strategy to test the developed hypotheses (Creswell, 2003). In this approach, there is an expected pattern for the proposed relationship and the aim is to use the observations for the test of these patterns. For this reason, it is deemed suitable to follow the approach of deduction. Generally, studies using a deductive approach follow the following stages as depicted in Table 4.2:

Table 4.2: The Application of the Deductive Approach in Study 1 and Study 2

Steps in Deduction	Application for Study 1 and 2
Deduction of hypotheses form the extant theory	Theory of Action Regulation
Formulation of hypotheses	The impact of IEO on SMEs' success and undergraduate business students' entrepreneurial intention through the mediating role of action characteristics.
Test of hypotheses through statistical methods	Multiple mediation analysis using PROCESS Model 4
Examination of outcome	Acceptance/Rejection based on results

Study 3 and study 4 are based on pragmatism so the abductive approach is most suitable. It deploys both inductive reasoning and deductive reasoning are used at various levels of the research process. The quantitative part of the studies 3 and 4 is based on an experimental intervention to develop IEO in the operational and potential entrepreneurs. The data were collected before and after the intervention quantitatively through the use of the questionnaire. Moreover, using the qualitative approach it was supplemented with the qualitative semi-structured interviews post-intervention to gain deeper insight into the training outcomes. The proposed hypotheses were tested following the deductive approach about the creation of individual entrepreneurial orientation by training intervention in existing and to-be entrepreneurs and its subsequent impact on training effectiveness and mediating role of IEO behavior. The inductive approach was applied as a supplement to better understand the formulation and outcomes of the training program based on the in-depth interviews through the selected participants. The application of the abductive approach in study 3 and 4 are shown in the following Table 4.3.

Table 4.3: The Application of the Deductive Approach in Study 3 and Study 4

Steps in Abductive approach	Application for Study 3 and 4
Deduction of hypothesis form the extant theory	Theory of action regulation
Formulation of hypotheses	The impact of IEO on SMEs' success and entrepreneurial intention through the mediating role of action characteristics.
Test of hypothesis through statistical methods and subsequent validation through qualitative insights	Multiple mediation analysis using PROCESS Model 4/independent sample t-test and one-way ANCOVA for experimental studies
Examination of outcome	Acceptance/Rejection based on the results of the experiment, the explanation of the results in light of qualitative insights
Use of inductive approach to further explore the quantitative findings	The semi-structured interviews are conducted post-intervention for gaining the full view of impacts of training on the success of SMEs in existing entrepreneurs and the development of entrepreneurial intention among the undergraduate business students Deductive thematic analysis for the analysis of interview findings

4.3 Research Method

There are three main ways of investigating any research issue that are quantitative, qualitative, and mixed-method approaches (Creswell, 2012). The basic characteristic of a quantitative method includes objectivity, use of numbers and figures, and statistical methods. It is divided into the use of experimental methods and the use of non-experimental methods. The experimental methods are the gold standard to find out the cause and effect relationship in a controlled environment. The non-experimental studies are based on surveys in which the opinion of various groups is sought toward specific research question. Survey research is used to quantify the qualities of various groups, or their disposition towards, or view of a specific item. The causes, outcomes, or comparisons among different variables can be examined. Qualitative studies deal with the exploration of a certain social phenomenon. The data is gathered through interviews and focus groups and analyzed descriptively in the form of words and images. Lately, another contemporary type of research method has emerged known as mixed-methods that is a blend of qualitative and quantitative methods as needed by the

objectives of the study (Ary, Jacobs, Sorensen, & Walker, 2013). The main characteristics of research methods are summarized in Figure 4.3.

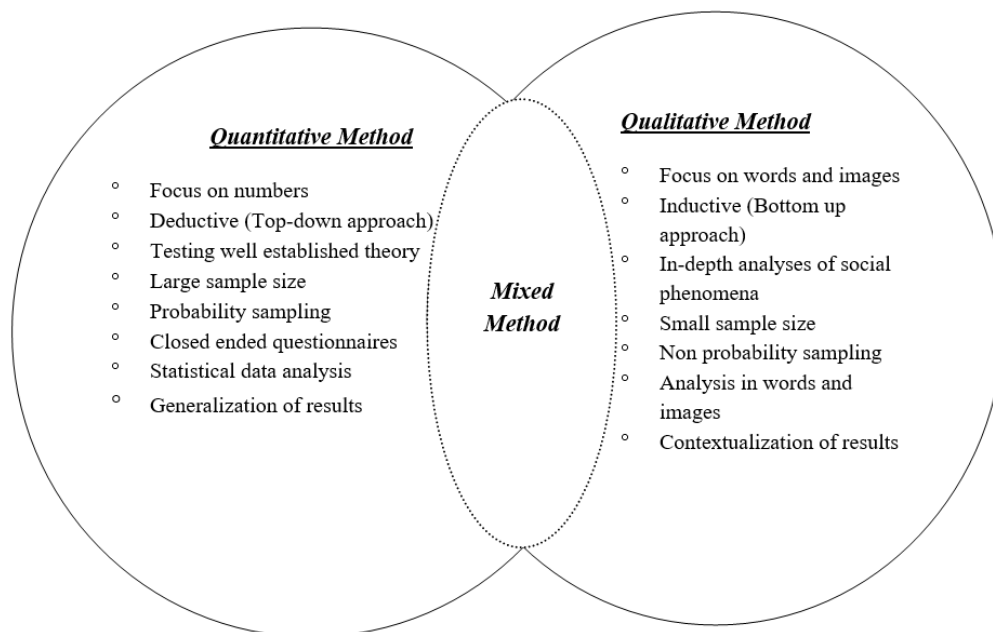


Figure 4.3: Features of Research Methods

Source: Adapted from Creswell (2003)

4.3.1 Quantitative Method

The quantitative method of research has its core roots in the world view of positivism for the development of knowledge. The major thinking underlying this method is to determine the causes of certain factors through the development of a hypothesis based on variables. The observations collected from the predetermined instruments measured through coding that are subsequently tested by statistical techniques (Ary et al., 2013). The quantitative approach is utilized for the testing of objective theories by examination of the relationship among variables. These study variables are capable of being measured through the instruments and they are codified in numerical terms for the analysis of data through the quantitative method based on statistical techniques. In this type of method, the attempt is made to minimize the bias and the personal intervention of the researcher. The results generated through this method are generalizable and they can be replicated in other settings. The aim is to determine the relationship between independent and dependent variables within a specified population. This kind of inquiries is either descriptive or experimental. In the descriptive method the subjects

are examined by surveys at one or more points of time while in the experimental inquiries the subjects are measured before and after the treatment or they are compared to a control group that is given no treatment (Creswell, 2003). The outcome of a descriptive study is the relationship among variables and the experimental studies are used to establish cause and effect. The basic aim is the use of logic, numbers, and objective perspective to the reality that is based on convergent reasoning. The overarching objective of this method is the classification of features, determining their count, constructing statistical models, and explaining the observation in its premise. The main features of the quantitative method are:

- The data collection instruments are structured
- The samples are representative of populations
- The study can be replicated with reliability
- Established objectives and questions
- The steps are designed in a careful manner
- The data are in a numerical and statistical format that is presented in tables and graphs.
- Cause and effect relationships can be established
- Questionnaires are used for data collection (Bell, Bryman, & Harley, 2018).

4.3.2 Qualitative Methods

A qualitative method is an approach for the exploration and understanding of individual and group dynamics through the meanings attributed to the human and social issues. The major emphasis of qualitative methods is answering the “why” questions rather than the “what” questions in the quantitative research. The foundation of analysis is the direct experiences of the people who had faced the issue of interest with the focus on making meaning out of everyday activities. The focus of the qualitative method is on non-statistical methods such as case studies, histories, biographies, discourse analysis, grounded theory, ethnography, and phenomenology (Bell et al., 2018). The areas of individuals, language, communication, societies, and cultures are the main concern in this approach. The researchers are actively involved in the process and gain direct insights from the participants regarding their experiences and use their insights to make the meaning of the phenomenon under study. To make sure that the process of research is credible the researchers make efforts to remain impartial in the process of collecting and interpreting data. The transcribed data are then

validated by the participants to ensure that it does not contain any statement that they did not say or have different meanings from their views (Creswell, 2003).

The research questions and procedures are emergent, the entire research plan cannot be strictly devised at the start. The data are collected from the participants in their unique settings. The analysis is done inductively moving from specific to general themes and the researcher plays an active role in inferring the meanings from the findings. The final output of a qualitative inquiry does not follow the right format. The importance is placed on the development of individual meaning and attention is paid towards understanding the dynamics of complexity that are inherent in the research situations. The studies using qualitative methods focus on an in-depth investigation of social happenings such as work environments and cultures (Bryman & Bell, 2015). The qualitative studies are usually descriptive and are centered on the observation and portrayal of events by capturing the perceptions and experiences of individuals. The data of qualitative investigation is usually in the forms of words and text that are mainly the field notes, audio, and visual recordings, etc. and the data are presented in a narrative format to capture the realities in the natural settings in a comprehensive manner. The data are gathered from in-depth interviews, observations, focus groups, and ethnography. The stance of qualitative investigation is that social interactions are the foundation of social life and a better understanding of social phenomena can be done through the observation and views of the people who are a part of those situations (Ary et al., 2013).

The cardinal motive of the qualitative method is keeping in view the context as the results are dependent on the nature of the context. The results are carefully reported in the premise of the situation, time, and people that were pertinent to the study. It is important to provide information about the researcher and the possible manner in which it could have an impact on the collection, analysis, and interpretation of data. It includes the personal connection with respondents, context, and situation of the study (McBurney & White, 2009). It is the duty of the researcher to intact the level of intellectual rigor in the process of data collection, analysis, and interpretation. To ensure that the research is credible, the researcher must spend adequate time in the study context so that he/she can gain an adequate understanding of the factors that impact the study phenomenon, and have rapport and trust with the participants. The identification and analysis of the most relevant factors should be done. The researchers are advised to use data from multiple sources so that the inherent bias in the study could be minimized. The qualitative investigations are done in situations where the phenomenon of

study takes place rather than the lab or contrived settings. In contrast to the quantitative inquiries, the researchers are actively involved in the process of data collection by observation or interview of the participants, or they directly examine the relevant documents (Creswell, 2003).

After the collection of data, qualitative researchers develop patterns, categories, and themes using the “bottom-up” strategy through the process of inductive reasoning. The researchers have to constantly work with the themes until the discrepancies in the themes are addressed and all the emergent views are incorporated. For this process sometimes the participants or the field experts are also included in the process of conducting research (Bernard & Bernard, 2012). Sometimes, the qualitative studies use somewhat deductive approach, by developing the themes based on the existing data and checking the collected data against them. The inductive-deductive process allows for complex reasoning in the process of investigation. The major focus is the meaning of problem in the views of the participants that suggests the numerous perspectives and the themes are a reflection of multiple perspectives that participants have expressed about that particular category. All these elements allow qualitative research to develop a broader picture of the phenomenon under study with the inclusion of a diverse viewpoint and multiple factors that are unique to the studied context (Creswell, 2003).

4.3.3 Mixed Methods Approach

A mixed-method study is a relatively new research method that combines the characteristics of both qualitative and quantitative approaches, strategies, and techniques in a single investigation (Creswell, 2012). The advent in mixed-method research occurred two decades ago that was primarily suggested by (Greene, Caracelli, & Graham, 1989), then it was subjected to subsequent revision (Creswell & Plano Clark, 2007), and reorganization (Teddlie & Tashakkori, 2009). The main purpose of adopting this approach is overcoming the shortcomings of adopting either qualitative or quantitative methods and offers a more rigorous answer to the study questions. Both kinds of methods are used to answer a single set of study questions so that in-depth and comprehensive insights can be obtained. This allows the researcher to use the strategies from qualitative as well as a quantitative stream of research. The foundation of mixed-method inquiries is the pragmatic worldview that supports the use of inductive and deductive stance to address the research issue comprehensively.

The basic rationale behind the adoption of this method is that it offers a better and complete underrating of a research problem that is not possible by using the quantitative or qualitative design alone. The collection and analysis of data are guided by using both qualitative and quantitative methods and the underlying philosophies are guided by a pragmatic approach (Creswell & Plano Clark, 2007). The use of mixed-method tends to offer a unique insight to communicate the meaning and knowledge as it is the combination of reliability of quantitative methods and validity of the individual lived experiences and perceptions (Johnson & Onwuegbuzie, 2004). The use of mixed-method provides the benefits of both qualitative and quantitative methods in terms of the collection of data and understanding the meaning. There are important considerations that must be kept in mind before using a mixed-method approach i.e. mixing, weighing, and timing (Creswell & Plano Clark, 2007).

First of all the research should decide on the order or point of time of mixing these two methods. Both methods can be used at the same time or in a sequential manner. If the researchers are interested in comparing the way both methods capture the data they can adopt the simultaneous approach, as it is possible to carry out both kinds of investigations at once (Jenkins, 2001). For other researchers, the collection and analysis of data from both sources are done sequentially. The mixed-methods designs can be used in a variety of ways as deemed necessary by the demands of the question under study. It can be the development of a theory based on a qualitative method followed by the use of a quantitative method to test the theory. On the other hand, the findings of a quantitative investigation may be tested by conducting a qualitative study. However, the data may be collected at the same time and analyzed at different points of time if the data collection and analysis are not so close.

Secondly, it is important to weigh the relative importance of either the quantitative method or the qualitative method in the study. Some studies focus more on the quantitative approach (QUANT) with the supplementary role of qualitative (qual) approach; the others may be based more on the qualitative method (QUAL) and the quantitative (quant) affirmation may be a smaller part of this kind of investigation. Third, the decision is to be made regarding the mixing of data, i.e. either the data from both sources can be integrated, embedded within one another, or the data can be presented separately and then connected afterward to answer different aspects of same research questions or to address similar research questions (Wheeldon & Ahlberg, 2011).

4.3.4 Application for the Present Research

For the appropriate selection of research methods, the focus should be on the aim and objectives of the study. For Survey study 1 and study 2 that follow the worldview of positivism and deductive approach, the quantitative method is employed. These two studies aimed to find the relationship of IEO with the SMEs' success (SMEs owner sample) as well as the entrepreneurial intention (undergraduate business sample). These studies fulfill the assumptions of a quantitative method because the objectives of the study were formulated and the aim was to establish the relationship among variables that is suitable to be investigated through a quantitative method (Bryman & Bell, 2015). Multi-stage sampling is used and the data were collected through structured questionnaires that were subsequently coded and analyzed using SPSS through PROCESS model 4. The aim of study 1 was to generalize that the IEO causes the SME owners to develop the action characteristics of access to finance, social networking, exploration activities, and response performance that results in SMEs' success. While in study 2, the aim was to generalize that IEO creates the action characteristic of entrepreneurial alertness in the undergraduate business students that causes them to have more entrepreneurial intention. As the quantitative methods are suitable in case when the objective of the study is to generalize the findings to the population of interest, based on the representative sample chosen through the random sampling methods (Creswell, 2012) so the use of the quantitative method is justified in both studies.

Experimental Study 3 and study 4 are based on pragmatism and the abductive approach so the use of mixed-methods is most suitable, which deploys both qualitative and quantitative methods as suggested by Wheeldon and Ahlberg (2011).

The quantitative part of the studies 3 and 4 is based on an experimental intervention to develop IEO in the SME owners and undergraduate business students respectively. The hypotheses about the impact of IEO training on the reaction measures (IEO training satisfaction, utility, transfer motivation), IEO learning, IEO behavior, and results (SMEs success and undergraduate business students' entrepreneurial intention) were tested. Afterward, the impact of IEO training was examined on the development of IEO behavior and subsequent development of SMEs' success and undergraduate business students' entrepreneurial intention.

Moreover, in both studies, using a qualitative approach the quantitative outcomes were supplemented with the semi-structured interviews post-intervention to gain deeper insight into the training outcomes in both studies. The inductive approach was applied as a supplement to better understand the formulation and outcomes of the training program based on the in-depth interviews through the selected participants.

4.4 Research Design

Research design assures that the evidence offered by research is effective enough to solve the research issue logically and unambiguously. The type of evidence that is required to test the theory for attaining the relevant information is outlined in the research design. If proper research design is not selected it will result in subsequent improper addressing of the research problem and the conclusions will be unconvincing and weak. Research design is an overall action plan for answering the research questions. It is not sufficient for the researcher to just select the quantitative, qualitative, or mixed-method of research. The researcher must also make a selection amongst the types of studies within each method. The design explains the type of inquiry within the research methods that outline the specific procedures for conducting the study. Research design is also termed as a strategy of inquiry (Denzin & Lincoln, 2011). An overview of the available research designs is shown in Figure 4.4.

Quantitative	Qualitative	Mixed Methods
• Experimental designs • Nonexperimental designs, such as surveys	• Narrative research • Phenomenology • Grounded theory • Ethnographies • Case study	• Convergent • Explanatory sequential • Exploratory sequential • Transformative, embedded, or multiphase

Figure 4.4: Alternative Research Designs

Source: Creswell (2003)

4.4.1 Quantitative Designs

The strategies of inquiry that are supported by the positivist worldview constitute the quantitative research designs. There are broadly two forms of quantitative research designs i.e. experimental and non-experimental. The purpose of experimental research is to determine the impact of a specific treatment on outcomes. The specified treatment is given to one group and is withheld from the other group and the scores of outcomes are measured in both groups. A single group can be given treatment and the scores of outcomes can be measured before and after the treatment. The experimental designs are divided into two categories that are true experiments and quasi-experiments. In true experiments the assignment of participants to the control and treatment group is done on a random basis and in quasi-experiments, this assignment is none randomized (Cooper & Schindler, 2003).

The non-experimental design includes survey-based designs in which the numeric and quantitative description of opinions, trends, and attitudes of a population is provided. There are some more variants of quantitative designs. The descriptive design aims to depict the present status of a certain phenomenon or variable. The objects of research are examined in their existing state without influencing them. The snapshot of current feelings, behaviors, and opinions of people is examined. It usually answers the questions of “What?” (Bernard & Bernard, 2012). When the relationship is examined using a descriptive method it is termed as correlational study (Cooper & Schindler, 2003). In this kind of study, the researcher has a minimal amount of interference and the study is examined in the natural workflow (Sekaran & Bougie, 2003). The correlational design explains the degree of association in a relationship. It shows either the increase or decrease in one variable explains the increase or decrease in another variable, in such a way that either two variables are positively, negatively, or not related, but the cause and effect relationships are not established (Creswell, 2012). In explanatory research, the aim is to investigate the variables that the researcher believes are related to another variable to elucidate human behavior. Another kind of correlational study is prediction studies when the aim is to predict one behavior based on other such that one variable is known as the predictor variable and the other is known as criterion variable (Fraenkel, Wallen, & Hyun, 2011). In quantitative designs, the data may be collected at one point in time (cross-sectional) or multiple points of time (longitudinal). This kind of research design intends to produce results that can be generalized over the intended population (Creswell, 2003).

4.4.2 Qualitative Research Design

Qualitative designs are targeted to study human behavior, themes, and opinions by taking into view the subjective perspective. The qualitative designs provide an in-depth insight into a phenomenon that is not possible through other methods. The data generated from these designs are concerned with the attributes, characteristics, or features of the phenomenon that are usually interpreted using themes. The qualitative designs have usually less structure and more flexibility as compared to the quantitative designs. This kind of data is more insightful for understating the reasons and patterns underlying the phenomenon of interest. There are five types of qualitative research designs i.e. narratives, case study, phenomenology, ethnography, grounded theory. In narrative design, the phenomenon is examined based on the stories of one or more individuals. These are elaborated by the researcher in the light of participants' and researchers' views (Riessman, 2008). In the case of study design, a single in-depth analysis of a case is done to gain specific insights about the phenomenon in a particular setting. The case can be a person, an organization, an event, or a group. The cases are developed for a specific duration of time based on a specific activity (Yin, 2012). In phenomenology, the lived experiences of participants are described based on their own experiences. The cumulative description of all the participants is reported based on the common views that have experienced the phenomenon. In grounded theory, a systematic approach is adopted to develop a theory that explains a certain phenomenon. The data is gathered from 20-30 participants and their views are taken until the data reaches the point of saturation. The abstract theory about interaction, action, or process is grounded in the respondents' views. The data collection and analysis is done in multiple stages until the interrelated categories of relationship are refined (Corbin & Strauss, 1990). In ethnography, the patterns of language, actions, and behaviors are examined in the context of a specific cultural setting. This type of study spans over a long period and takes place in natural settings. Most of the data collection is based on interviews and observations (Hammersley & Atkinson, 2007).

4.4.3 Mixed-Method Designs

In mixed-method designs, the qualitative and quantitative data are integrated and mixed. Multiple forms of data are collected in a single study. Different qualitative and quantitative designs are mixed emerging into new mixed-method designs (Tashakkori & Teddlie, 2010). In convergent parallel deigns the quantitative and qualitative data are merged

and a comprehensive view of the research problem is given. Both forms of data are gathered nearly at the same time and the integration of overall results is done. Any contradictory finding is further probed in the end. In an explanatory sequential design, the quantitative study is conducted first and then the results are explained in more detail based on the qualitative data. The initial results of qualitative data are explained in light of conducting a subsequent qualitative inquiry. The exploratory sequential designs are the opposite case, first of all, a qualitative study is carried out based on the exploration of the viewpoints of participants. The information obtained from the participants in the qualitative phase sets the foundation for quantitative validation. This may also include the identification or formation of an appropriate instrument. It can also be used for the identification of variables that need to be tested in a subsequent quantitative study (Johnson & Onwuegbuzie, 2004). Transformative mixed-method research contains both qualitative and quantitative data. In an embedded mixed-method design the qualitative and quantitative data is embedded in a larger design (may be convergent or sequential). A multi-phase mixed method design is used to evaluate long term interventions and programs. The goals of the program are understood by the implementation of qualitative and quantitative designs in tandem over time (Creswell, 2012).

4.4.4 Application for the Present Research

To select the most suitable research design, the philosophy, approach, and method of research set the ground. Study 1 and Study 2 followed the worldview of positivism, deductive approach, and quantitative method. These two studies aimed to find the relationship of IEO with the SMEs' success and undergraduate business students' entrepreneurial intention through the mediating role of action characteristics. For these two studies, the non-experimental explanatory survey design was deployed in which the data were collected at three points of time to overcome the issue of common method bias. At T1 the data of IEO were taken at T2 the data of mediators were gathered and at T3 (Time lag of 1 week) the data of entrepreneurial intention/ success were taken. This was deemed to be a suitable method because the data were gathered using a closed-ended survey at more than one point of time and the aim was not to introduce manipulation and just to describe the relationships among the variables of interest. The studies based on the positivist view and deductive approach has well-developed hypotheses based on existing literature and theory. In this case, the quantitative methods were adapted to test the hypotheses and a closed-ended survey is the most appropriate choice in this

case that enabled the collection of data from the larger population in a timely and economical fashion and fulfilled the requirements of generalizability (Creswell, 2012).

Study 3 and study 4 are based on pragmatism, abductive approach, and deploy a mixed-method design (Wheeldon & Ahlberg, 2011). The quantitative part of the studies 3 and 4 is based on an experimental intervention to develop IEO in the SME owners and undergraduate business students. The quantitative findings are supplemented with the semi-structured interviews post-intervention to gain deeper insight into the training outcomes. These studies employed a transformative mixed-method design that comes under the umbrella of ‘embedded mixed-method designs’ given by Creswell (2013). This is a suitable design to understand the impact of an intervention (IEO training in the case of the present study). This allows for the collection of qualitative and quantitative data before, between, and/or after the intervention (Wheeldon & Ahlberg, 2011). It was deemed to be the most suitable mixed-method model as the research involved training intervention based on quantitative experimental design. It used qualitative semi-structured interviews at the end of the process (sequential) along with the quantitative pre-test and post-test measures. The final interpretation was dominated by quantitative results duly validated by qualitative results. In this way, the qualitative and quantitative data were embedded in a larger experimental design that fulfills the requirement of the selected model. That is elaborated in Figure 4.5

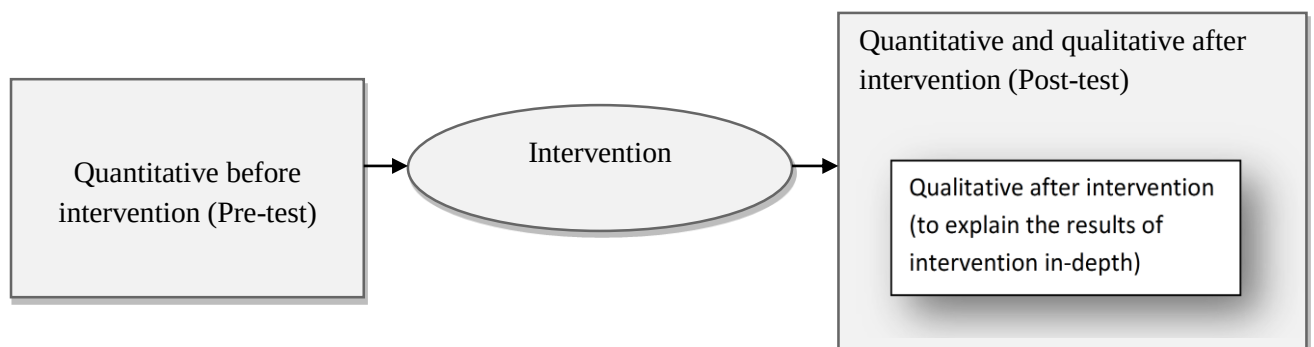


Figure 4.5: Embedded Mixed-Method Design for Study 3 and 4

Source: Adapted from Creswell (2012).

The overview of all studies along with the justification of their research design is presented in Table 4.4.

Table 4.4: Overview of Research Design Selection across Four Studies in this Dissertation

Study	Philosophy/Approach/ Method	Sample	Purpose	Chosen Research Design
1	Positivism, deductive approach and quantitative method	SME Owners	▪ To offer empirical evidence that IEO is a determinant of SMEs success through exploration activities, response performance, access to finance, and active social networking	▪ Quantitative Time-lagged survey (III-Waves/Non-experimental/explanatory)
2	Positivism, deductive approach and quantitative method	Undergraduate business students	▪ To offer empirical evidence that IEO is a determinant of business students' entrepreneurial intention through alert scanning and search, alert association and connection, alert evaluation, and judgment	▪ Quantitative Time-lagged survey (III-Waves/ Non-experimental/explanatory)
3	Pragmatism, abductive, mixed-method	SME Owners (Sub-sample study 1)	▪ SMEs' owners can be trained for developing and improving IEO ▪ Training results in IEO behavior ▪ Trained IEO behavior increases SMEs success ▪ The qualitative interviews provide validation to the quantitative findings	▪ Embedded mixed-method experiment ▪ Quantitative part: Pre-test/post-test intervention based experiment ▪ Qualitative part: post-test semi-structured interviewing
4	Pragmatism, abductive, mixed-method	Undergraduate business students (Sub-sample study 2)	▪ Business students can be trained for developing and improving IEO ▪ Training results in IEO behavior ▪ Trained IEO behavior increases business students' entrepreneurial intention ▪ The qualitative interviews provide validation to the quantitative findings	▪ Embedded mixed-method experiment ▪ Quantitative part: Pre-test/post-test intervention based experiment ▪ Qualitative part: post-test semi-structured interviewing

4.5 Data Collection Techniques

The data collection tools and techniques allow the researchers to gather the required data on the variables of interest in an established and standardized manner as needed by the objectives of the study. For the qualitative, quantitative, and mixed-method designs, certain tools are used for the collection of data. In quantitative designs usually, closed-ended questionnaires and structured interviews are used. While in qualitative methods observations, unstructured and semi-structured interviews and focus groups are suitable techniques to collect data. In mixed-method designs, the blend of qualitative and quantitative data collection tools is used as per the requirements. Three major aspects are considered in the data collection tools i.e. how much the data collection tool is pre-determined, to what extent the data collection tool is open-ended or closed-ended and the type of data in terms of being numeric or textual. The quantitative data collection methods are more pre-determined, closed-ended, and intended to collect numeric data and the opposite is the case with qualitative data collection tools (Creswell, 2012) (See Table 4.5).

Table 4.5: Data Collection Methods Under Qualitative, Quantitative And Mixed-Methods

Data Collection Method	Tools	Focus
Quantitative	Closed-ended Questionnaires	Predetermined
	Structured Interviews	Closed-ended Structured Numeric
Qualitative	Observation	Flexible
	Focus groups	Open-ended
	Semi-structured/Un-structured Interviews	Semi-structured/Un-structured Textual
Mixed	Both	Both

Source: Creswell (2012).

4.5.1 Quantitative Data Collection Tools

These tools are aimed at the collection of quantitative data that is measurable and can be expressed in the form of values and quantities. The first and most widely used quantitative data collection tool is a questionnaire survey that is based on checklists accompanied by the

rating scales. The closed-ended questionnaires are composed of short statements regarding the variables of interest and the answers are marked on predetermined categories. They are suitable to gather standardized data from a large population in a timely and economical manner. Numerical values are assigned to the established response categories that allow for the subsequent statistical data analysis. This is a suitable method for measuring the frequencies, relationships, and pre-test and post-test results about any given topic (Bryman & Bell, 2015). The questionnaires can be administered face to face, through mail or e-mail. Another method to collect quantitative data is structured interviews in which each of the participants is given with the same set of questions and for the collection of quantitative data, the responses are marked on the predetermined categories (Fowler, 2004).

4.5.2 Qualitative Data Collection Tools

An in-depth interview is one of the most widely used data collection tools in qualitative methods. It is a conversation between two people to attain a specific purpose that is gaining the perspective and knowledge of the interviewee on the topic of interest. Interviews are useful for gaining insight into the values, understanding, beliefs, feelings, experiences, and perspectives regarding an issue. They offer the possibility of gaining in-depth information about the complex issues and then contextual factors that shape the experiences of the individual. Interviews are a suitable choice in the case when detailed and comprehensive information regarding a specific issue is needed from fewer people as opposed to gaining a snapshot of information from a large number of people in the survey (Legard, Keegan, & Ward, 2003).

Another method of data collection in qualitative studies is a focus group. This is an organized session of discussion that takes place between 8 to 14 people. The people in the focus group share similar characteristics and they have a common interest. A trained facilitator guides the discussion on a predetermined topic. The views of participants are invited on a specific topic and an opportunity for agreeing or disagreeing with one another is given. People are given space to discuss the topic, and it gives insights about the groups' perception regarding a specific issue and a range of ideas and opinions are obtained (Morgan, 1997). This allows the researcher to understand the similarities and differences people in a group hold about the specific idea. The inconsistencies in the beliefs people hold about a certain issue are unveiled.

The participants in a focus group are recruited based on a specific purpose (i.e., those who know the issue of interest) (Creswell, 2003).

Observation is yet another data collection tool in qualitative research in which the data is collected by observing the phenomenon as it takes place. In this method, the researcher actively takes part in the collection of data by taking notes in the settings where the phenomenon of interest takes place. The data collection can be structured based on the pre-determined objectives and the variables about which the data is to be observed are already decided. On the other hand, observation can be unstructured and flexible which allows for free and open data collection. One way of observation is without the knowledge of participants so that they do not change their behavior due to being observed. The observation may be a participant observation in which the researcher becomes the participants of the group he intends to take data about, this is a time-consuming method that needs months or years for data collection as it requires the researcher to be the part of culture being observed so that the observations of the phenomenon in natural settings could be ensured. The qualitative information can also be obtained by reviewing the internal or external records of the organization (Patton, 1990).

4.5.3 Mixed-Method Data Collection Tools

Both qualitative and quantitative data collection methods are used as needed by the mixed-method design that is employed. The questionnaires are combined with interviews, focus groups, or observations as needed (Tashakkori & Teddlie, 2010).

4.5.4 Application for the Present Research

Study 1 and Study 2 followed the time-lagged non-experimental explanatory survey-based quantitative research design. These two studies aimed to find the relationship of IEO with the SMEs' success as well as the undergraduate business students' entrepreneurial intention. The data were gathered in three waves through structured questionnaires. Questionnaires are deemed a suitable data collection tool in this case as the data were to be gathered from a large sample and the aim was to do quantitative analysis, and getting generalized findings. In this case, the data can be gathered in an economic and timely manner

using a closed-ended questionnaire (Creswell, 2012). The questionnaire for Study 1 was developed in English and translated in Urdu as well for ease of understanding as suggested by the previous studies in the SME sector of Pakistan (Chacahr, 2013; Rajput, 2011; Rauf, 2007) and administrated with the help of SMEDA. For the undergraduate business student sample in Study 2, the questionnaires were kept in the English language and administered via the help of respective universities' Business Departments.

Study 3 and Study 4 relied on a mixed-method design suggested by (Wheeldon & Ahlberg, 2011). The quantitative part of the studies 3 and 4 was an experimental intervention to develop IEO in the SME owners and undergraduate business students. Questionnaires are a suitable method to collect the pre-test and post-test data in experimental designs that allow for the examination of the effect before and after the intervention and also across the control group and experimental group (Bell et al., 2018). The pre-test and post-test measurements were based on the adapted questions for IEO (learning/behavior), SMEs' success, and entrepreneurial intention (Training satisfaction was measured only in the training group after IEO intervention). Moreover, for the post-intervention qualitative part of the study, semi-structured interviews were used, that allowed probing deeper into the training experiences and outcomes. For this purpose, an interview protocol was developed based on the extant IEO and training evaluation literature. The questions were then subjected to discussion with the panel of experts (i.e., SMEDA training official, research expert working in SME and undergraduate student sample, qualitative research professional) and the discussed changes were made (detail is offered in section 4.7.3.2). The data collected through all four study phases is schematically shown in Figure 4.6.

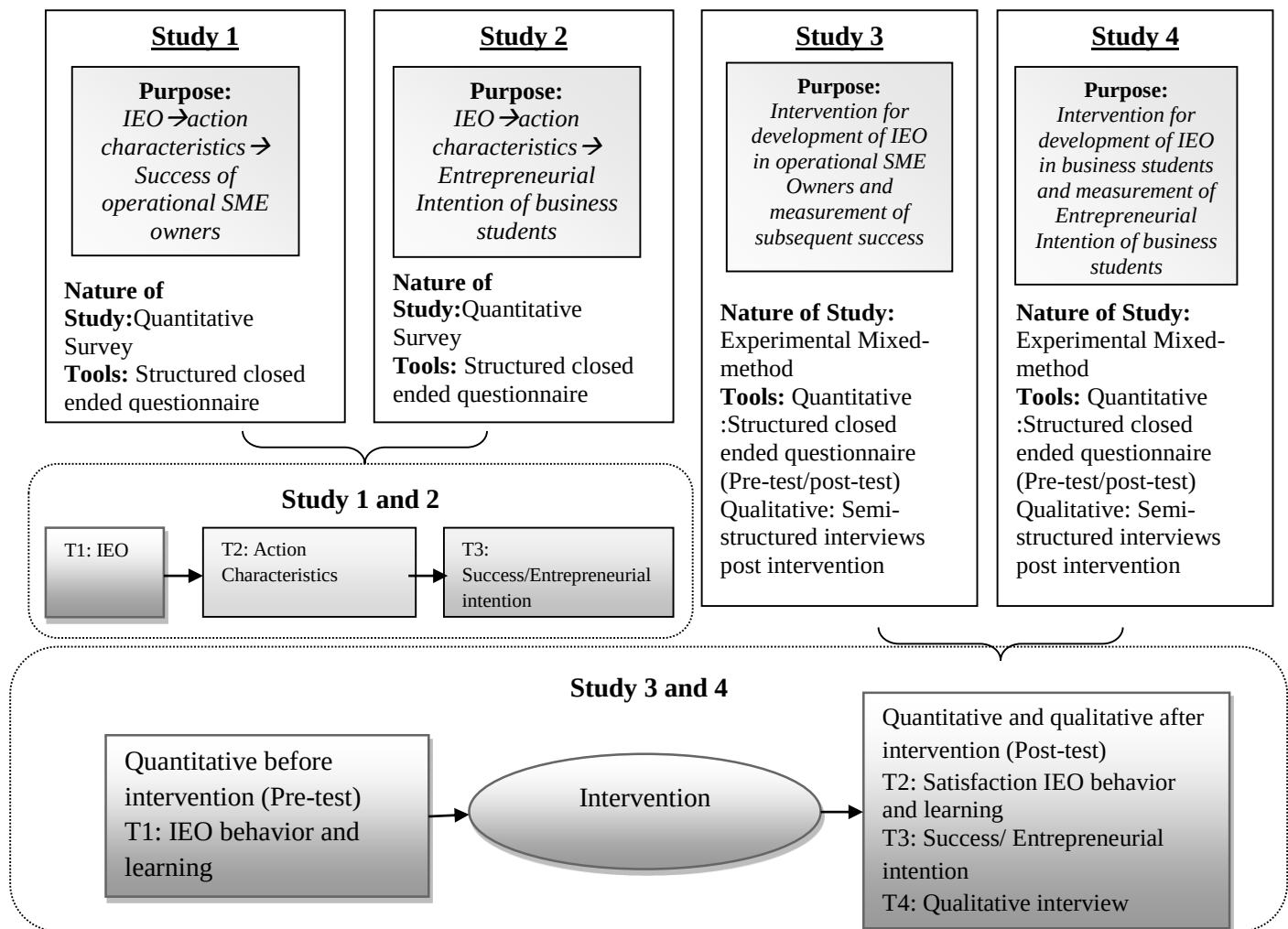


Figure 4.6: Data Collection Tools Used in all Phases of Current Research

4.6 Population and Sampling

4.6.1 Population

The group of individuals that the researcher aims to investigate comprise the population of the study (Stangor, 2014). The population is an arrangement of objects or individuals that share at least one characteristic. It is such a group of individuals to whom the researcher wants to generalize the findings of the study, these are the cases that are eligible for incorporation in the research and about which the inferences are to be made (Busha & Harter, 1980).

4.6.2 Sampling

Given the limitations of time and resources, it is not feasible to collect data from all the population (Punch, 2013). It is a statistical method in which a predetermined number of individuals are selected from the whole population. A sample is a subset of the entire population that allows for the estimation of characteristics of the whole population (Bryman & Bell, 2015). There are two main objectives for doing sampling, (a) to assess the representativeness of the observed cases and (b) to ascertain the level of trust that can be placed on the inferences drawn from the cases (Silverman, 2016).

There are two methods through which the samples are drawn from population i.e. Probability and non-probability based.

4.6.2.1 Probability Sampling

One is probability sampling in which the individuals in the population have an equal chance of being selected and the results based on such samples are a more accurate representation of the population. Probability sampling is a preferable method in quantitative studies but the limitations of time, cost, resources, and availability of the sampling frame are to be kept in consideration. There are five kinds of probability sampling i.e. simple random sampling, systematic sampling, stratified sampling, cluster sampling, and multi-stage sampling. In simple random sampling, the random selection of members is done without specifying any criteria. This kind of sampling is suitable in a homogeneous population. In systematic sampling, the members are chosen after a specific interval (K^{th} element). The interval usually depends on the size of the population and the sample that is to be selected out of that population. In cluster sampling, the population is divided into geographical regions that are known as clusters (Sekaran & Bougie, 2009). The members of the population are heterogeneous within the clusters and homogeneous across the clusters. The sample is then drawn randomly from the chosen clusters. In stratified sampling, the division of the population in subgroups (i.e., strata) is done based on the similarity in the members i.e. age, gender, status, etc. This is a suitable method when the population is heterogeneous. The sample is drawn randomly out of each stratum. Lastly, multi-stage sampling is a complex probability-based sampling method in which the process of sampling is done in numerous stages. The sample is selected in stages by using smaller sub-units at each stage of the sampling process. In this kind

of sampling a combination of the cluster, stratified, and simple random sampling is used (McBurney & White, 2009).

4.6.2.2 Non-Probability Sampling

The other type is non-probability sampling in which the equal chances of selection of each participant are not present. This may be the case due to the unavailability of the sampling frame or due to the qualitative nature of the investigation. In this type of sampling, it is not possible to generalize the results to the entire population. The types of nonprobability based sampling include purposive, convenience, snowball, and quota sampling. In purposive sampling, the sample is selected based on the research purpose (Sekaran & Bougie, 2009). The deliberate selection of subjects is done based on the judgment of the researcher and the data are taken from the most appropriate respondents. Moreover, in convenience sampling, the easily accessible respondents are chosen to obtain data. In snowball sampling one of the participants identifies others either from relatives or friends. This kind of sampling is suitable in cases where the access to population is difficult or the population is not known. In quota sampling, the members are selected based on a certain characteristic chosen by the researcher as the basis for assigning quota i.e. gender, age, etc. (Bryman & Bell, 2015). Figure 4.7 shows the probability and non-probability sampling techniques.

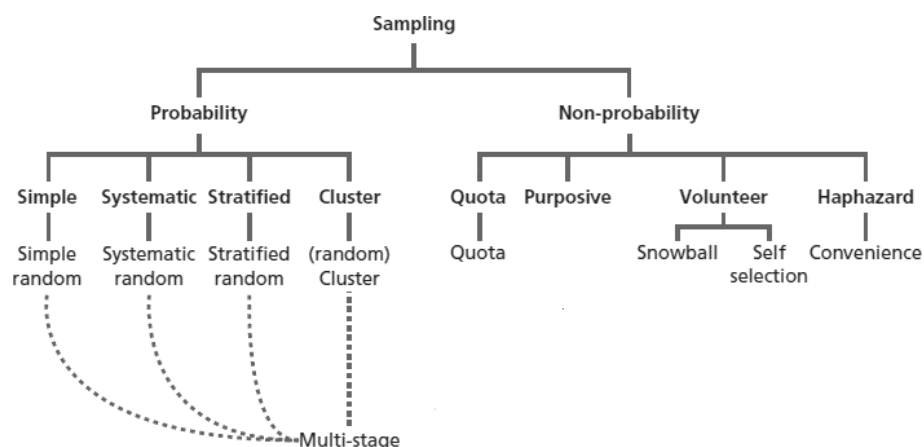


Figure 4.7: The Probability and Non-Probability Sampling Techniques

4.6.3 Sample Size

After the finalization of the sampling technique, the next task to the determination of adequate sample size from the chosen population. The size of the sample is the number of units that are chosen from the desired population. This is an important part of the sampling process where the sample is chosen to make the inferences for the entire population. Different authors have given formulas for the calculation of the appropriate sample size (Lavrakas, 2008). According to Tabachnick and Fidell (2007), the minimum acceptable sample size can be calculated as per the study variables, with the formula $N > 50 + 8m$, where m is the (independent, mediating, and moderating variables in the model). Moreover, it has been suggested that there should be 15 participants for each variable in the study to reach an appropriate sample size (Stevens, 1996). Another estimation rule of sample size is given by Hair et al. (2010), who suggested a sample size of 200 to 300 is acceptable in survey research. For experimental studies, the acceptable sample size is > 35 in the control and experimental group (McClelland & Winter, 1969). Moreover, in the case of qualitative studies, 9-20 participants are considered adequate for non-probability based sampling methods (Yang, 2008).

4.6.4 Population and Sampling for the Present Research

Study 1 was a time-lagged survey, and the aim was to examine the impact of IEO on the success of SMEs through the mediating role of action characteristics (i.e. access to finance, efficient market response (exploration activities and development of strong social ties), so the population for this study was operational SME owners in Pakistan that fulfilled the criteria of (a) being a small or medium scale business owner (b) had minimum one year of tenure for business operation/personal experience¹ (c) had employees ranging from 1-250 for manufacturing and services concerns, and up-to 100 employees for trading concerns, (d) maximum sales level up-to PKR 800 million (SBP.org, 2017).

¹ All respondents of study 1 and study 3 who indicated less than one year of business operations as well as having personal business experience less than one year were screened out.

Multistage sampling was deemed appropriate in this case, the statistics of Small and Medium Enterprises Development Authority (SMEDA) were used.

- In Stage-I the clusters were developed based on the provinces. i.e. Sindh (17.82% SMEs), KPK (14.2% SMEs), Punjab (65.26% SMEs), and Baluchistan (2.09%). Data for Gilgit Baltistan was not available, therefore it was excluded (<https://smeda.org/>). All provinces in Pakistan have trading, manufacturing, and services SMEs, therefore they were taken as clusters given the fulfillment of criteria of heterogeneity within clusters and homogeneity across clusters.
- Punjab has maximum numbers of SMEs amongst all provinces of Pakistan therefore, it was selected in Stage-I.
- As per the ‘SME Sector Genesis, challenges and prospect report’ published by SMEDA, Faisalabad, Sialkot, Lahore, Bahawalpur, Gujranwala, Jhang, Multan, and Sargodha contain a majority of SMEs. In Stage-II, Punjab was bifurcated into clusters based on above-mentioned industrial cities (all of them have trading, manufacturing, and services SMEs). Lahore has more generalized SMEs clusters and it has most of the business enterprises that have purchase or sales interactions with all four provinces in Pakistan (Bilal et al., 2016). Moreover, it has the maximum number of SMEs as chamber members (<https://smeda.org/>). Therefore, to find more generalized results, participants were drawn from Lahore.
- In Stage-III, the lists of small and medium scale registered firms were obtained from SMEDA. Out of a total of 17,360 SMEs, the strata were developed based on manufacturing (22%), services (31%) and trading (47%) concerns. The chosen enterprises were registered under Security and Exchange Commission of Pakistan (SECP), filed annual returns on regular basis and submitted audited financial records to relevant government authorities, having up-to 250 employees and sales revenue not exceeding 400 million PKR (small enterprises) 800 million PKR (medium enterprises) as per criteria of State Bank of Pakistan (2017).

From the perspective of population size, there should be at least 204 responses if the population is up to 20,000 units (Israel, 1992). Tabachnick and Fidell (2007) suggested the minimum acceptable sample size can be calculated as per the study variables, with the formula $N > 50 + 8m$, m is the (independent, mediating and moderating variables in the model), so for

this study minimum sample should be $N > 50 + 8 \times 5 = 90$. Moreover, Stevens (1996) suggested 15 participants per variable ($6 \times 15 = 90$). Hair et al. (2010) deemed a sample size of 200-300 appropriate for survey analysis. Keeping in view all the above criteria, questionnaires were sent out to 400 business owners on a proportionate basis. The questionnaire of the independent variable was administered in Wave-I, mediating variables in Wave-II, and dependent variable in Wave-III. Out of total questionnaires, 357 were returned in Wave-I, 301 were returned in Wave-II and 295 were returned in wave 3. Out of which only 269 were usable after matching for all three time periods and consideration of missing values. This led to an overall response rate of 67.25%.

In study 2 the aim was to examine the impact of IEO on the entrepreneurial intention of students through the mediating impact of entrepreneurial alertness. The population of the study was university business students. The list of recognized universities was obtained from the website of HEC (www.hec.gov.pk/), amongst which only general category universities were included. The specialized universities and banned universities were excluded from the list after screening. There are total 156 general category universities in Pakistan that contain business departments, according to geographical regions, the universities were divided into 7 regions, amongst which 48 (31%) are in Punjab, 38 in Sindh (24%), 35 are in KPK (22%), 20 in the capital (13%), 7 in Baluchistan (5%), 6 in AJ&K (4%), and 2 are in Gilgit Baltistan (1%) (HEC.gov, 2019). Multi-stage sampling was used in which first of all;

- Pakistan was categorized into provinces using cluster sampling at Stage-I, as all of these provinces have heterogeneity in terms of having general public and private sector universities that have business departments, and are mutually homogenous based on this criteria. Punjab was chosen as a cluster for data collection as it has 31% of the public and private general category universities in Pakistan (HEC.gov, 2019).
- The province of Punjab was then divided into two geographical regions i.e. Lahore and other cities in Stage-II and Lahore was chosen as a cluster which is deemed as ‘hub’ of universities having 24 general category universities (50%) in Punjab (HEC.gov, 2019).
- At Stage-III the universities in Lahore were divided into two strata i.e. public (7) and private (17) sector and the sample was drawn proportionately. To select the universities from public and private sector the following formula was used:

- 'N' $\leq$ 18; 'n' =2, 'N' >18 and =23; 'n' =3, 'N' 23 and=36; 'n' =5 (Ghauri & Gronhaug, 2005).
- 2 public (University of Engineering and Technology, University of Education) and 2 private sector universities were chosen (the University of Lahore, University of Central Punjab) on random basis.

The population of this study comprised of undergraduate business students in the above mentioned public and private sector universities (the students of 7th and 8th semesters were excluded given their unavailability in the subsequent waves) that totaled to 5051 (Statistics were obtained from the respective administrative departments of each university). As per the population parameter, at 93% confidence interval a minimum sample of 197 is required (Israel, 1992). According to the number of variables the minimum sample size for this study was $N > 50 + 8 \times 4 = 82$ (Tabachnick & Fidell, 2007). Moreover, following the guidelines of Stevens (1996) who suggested 15 participants per variable, the adequate sample size turned out to be $5 \times 15 = 70$. For survey studies, Hair et al. (2010) regard a sample size of 200-300 appropriate for robust analysis. Keeping in view all the above criteria, 300 questionnaires were distributed among the undergraduate business students in the selected public and private sector universities on a proportionate basis. The questionnaire of the independent variable was administered in Wave-I, mediating variables in Wave-II, and dependent variable in Wave-III. Out of which 248 were returned in wave 1, 235 were returned in wave 2 and 227 were returned in wave 3. Out of which only 212 were usable after matching for all three time periods and consideration of missing values. This led to an overall response rate of 70.60%.

In studies 1 and 2 an additional pamphlet of IEO training intervention was attached and the participants were asked to indicate their interest in participation for experimental study 3 and 4. In studies 1 and 2 an additional pamphlet of IEO training intervention was attached and the participants were asked to indicate their voluntary interest in participation for experimental study 3 and 4. The interested subjects provided their contact details and willingness for subsequent studies. This method facilitated the selection of trainees that would be difficult to reach otherwise. Hence, the population of Study 3 and Study 4 were the sub-set of Study 1 and Study 2 population.

Another reason for using the sub-sample was that action-based psychological interventions work better when empirical evidence of the relationship of the trained variable with the intended outcomes of training is obtained (Frese, Rousseau, & Wiklund, 2014; Guerra et al., 2014). Therefore, first, the survey-based studies (1 and 2) are used to establish that IEO improves SMEs' success and undergraduate business students' entrepreneurial intention in the selected sample. This evidence led to the increased chances that IEO training given to the subjects from the same population will have more successful outcomes in terms of their business results and development of entrepreneurial intention.

Study 3, was an embedded mixed-method experimental intervention aimed at the development of IEO in operational SME owners to enhance their success. So, the participants of the research were SME owners operating in Lahore (Sub-sample study 1). The interested participants of study 1 were contacted, and they were briefly elaborated about the nature of the experiment, and their consent was validated. Before the finalization of respondents, the predefined descriptive criteria to participate in special nature training was again verified (Minimum one year experience as an SME owner and having an active role in business management). This led to the agreement of 103 final business owners that were assigned to the training group (N=51) and the control group (N=52). Out of 51 training participants, 8 were unable to attend the training program due to personal issues, so the total training participants were (N=43). From the control group, the response in the subsequent waves was not provided by 10 participants and thus, final participants were (N=42). The sample size was considered sufficient as per the number of 35 participants per group that has been used in similar inquires (McClelland & Winter, 1969).

Lastly, for study 4, which was also an embedded mixed-method experimental intervention-based study for the development of IEO in undergraduate business students aimed at enhancing their entrepreneurial intention. A similar pattern was chosen for sample recruitment, 119 of total students marked the option of interest in the training program were contacted and recruited randomly for the intervention i.e. (N=59) in the control group and (N=60) in the experimental group. Due to non-participation, 3 participants were dropped from the training group and 7 participants were dropped out of the control group and the final sample size accounted for N=56 in the control group and N=53 in the training group. This sample size was justified as per the reported a minimum of 35 participants for psychological entrepreneurial

training programs in each group (McClelland & Winter, 1969; Miron & McClelland, 1979). For the qualitative portion, 12 interviewees from each group were taken based on their voluntary willingness, fulfilling the criteria of a minimum of 20 respondents for gaining adequate qualitative insights (Yang, 2008). The schematic diagrams (Figures 4.8 and 4.9) give the snap-shot of sampling for the 4 studies.

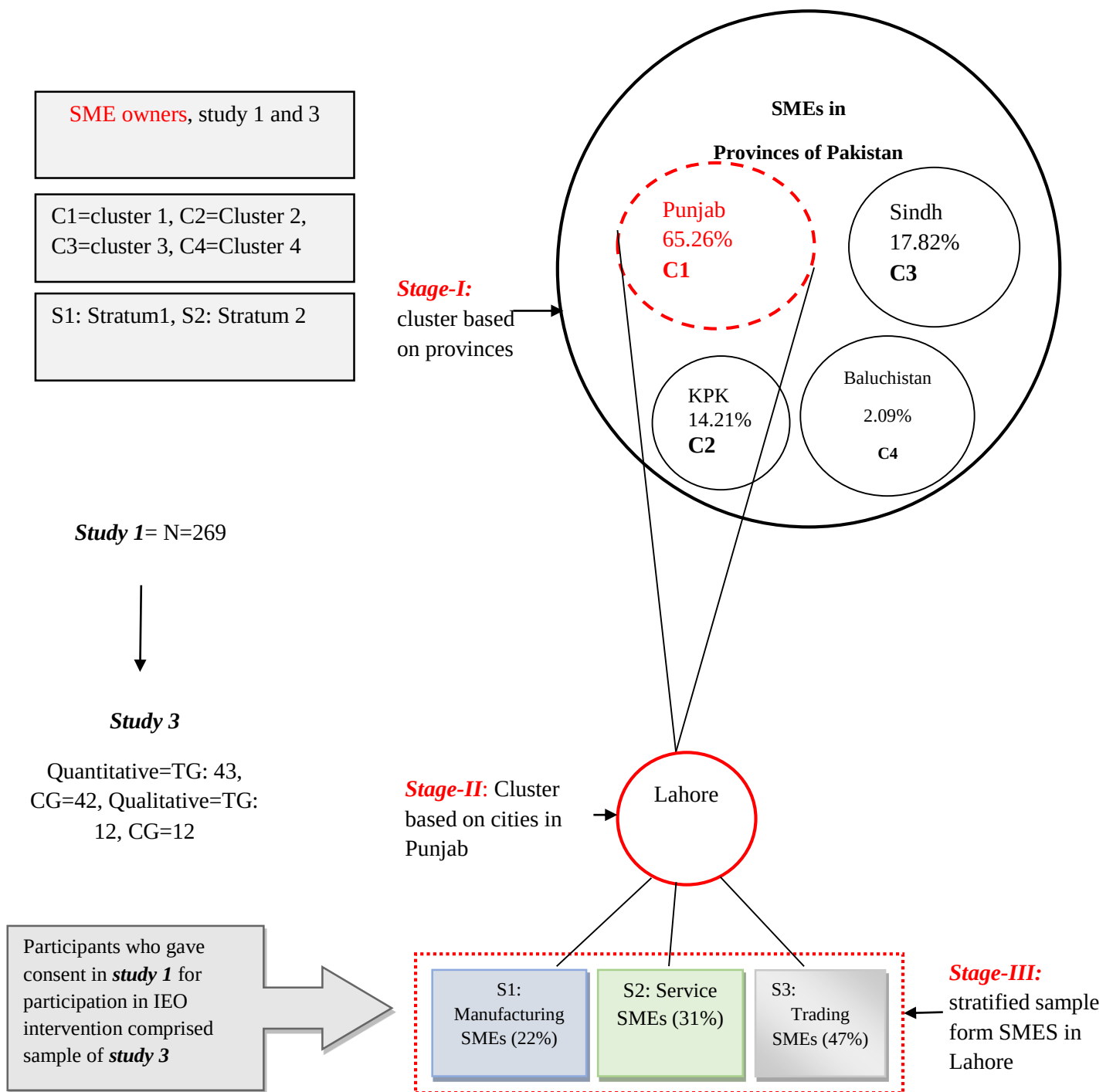


Figure 4.8: Schematic Diagram of Sampling Process for Study 1 and 3

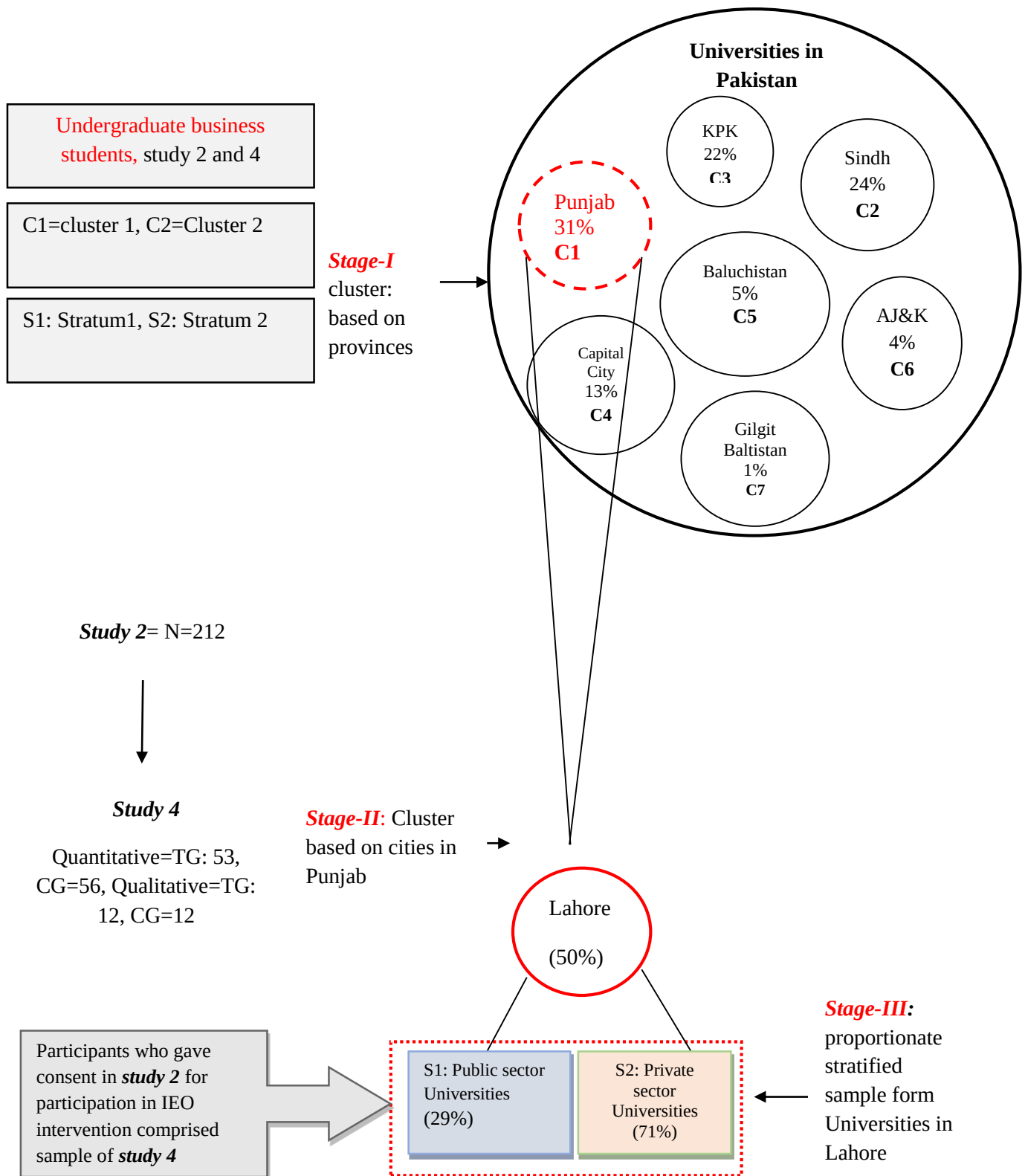


Figure 4.9: Schematic Diagram of Sampling Process for Study 2 and 4

4.7 Instrumentation

The following section outlines the instrumentation for 4 studies. Studies 1 and 2 were based on a structured questionnaire, while studies 3 and 4 were experimental interventions. The instrumentation for variables of each study is given below and the full-scale items are presented in the Appendix I.

Study 1. The items of variables included in Study 1 based on the sample of existing entrepreneurs (SME owners) are given as follows:

Demographic measures-T1. The demographic characteristics of the industry type, age, gender, education, sector, size, and age of business were asked.

Individual entrepreneurial orientation (IEO)-T2. For measuring IEO the scale from Krauss et al. (2005) was adapted. The reason behind choosing this 7-dimensional (comprising 30 items) conceptualization was that it was developed especially for the smaller scale business in developing nations. A sample item is “Do you scan for the potential opportunities and threats?” The response was measured on a five-point Likert scale ranging from “1-never” to “5-always”.

Exploration activities (EA)-T2. For measurement of exploration activities, He and Wong (2004) 4-item scale was used. A sample item is “Creating products or services that are innovative for the firm”. The scale ranged from “1-strongly disagree” to “5-strongly agree”

Response performance (RP)-T2. Response performance was measured using Hughes et al. (2007) 3-items scale. A sample item is “I react to market and environmental changes quickly and satisfactorily”. The scale ranged from “1-strongly disagree” to “5-strongly agree”

Access to finance (AF)-T2. For measuring access to finance 2-items were adapted from Lee et al. (2015). A sample item is “I have difficulty in accessing finance for my business”. The response ranged from “1-never” to “5-always”.

Active social networking (SN)-T2. 10-items developed by Zhao (2005) were used for measuring social networking constructs. Sample item is “I skillfully use intermediaries to introduce me to those people with whom I want to associate.” The scale ranged from “1-strongly disagree” to “5-strongly agree”

SMEs’ success (S)-T3. To measure success, a modified 9-items scale for perceived organizational performance was used, which was originally developed by Delaney and Huselid (1996) and modified for the context of Pakistani SMEs by Bilal et al. (2017). The responses were taken on a 5-points scale spanning from “not at all” to “to a very great extent”. A sample item is “During the last quarter, the profitability of your company has been increased”.

Study 2. For the survey including student sample in study 2, the following scales were used for the measurement:

Demographic measures-T1. Students’ age, gender, semester, and university sector were asked as part of demographical information.

Individual entrepreneurial orientation (IEO)-T1. For the student sample, the three-dimensional scale of IEO developed by Bolton and Lane (2012) was used that was specifically developed to gauge the IEO in the student sample. The sample item for innovativeness is, “I favor experimentation and original approaches to problem-solving rather than using methods others generally use for solving their problems”, risk-taking is “I tend to act “boldly” in situations where risk is involved”, and proactiveness is, “I tend to plan ahead of projects”. The response was measured on a five-point Likert scale ranging from “1-never” to “5-always”.

Entrepreneurial alertness (EA-T2). Entrepreneurial alertness is gauged on a 13 item scale developed by Tang et al. (2012). The sample item is “I am an avid information seeker”. The responses were taken on a 5-points scale spanning from “not at all-1” to “to a very great extent-5”.

Entrepreneurial intention (EI)-T3. The entrepreneurial intention was measured through the 3-item scale developed by (Kolvereid, 1996). A sample item is “How likely is it that you

will pursue a career as self-employed”? The responses were taken on a 5-points scale spanning from “unlikely-1” to “likely-5”.

Study 3. For the experimental intervention based on the sample of operational entrepreneurs in study 3, the data were collected by using questionnaires as well as semi-structured interviews.

4.7.1 Quantitative Portion Measures Study 3

Background measures-T1. To compare the training and control group equivalency, the background characteristics of the industry type, age, gender, education, educational relevance, and the field of education, experience, sector, and, chamber membership, age of business, size, cognitive ability, and self-efficacy were incorporated.

Formality. A tax-paying business was rated to be in the formal sector and a non-tax paying business was categorized as informal (Glaub et al., 2014).

Generalized self-efficacy-T1. It was measured on a 10 items scale given by Schwarzer and Jerusalem (1995) (e.g., “I am confident that I could deal efficiently with unexpected events”) the options ranged from 1 “not at all true” to 4 “exactly true”.

Cognitive ability-T1. It was measured using Wechsler’s digit span test as proposed by Tewes (1991). The interviewer read 3 to 9 digit numbers to participants and asked them for recalling. It is deemed to be an appropriate measure of the level of intelligence and working memory (Jensen, 1985).

IEO training. The variable of training was dummy coded as “no training=1”, “training=2”

Reaction measures-T2. To determine the level of participants’ satisfaction with training at T2, the face scale was used that had face options from frowning to smiling. It has been indicated as a reasonable way to measure satisfaction in general (Wanous, Reichers, & Hudy,

1997) and in the case of training programs (Glaub, 2009). Besides, the training utility was measured on a 5-item scale adapted from Glaub (2009), a sample item is “Do you think that concept of "IEO" is useful for your business? To measure transfer motivation an 8-item scale was adapted as per the context of the present study (Glaub, 2009), a sample item is “To what extent do you think that after this training you will take more calculated risks than you did before”. The responses for training utility and transfer motivation were taken on a 5-point Likert scale ranging from “1- Not at all” to “5-Very much”.

Learning measure-T1/T2. The knowledge of individual entrepreneurial orientation was measured using a multiple-choice test as deemed apposite by Glaub et al. (2014). The items of individual entrepreneurial orientation were covered along with the action sequence. The scores of the test were used as a measure of IEO learning. Example of sample question: “Mr. A is more achievement-oriented. How he will plan?”

Individual entrepreneurial orientation behavior-T1/T3. To examine the individual entrepreneurial orientation behavior pre-training (T1) and 4 months post-training (T3), the structured questionnaires were administrated by using behavior-based measures.

The questions were adapted based on the conceptualization of individual entrepreneurial orientation given by Krauss et al. (2005) and the principles of action based approach (Zacher & Frese, 2015). This allowed the researcher to gauge the action-based behavior of business owners on showing entrepreneurial orientation. Indication of a specific dimension of entrepreneurial orientation was marked based on the frequency of each behavior as indicated by the participants. Such that (1) Never (No entrepreneurial orientation), (2) Seldom (Low entrepreneurial orientation), (3) Often (Moderate entrepreneurial orientation), (4) Frequent (High learning orientation), (5) Always (Exceptional learning orientation). The survey items were translated into Urdu for the population of operational entrepreneurs because of the lower literacy rate (Krauss et al., 2005). The sample items for each dimension of IEO were:

- Learning orientation- e.g. Do you use the current market information for business improvement?
- Achievement orientation- e.g. Do you seek feedback on the attainment of self-set goals?

- Innovation orientation-e.g. How many times you outperform the competitors based on innovation?
- Autonomy orientation- e.g. How much successful you have been in attaining the goals of business growth in the past 6 months?
- Competitive Aggressiveness- e.g. Do you actively make plans for dealing with competition?
- Personal Initiative- e.g. how actively you overcome barriers/challenges in case if the action plans are not attained?
- Risk orientation-e.g. Do you actively seek information for extensive risk assessment, evaluation, and mitigation?

Success Measures-T3. In developing nations like Pakistan, most of the SME owners do not maintain their business records as per international or national accounting standards due to their maximum reliance in own equity and minimum interest in external capital i.e. bank debt and market equity (Bilal et al., 2016). So subjective measures of success were used as suggested by Glaub et al. (2014) and gathered data at T1 and T3. All the measures of success were asked for the last quarter. The success was measured in terms of the following areas:

Sales Level. The participants were asked to indicate the sales as considerably decreased, slightly decreased, remained the same, slightly increased, or considerably increased.

Profit Level. The participants were asked to indicate either their profits as considerably decreased, slightly decreased, remained the same, slightly increased, or considerably increased.

Expenses. The participants were asked to indicate either the expenses (including supplies, wages, rental...) have considerably decreased, slightly decreased, remained the same, slightly increased, or considerably increased.

Employees' performance. The participants were asked to indicate either the employees' performance has considerably decreased, slightly decreased, remained the same, slightly increased, or considerably increased over the designated period.

Number of customers. The participants were asked to indicate either the number of customers has considerably decreased, slightly decreased, remained the same, slightly increased, or considerably increased.

4.7.2 Qualitative Portion Measures Study 3

To gain deeper insight into the impact of training, satisfaction, learning, behavior, and success were further probed through a semi-structured interview comprising of open-ended questions based on the Kirkpatrick's (1975) training evaluation criteria. The interview questions were developed by the researcher and they were duly discussed and validated by three-panel members i.e., an industry expert, a qualitative, and entrepreneurship researcher to ensure their adequacy for the present study. Minor changes were suggested by the panel that was incorporated in the interview questions. The questions related to satisfaction with training and IEO learning were asked immediately after the training (T2). While the interviews regarding IEO behavior and success were conducted at (T4). Following interview questions were asked:

1. Did your expectations regarding the training program were met and you feel it to be worth your time? (prompt: content and utility)*
2. What is your intention of using this learning in future and how it influenced your behavior?*
3. Did the training style matched your learning style and you felt engagement in the program?*
4. What were the most important learning points?* (Prompt: Do you think, your utilized time in this training has resulted in new knowledge that would help sustain and grow your business?)
5. Are you a risk-taker? Elaborate.
6. How do you describe your initiative behavior in business activities?
7. How you incorporate innovation into your business?

8. How much you learn from your past mistakes and try to avoid them in the future?
Do you actively learn about business improvement?
9. How do you incorporate achievement orientation in your business (setting challenging goals and making a full effort to achieve them)
10. How much autonomous do you behave in your business matters? (Take decisions yourself, actively participate in your business activities, can realize vision)
11. Elaborate on your competitive behavior?
12. Are you satisfied with your business success? (Profit, market share, customers, employees, product, services)

The interview questions were translated into Urdu as well and offered in Appendix II. For the training group, the participants were prompted about the above questions in terms of pre-and post-test differences. In the case of the control group, and it was asked either the participants have any change in these behaviors over the past six months. For the contradictory results, further reasons were probed. The questions with (*) were asked only from the training group.

Study 4. For the experimental intervention based on the sample of potential entrepreneurs in study 4, the data were collected by using questionnaires as well as semi-structured interviews. The interviews were conducted post-intervention to attain insights about training success and the development of entrepreneurial intention. For the student's intervention, the only three-dimensional construct of IEO was used (Bolton & Lane, 2012).

4.7.3 Quantitative Portion Measures Study 4

Background measure-T1. Only age, gender, sector, generalized self-efficacy, and cognitive ability were used as control variables for the student sample and they were measured on the same scale as for study 3.

IEO training. Same as study 3.

Reaction measures-T2. The same items were used for training satisfaction and perceived utility as used in study 3. For measuring transfer motivation of students a 4-item scale was used instead of 8 items because for this population only three dimensions of IEO were considered (i.e. innovation, risk-taking, and proactivity).

Learning measures-T1/T2. Same items as used in study 3 but the test contained only the three dimensions of IEO (i.e. innovation, risk-taking, and proactivity).

IEO behavior-T1/T3. Same items as used in study 2.

Entrepreneurial intention-T3. The entrepreneurial intention was measured by questionnaire items used in study 2 (as the student sample was educated and capable of understanding the English Language).

4.7.4 Qualitative Portion Measures Study 4

To gain deeper insight into the impact of training the satisfaction, learning, behavior, and entrepreneurial intention was further probed through a semi-structured interview comprising of open-ended questions. Following the same pattern as in study 3, the interview questions related to training satisfaction, IEO learning were asked post-training (T2) and the interviews regarding IEO behavior and entrepreneurial intentions were conducted at (T4). The questions were asked with the same protocol as in study 3, but they were adapted as follows to match the respondents of the undergraduate business student sample.

1. Did your expectations regarding the training program were met and you feel it to be worth your time? (prompt: content and utility)*
2. What is your intention of using this learning in future and how it influenced your behavior?*
3. Did the training style matched your learning style and you felt engagement in the program?*
4. What were the most important learning points?*

5. Are you a risk-taker?
6. How do you describe your personal initiative behavior?
7. What is your innovative capability? (Keep in mind regarding a new venture start-up)
8. How much you intend to be self-employed?

4.7.5 Language of Questionnaires

Most of the SME owners have a low level of education in Pakistan (Qazilbash, 2015). The questionnaire and interview protocol were made in English as well as Urdu to ensure comprehensibility as the same method has been used in previous studies targeting SMEs' owners (Chachar, 2013; Rauf, 2007). To ensure the reliability of the content in both languages, it was verified from representatives from English and Urdu departments of HEC recognized universities. Moreover, the entrepreneurial dynamics are context-dependent which varies as per geographical settings and demographical factors (Krauss et al., 2005). To assure the validity and reliability of research instruments (i.e. questionnaire items and interview protocols) as per the Pakistani context they were being subjected to scrutiny and discussion under the guidance of a panel of experts as shown in Table 4.6 and the suggested changes were incorporated. For the student sample, the questionnaires and interview questions were kept in the English language because English is

Table 4.6: Panel for the Validation of Research Instruments

Area of Expertise	Profession	Qualification	Number
Entrepreneurial experience	Operational Entrepreneur at small/medium level	At least graduate	2
Entrepreneurial Theory and practice	Academicians from HEC recognized universities in the area of Entrepreneurship/Business Administration/Management sciences	M.Phil./PhD At least 2 publications in the area of entrepreneurial success factors	2
Language	Academicians from HEC recognized universities in the area of Urdu and English	M.Phil./Ph.D. (Urdu and English) Proficient in the language domain	2
SMEs regulatory knowledge	Representative of SMEDA	At least graduate Minimum 1-year experience in SMEDA	1

4.8 Data Collection

For survey studies 1 and 2, the data were collected in three waves. The data of independent variable (IEO) was measured at T1, the data of mediators were taken at T2 the data on mediators (exploration activities, response performance, access to finance, and active social networking) for study 1 and entrepreneurial alertness (alert scanning and search, alert association and connection, and alert evaluation and judgment) for study 2 were obtained. Lastly at T3 the business success (study 1) and entrepreneurial intention (study 2) was measured. The basic purpose of data collection at multiple times was to overcome the common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). In the case of single-source data, it is recommended to collect it at more than one point of time with a relatively short time apart. The short time-lag is suitable to maintain the response rate as well as it does not risk the masking of an actual relationship due to inordinate period between the studied variables (Podsakoff et al., 2003; Taris & Kompier, 2014).

In organizational psychology research, the time-lag of 2 weeks has been proved to be apposite to minimize the common method variance (Donia, Raja, Panaccio, & Wang, 2016). As in study 1 and study 2, the aim was not to uncover the temporal nature of variables therefore, this period between waves was deemed appropriate. For study 1, the questionnaires were distributed by mail/e-mail with the facilitation of the HR department at SMEDA, Lahore. To match the questionnaires, the participants were asked to mention the last four digits of their national identity card number. For study 2, the questionnaires were distributed among the university students through the help of respective teachers of BBA (semester 1 to semester 6). The researcher collected the questionnaires in each wave. The student ID was used as an identifier for matching questionnaires across all three waves.

For study 3 and 4, following the research objectives and current methodological directions in entrepreneurship research, the author adopted an untreated control group for pre-test and post-test embedded mixed-method experimental design. Data collection was based on action-oriented intervention to teach IEO to operational (SME owners) and potential entrepreneurs (undergraduate business students). To test the effectiveness of the IEO training

program, the data were collected before and after the intervention as suggested by the extant practice in the field (Frese, Gielnik, & Mensmann, 2016; Glaub et al., 2014).

The intervention aimed to educate operational (study 3) and potential (study 4) entrepreneurs regarding the psychological variable of IEO by linking the concepts IEO with SMEs' success and developing entrepreneurial intention. For study 3 and study 4, the data were collected in four waves, at T1 pre-test questionnaires were administered to all participants before carrying out the intervention. Then participants were allocated to control and experimental groups and intervention was administered to the participants in the experimental group.

Study 3 was carried out at the Training Center of SMEDA in Lahore, Pakistan as a part of a project directed at developing IEO in SME owners for improving the sector output with the facilitation of SMEDA. The IEO training program spanned over 1 month, with 4 sessions of 6 hours each. This is in line with the conception of 'wise-training' interventions that require the contact time of 24-48 hours for training to induce learning (Walton, 2014). The tenet of ART (Frese & Zapf, 1994) was used to lay the theoretical foundation of IEO training and by adapting the training principles from Glaub et al. (2014). According to the action regulation theory, each entrepreneurial action comprises five steps i.e., goal setting, gaining environmental knowledge, formulating and executing the plan of action, monitoring the plan, and seeking feedback. IEO training intended to develop the active entrepreneurial mindset of SME owners in the area of autonomy orientation, innovativeness, risk-taking, proactive personality, learning orientation, achievement orientation, and competitive aggressiveness (Krauss et al. 2005). This training combined top-down (providing IEO action principles that depict the process of showing IEO behavior as per action sequence) and bottom-up approach (trainees developed and internalized operative mental models for IEO for sample case and then for their business context). They were taught the IEO action principles with concrete examples. After that, the operative mental models (cognitive road maps having essential knowledge for displaying IEO behavior) were developed by trainees based on the action principles. The internalization of these mental models was done by first developing the action sequence for IEO facets in the model case (based on high and low IEO of business owners) and then refined these mental models by application to their business context. The trainees took feedback from their fellows and learned by self-reflection (Keith & Frese, 2008). This led to the development

of sophisticated mental models of IEO and the trainees applied these mental models in personal projects. Using personal projects is a suggested method for the application of trained mental models in real settings (Little, 1983). These were actual business projects that participants developed for their own business with completion in the next 3 months.

The training was carried out in Urdu that is the national language in Pakistan and 2 assistants training interns were provided for each session for distribution, collection, and organization of training material and evaluation forms. They assisted the trainees and developed the report of the overall session in terms of positive and negative points.

The follow-up was done in three phases, first immediately after training to examine the reaction and learning measures (T2) in the training group. While at the same period the measures of learning were collected from the control group. The second follow-up was done 4 months after training to examine the impacts of IEO training on IEO behavior and SMEs' success (T3) and lastly, post-intervention interviews were done within the next month (T4). The reason behind the time-lag is well justified as the reaction and learning measures can be obtained immediately after the intervention. Moreover, one quarter is a suitable time to measure the change in behavior and results (Glaub 2009; Glaub et al., 2014). The training and control group participants were retained in the study by offering them gifts and discount grocery vouchers on each evaluation phase. These gifts were voluntarily sponsored by one of the newly opened mega grocery stores in Lahore that contacted SMEDA for its advertisement to small business firms as a marketing strategy. With permission from the grocery store, SMEDA offered us gifts and discount grocery vouchers to be distributed among small firm representatives during our training sessions.

The same method was adopted for study 4, the training was carried out in UET as the administration voluntarily offered the venue. The case studies for student population were different (based on high and low IEO example in students) and the projects were proposed business plans. The teachers of respective training and control group participants were requested to offer them 10 reward marks as a course case study/class activity for complete participation in the study and it helped to reduce attrition rate inherent in multiple-wave studies. The stages of research are shown in the following Figure 4.10.

All training case studies, work sheets, and training slides are available from author through personal contact.

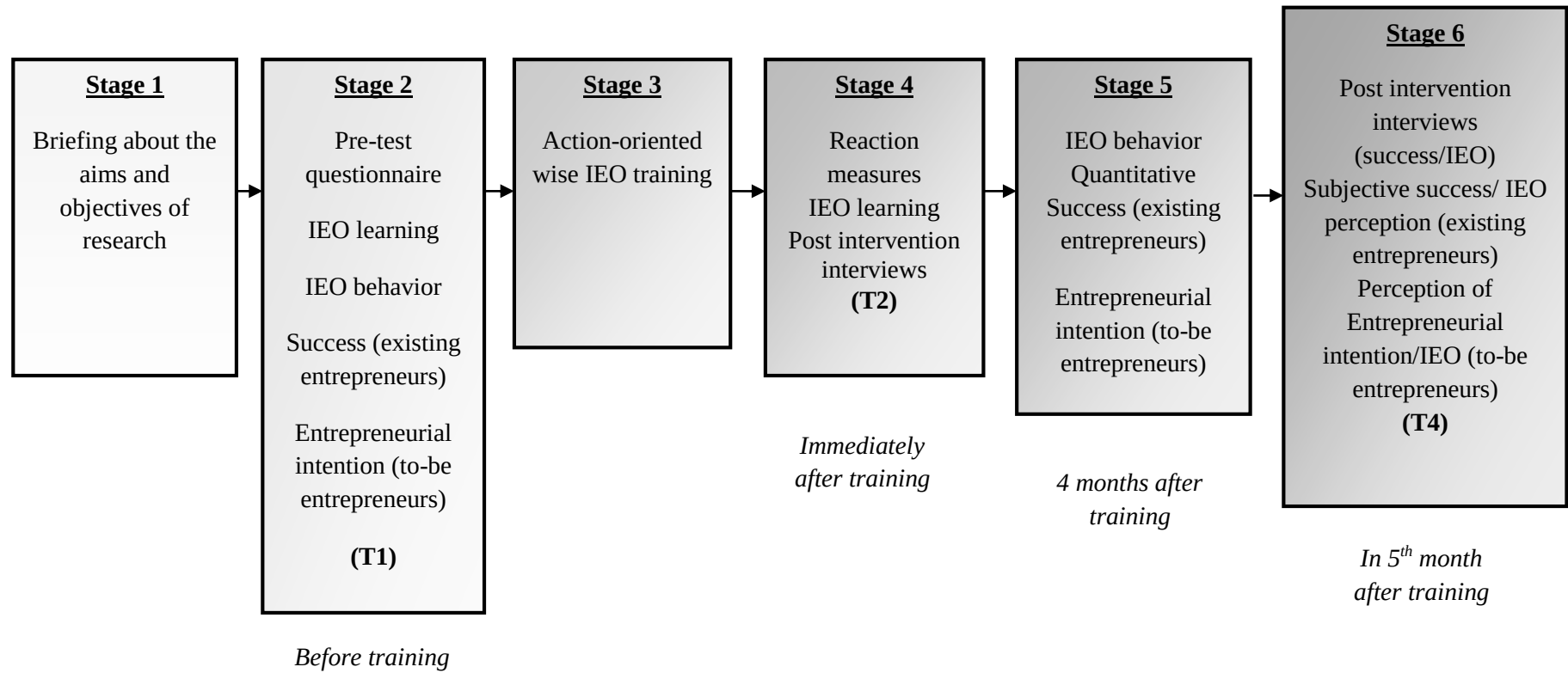


Figure 4.10: Stages of the Research Process

4.9 Data Analysis Techniques

For study 1 and study 2 the data were analyzed by using Amos 21 and SPSS 21. First, the demographical profile of participants was examined through frequency and percentages in the sample of SME owners and undergraduate business students. After that skewness and kurtosis were used to examine the normality of data. The means, standard deviation, and correlation among the study variables were calculated. Then the data was checked for common method bias via Hermans' single factor test. The reliability was ensured through Cronbach's alpha and the convergent and divergent validity were tested. To measure the convergent validity average variance extracted (AVE) was calculated and for gauging divergent validity Maximum shared variance (MSV) and average shared variance (ASV) were compared. Before proceeding to the hypotheses testing the dimensionality of the IEO construct was affirmed by confirmatory factor analysis (CFA). In both of the studies, better fit indices were obtained from the single-factor model so it was retained in the subsequent data analysis. Multiple indices are used to determine model fit, therefore, a CFA was run for the combined model and the following fit indices were calculated:

- Chi-squared/degrees of freedom (χ^2/df) is a suitable measure for examining model fit for sample sizes ranging from 75 to 400 that is normally distributed. In a sample size beyond 400, the model fit is misleadingly significant. χ^2 measures the disparity between restricted and unrestricted covariance in the sample matrices. Dividing χ^2 to degrees of freedom shows the fit between the hypothetical model and sample.
- Comparative fit index (CFI) also examines the model fit in terms of hypothetical model and sample data discrepancy, but it accounts for the inherent sample size issues in χ^2/df (Kenny, 2015).
- Incremental fit index (IFI) checks for the chances of over-rejection of model inborn in the absolute χ^2 based tests because of their sensitivity to the sample sizes. Therefore it is advisable to use IFI to adjust for the χ^2 of the fitted model to the null model (Miles & Shevlin, 2007).
- Tucker-Levis index (TLI) is also from the family of incremental fit indices and is less likely to be impacted by sample size (Jackson, 2007).
- Root mean square error of approximation (RMSEA) measures the fit between selected values of parameter and the covariance matrix values, in case of availability of

parameter values. It is a well suited supplementary fit index along with χ^2 that minimizes the chances of erroneous model rejection based on the sample size (MacCallum, Browne, & Sugawara, 1996). Kenny (2015) deem TLI and RMSEA as important fit indicators to be reported.

Then the relationship of IEO with SMEs' success was tested through the multiple mediators of exploration activities, response performance, access to finance, and active social networking (study 1). Moreover, the IEO and entrepreneurial intention association was determined via the mediators of alert scanning and search, association and connection, evaluation, and judgment (study 2). For testing the direct and indirect hypotheses PROCESS Model 4 was employed. It is an appropriate technique for testing multiple mediations through observed variables. PROCESS generates indirect effect for mediation that overcomes the limitation of the procedural nature of the regression-based analysis. It generates simultaneous output for the direct and indirect impact and offers the bootstrapping results to determine the relative effect size of each variable (Hayes, Montoya, & Rockwood, 2017).

Study 3 and Study 4 were experimental and included the collection of quantitative (pre-test and post-test) and qualitative data (post-test only).

For these studies, SPSS 21 was used for the analysis of data. Following a comparable pattern first of all the demographical profile of training and control group participants was examined via frequencies and percentage analysis. It was followed by the tests for normality, outliers, and correlations among the study variables. For testing the impact of IEO training on the reaction measures the values of mean were calculated. For group comparison between training and control group independent sample t-test was used that allows comparing two distinct groups on the same characteristics. Independent sample t-tests are employed to compare the training and control group on the IEO learning, behavior, SMEs success in study 3, and entrepreneurial intention in study 4. These comparisons were done for T1 as well as T2 and T3 observations in both groups to get a comprehensive insight into the pre and post IEO intervention situations. In case of any contradictory results, paired t-tests (compare the same group at two points) were used to determine the significance of the pre-test and post-test observations (Knapp & Schafer, 2009; Wright, 2006).

Moreover, univariate ANCOVA (analysis of covariance) was done to determine the impact of IEO intervention on the outcome variable by controlling the effects of generalized self-efficacy, cognitive ability, and demographical variables. This analysis is used to compare two independent groups on a dependent variable in the presence of covariates including the pre-test values. It is a suitable measure to examine the pre and post-intervention results in two or more than two groups because it accounts for the pre-test as well as the control variable impacts in determining the impact of an intervention on the intended outcomes. It is considered a powerful tool for testing the impacts of interventions (Xi, Pennell, Andridge, & Paskett, 2018) including psychological entrepreneurial training programs (Glaub, 2009; Glaub et al., 2014). Lastly PROCESS model 4 is again used to check the underlying mechanism through which the IEO intervention impacts the proposed outcomes. To explain the training outcomes interviews were analyzed through deductive thematic analysis. For the qualitative portion of study 3 and study 4, a deductive thematic analysis was done.

The interviews were conducted for substantiation and explanation of the quantitative findings, and they were a smaller part of a larger quantitative investigation (QUANT → qual). Thus, the themes were preconceived based on the research questions and hypotheses and in this situation the deductive approach to thematic analysis is suitable. It allows organizing the qualitative insights into the pre-determined categories (Aronson, 1994; Braun & Clarke, 2006). The steps of deductive thematic analysis suggested by Lambert and O'Halloran (2008) were adapted as per the context of present studies. First of all, the interviews were transcribed and the right side margin was left for making notes and highlighting codes. The transcripts were read several times to gain familiarization of data. After this reading, the critical points were noted down on the right-side margins in the form of codes. The codes were categorized under the pre-conceived themes (based on the hypothesized associations) and irrelevant data were excluded. Again, careful reading was done to include the emerging themes and to refine the existing themes. The relevant excerpts were mentioned underneath the explanation of each of the finalized theme. Lastly, the results were displayed in a diagrammatic form for clarity and conciseness.

4.10 Chapter Summary

Figure 4.11 depicts the summary of Chapter 4:

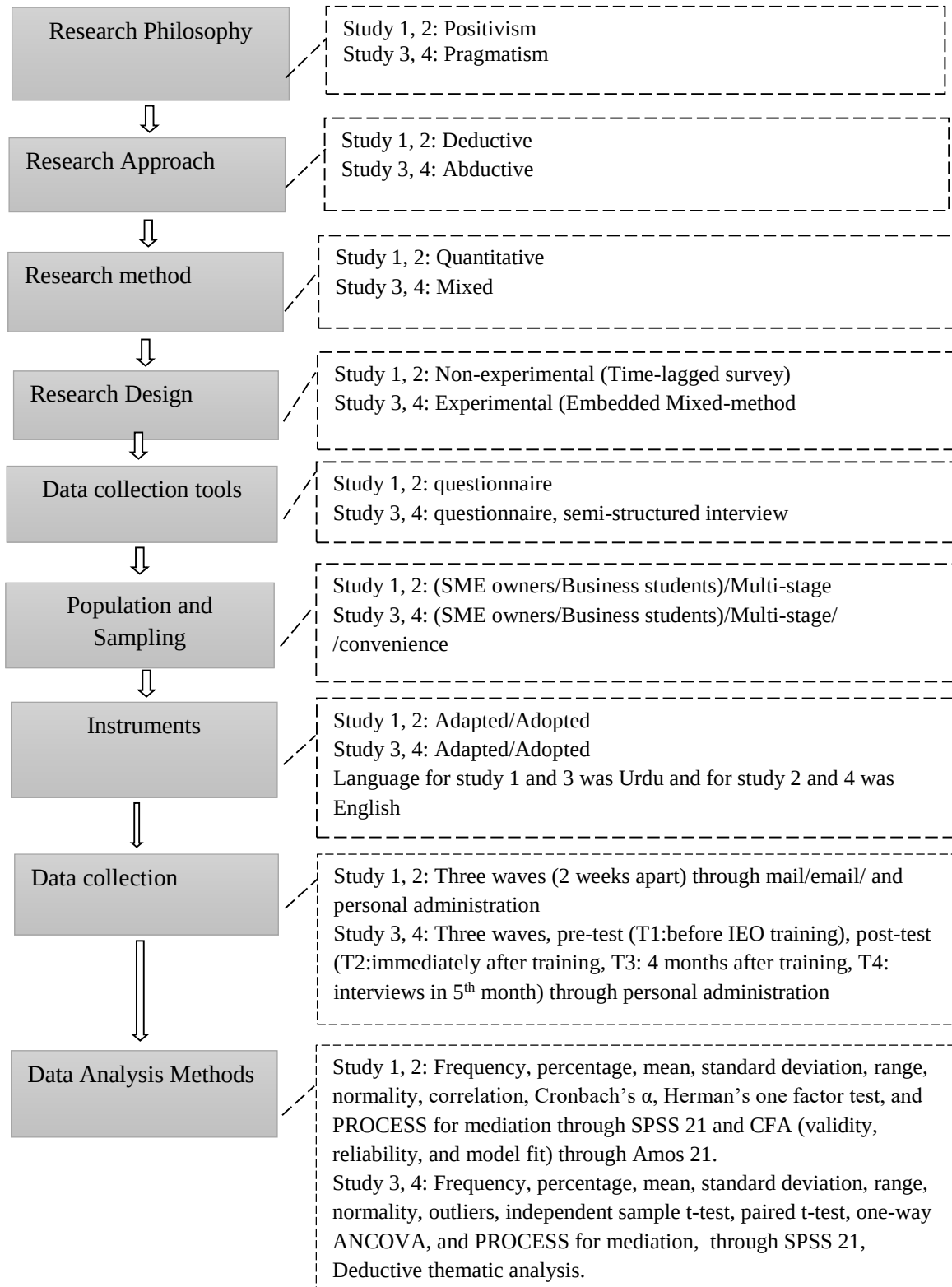


Figure 4.11: Summary of Chapter 4

CHAPTER FIVE: ANALYSIS AND RESULT

This chapter pertains to the analysis of data collected through the methodology proposed in Chapter 4. The chapter is divided into 4 separate sections based on the 4 studies included in the thesis. Study 1 and Study 2 were time-lagged surveys (three-waves). First of all the demographical profile of participants is presented, followed by the test for data normality and descriptive statistics. After that data reliability, validity, and common method bias was checked, and model fit indices were calculated. For testing the direct and indirect hypotheses PROCESS Model 4 was employed through SPSS 21. Study 3 and Study 4 were experimental and included the collection of quantitative data (pre-test and post-test), as well as, qualitative data (post-test only). Following a similar pattern first of all the demographical profile of training and control group participants is presented. It was followed by the tests for normality, outliers, and correlations among the study variables. Independent sample t-tests were employed to compare the training and control group before and after IEO training. Moreover, univariate ANCOVA was done to determine the impact of the IEO intervention on the proposed outcomes. Lastly, PROCESS model 4 was again used to check the underlying mechanism through which the IEO intervention impacted the proposed outcomes. To explain the training outcomes interviews were analyzed through deductive thematic analysis. The chapter ended with a summary of the hypotheses results for each study.

5.1 Results Study 1

In study 1 the impact of SME owners IEO was examined on their business success through the multiple mediators of exploration activities, response performance, access to finance, and active social networking strategies.

5.1.1 Demographic Profile

SMEs' owners located in Lahore constituted the population of study 1. The demographical data of participants were obtained regarding their gender, age, education, educational relevance, field of education, business category, and size of the business, business age, and personal business experience. A total of 400 questionnaires were distributed, out of

which 357 were returned in wave 1, 301 were returned in wave 2 and 295 were returned in wave 3. Out of which only 269 were usable after matching for all three time periods and consideration of missing values. This led to an overall response rate of 67.25%.

Out of the 269 participants, 75.8% were male and 24.2% were female, 10.4% were less than 25 years of age, 20.8% were between 25 to 30 years, 29% were from 31 to 35 years, 17.5% were from 36 to 40 years and 22.3% were above 40 years. The educational statistics indicated that 20.8% of the participants had education level less than matriculation, 14.9% had education till matric, 24.5% completed education till intermediate, 20.1% had a bachelor's degree, 13% had a master's degree and only 6.7% had attained education beyond masters. It was further revealed that only 31.6% of the participants reported that their education was related to the field of business and 68.4% stated that they deal in a business that is not relevant to their acquired education. Furthermore, 20.8% of the respondents had business education, 17.5% had technical education, and the rest of 61.7% had general education. It was found that 30.1 % had 1 to 5 years of experience, 24.2% had 6 to 10 years of experience, 25.7% had 11 to 15 years of experience and 20.1% had experience above 15 years.

Regarding the size of the business, it was found that 63.6% were small scale enterprises and 36.4% were medium scale enterprises. Out of this 34.2 % of the business operated in the manufacturing sector, 31.2% of the businesses were from the trading sector, and 34.6% were in the service sector. The data regarding business age illustrated that 32% of the businesses were operating from 1 to 5 years, 23% were operating from 6 to 10 years, 25.3% of the businesses were operating from 11 to 15 years and 19.7% of them had more than 15 years of operations. The demographic profile of the study 1 participants is shown in Table 5.1.

Table 5.1: Demographic Profile of Study 1 Participants

Variables	Categories	<i>N</i>	Percent	Valid Percent	Cumulative Percent
Gender	Male	204	75.8	75.8	75.8
	Female	65	24.2	24.2	100.0
	Total	269	100.0	100.0	
Age	Below 25	28	10.4	10.4	10.4
	25-30 Years	56	20.8	20.8	31.2
	31-45 Years	78	29.0	29.0	60.2
	36-40 years	47	17.5	17.5	77.7
	Above 40 years	60	22.3	22.3	100.0
	Total	269	100.0	100.0	
Educational Level	Below matriculation	56	20.8	20.8	20.8
	Matriculation	40	14.9	14.9	35.7
	Intermediate	66	24.5	24.5	60.2
	Bachelors	54	20.1	20.1	80.3
	Masters	35	13.0	13.0	93.3
	Above Masters	18	6.7	6.7	100.0
	Total	269	100.0	100.0	
Educational Relevance with business	Yes	85	31.6	31.6	31.6
	No	184	68.4	68.4	100.0
	Total	269	100.0	100.0	
Field of Education	Business	56	20.8	20.8	20.8
	General	166	61.7	61.7	82.5
	Technical	47	17.5	17.5	100.0
	Total	269	100.0	100.0	
Personal Business Experience	1-5 years	81	30.1	19.7	30.1
	6-10 years	65	24.2	24.2	54.3
	11-15 years	69	25.7	25.7	79.9
	Above 15 years	54	20.1	20.1	100.0
	Total	269	100.0	100.0	
Business Age	1-5 years	86	32.0	32.0	32.0
	6-10 years	62	23.0	23.0	55.0
	11-15 years	67	25.3	25.3	80.3
	Above 15 years	54	19.7	19.7	100.0
	Total	269	100.0	100.0	
Size of Business	Medium Scale	98	36.4	36.4	100.0
	Total	269	100.0	100.0	

Business Sector	Manufacturing	92	34.2	34.2	34.2
	Trading	84	31.2	31.2	65.4
	Services	93	34.6	34.6	100.0
	Total	269	100.0	100.0	

5.1.2 Data Normality

Ascertaining the normality of data is a prerequisite for subsequent regression and factor analysis. Therefore, skewness and kurtosis were used to determine how much the data deviated from normality. The datasets that are above 200 participants dissolve the impacts of kurtosis and skewness, and does not make it prone to substantial deviations in the analysis (Tabachnick & Fidell, 1996). The participants of study 1 are above this threshold (N=269). Moreover, the values of kurtosis and skewness for all variables were found within the threshold limit that is (-1.96 to +1.96) for skewness and (-2 to +2) for kurtosis. See Table 5.2

Table 5.2: Normality Statistics

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Individual Entrepreneurial Orientation	.367	.149	.271	.296
Exploration Activities	.018	.149	-1.231	.296
Access to Finance	.056	.149	-.848	.296
Response Performance	.501	.149	.702	.296
Active Social Networking	.196	.149	-.776	.296
Business Success	.212	.149	-.792	.296

5.1.3 Descriptive Statistics

In this section, the means, standard deviations, and correlations of the study variables are given (see Table 5.3). All the constructs have a minimum value of 1 and a maximum value of 5. IEO and exploration activities had a mean value of 3.00, access to finance had a mean value of 2.79, response performance has a mean value of 2.01, active social networking had a mean value of 2.84, and business success had the mean value of 2.93. The standard deviations of the study variables ranged from 0.68 to 1.12.

The results of correlation analysis showed that IEO had a positive relation with exploration activities ($r=0.59^{**}$), access to finance ($r=0.48^{**}$), response performance ($r=0.39^{**}$), active social networking ($r=0.54^{**}$), and business success ($r=0.60^{**}$). Exploration activities had a positive correlation with access to finance ($r=0.57^{**}$), response performance ($r=0.56^{**}$), active social networking ($r=0.68^{**}$), and business success ($r=0.71^{**}$). Access to finance was positively correlated with response performance ($r=0.30^{**}$), active social networking ($r=0.45^{**}$), and business success ($r=0.53^{**}$). Response performance had a positive correlation with active social networking ($r=0.44^{**}$) and business success ($r=0.46^{**}$). Active social networking was found to have a positive correlation with business success ($r=0.71^{**}$).

Table 5.3: Descriptive Statistics of Study 1

	Min.	Max.	Mean	SD	Correlation					
					1	2	3	4	5	6
1. IEO	1.00	5.00	3.0	0.70	1					
2. EA	1.00	5.00	3.01	1.12	.59**	1				
3. AF	1.00	5.00	2.79	0.99	.48**	.56**	1			
4. RP	1.00	5.00	2.01	0.68	.39**	.56**	.30**	1		
5. SN	1.00	5.00	2.84	0.83	.54**	.68**	.45**	.44**	1	
6. S	1.00	5.00	2.93	0.88	.60**	.71**	.53**	.46**	.71**	1

Notes. **, Correlation is significant at the 0.01 level (2-tailed).

Min=minimum, Max=maximum, SD=standard deviation, IEO=individual entrepreneurial orientation, EA=exploration activities, AF=access to finance, RP=response performance, SN=active social networking, S=business success

5.1.4 Common Method Bias, Data Reliability, and Validity

Common method bias (CMB) occurs when the data are obtained through self-report responses and misleadingly inflates the relationship between variables (Conway & Lance, 2010). To rule out CMB ‘ex-ante’ (during data collection) and ‘ex-post’ (after data collection) measures were taken as suggested by Chang, Van Witteloostuijn, and Eden (2010). Before data collection, it was ensured that the questionnaire statements were concise and vivid and they were sequenced differently to minimize the cognitive correlation created by participants. Moreover, the respondents were asked to give honest responses by assuring them confidentially and anonymity. The data of variables were collected in three waves (Control variables and IEO at Time 1, mediators (exploration activities, response performance, access to finance, active

social networking) at Time 2, and business success at Time 3. These three measures help in reducing the CMB during the phase of data collection (Chang et al., 2010; Murray, Kotabe, & Zhou, 2005). After data collection to check the inflation impact of common method variance (CMV), first of all, the Harman single-factor test was conducted and it was revealed that the single factor accounted for less than fifty percent of covariance.

Conway and Lance (2010) stated that establishing construct validity and reliability minimizes the issue of CMB. The construct validity and reliability of all scale items were established as per the recommendations of Hair, Black, Babin, Anderson, and Tatham (2010). The validity of all scales was ensured through average variance extracted (AVE) that is the variance captured by a construct as compared to the measurement error variance (Farrell, 2010). The AVE has threshold value of > 0.50 and all the constructs were well above this limit (IEO=0.68, exploration activities=0.74, response performance=0.75, active social networking=0.63, access to finance=0.69 and business success=0.67).

To measure the internal consistency of all constructs composite reliability (CR) was ensured. It is the actual variance of the score in comparison to the variance explained by the entire scale score (Alonso, Laenen, Molenberghs, Geys, & Vangeneugden, 2010). According to Nunnally and Bernstein (1994), the value of CR > 0.7 is fair, >0.8 is good, and $>$ is considered excellent. CR for all scale items was above the prescribed criteria such as IEO=0.94, exploration activities=0.95, response performance=0.95, active social networking=0.95, access to finance=0.92, and business success=0.94. Moreover, the values of Cronbach's Alpha for all scale items were above the threshold limit of 0.70 as suggested by Nunnally (1994) (IEO=0.94, exploration activities=0.95, response performance=0.95, active social networking=0.95, access to finance=0.92 and business success=0.94). Also Maximum shared variance (MSV) and average shared variance (ASV) were less than AVE that established discriminant validity (see Table 5.4).

Table 5.4: Validity and Reliability of Scales of Study 1

Variables	Number of Items	AVE	CR	MSV	ASV	Cronbach's Alpha
Individual Entrepreneurial Orientation	30	0.68	0.94	0.36	0.52	0.89
Exploration Activities	3	0.74	0.95	0.50	0.52	0.87
Response Performance	3	0.75	0.95	0.31	0.59	0.88
Access to Finance	2	0.63	0.92	0.31	0.52	0.81
Active Social Networking	10	0.69	0.95	0.50	0.51	0.85
SME Success	9	0.67	0.94	0.51	0.60	0.86

Notes. AVE= Average Variance Extracted, CR=Composite Reliability, MSV=Maximum shared variance, ASV=Average shared variance.

To confirm the uni-dimensionality of IEO construct CFA was run on a single factor model and then on a seven factor in which segregated dimensions of IEO were included. The fit statistics were better for the aggregated construct χ^2 (df) = 755.93 (374), χ^2/df = 2.02; comparative fit index (CFI) = 0.96; incremental fit index (IFI) = 0.96; Tucker-Levis index (TLI)=0.95; root mean square error of approximation (RMSEA)=0.06 than a seven factor model χ^2 (df) = 958.091 (380), χ^2/df = 2.52; CFI= 0.93; IFI= 0.93; TLI=0.92; RMESA=0.07. Therefore, the single dimensional IEO construct was retained for the subsequent analysis. Figure 5.1. and Figure 5.2 show the measurement models of one factor and three factor IEO construct.

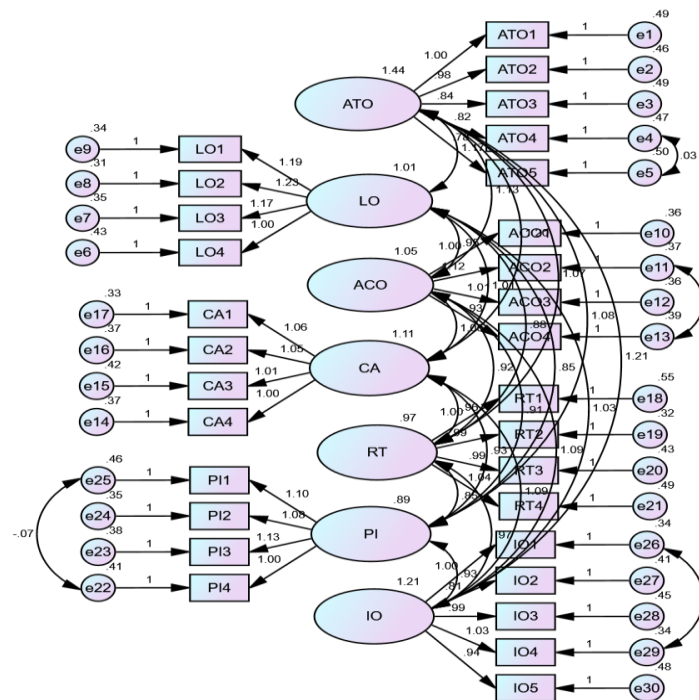


Figure 5.1: Seven-Factor Measurement Model of IEO (SME Owners)

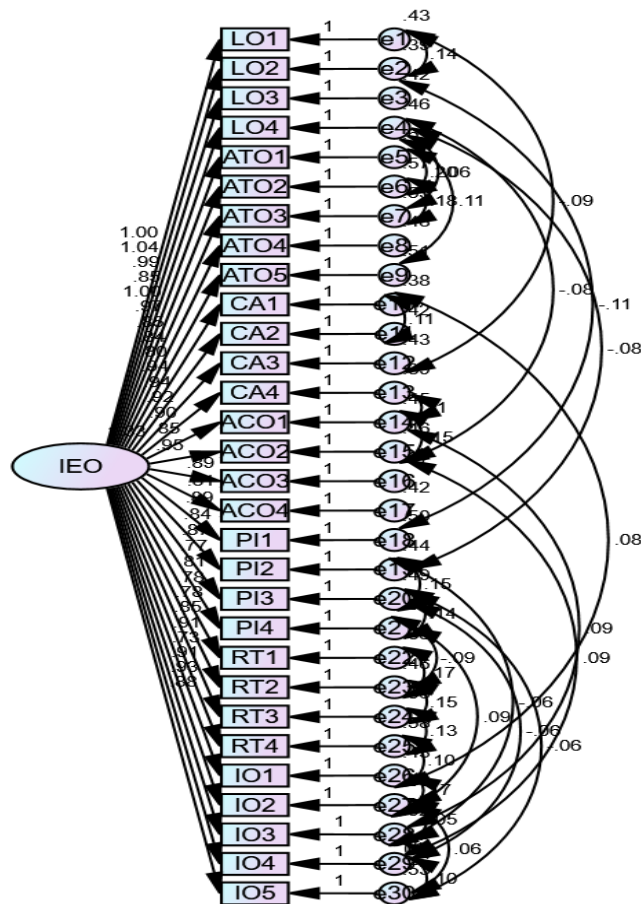


Figure 5.2: One-Factor Measurement Model of IEO (SME Owners)

5.1.5 Model Fit

CFA was done to ensure that all the items significantly belonged to their respective variables. For this purpose Cua, McKone, and Schroeder (2001) suggested that a factor loading greater than 0.40 serves as a threshold. A composite CFA was done to determine the overall model fit. There were a total of six factors IEO, exploration activities (EA), response performance (RP), access to finance (AF), active social networking (SN), and SMEs' success (S). All factor loadings were beyond 0.40 that illustrated that all the items correlated with their respective constructs

The IEO construct was measured through a 30-item scale (LO1, LO2, LO3, LO4, ATO1, ATO2, ATO3, ATO4, ATO5, CA1, CA2, CA3, CA4, ACO1, ACO2, ACO3, ACO4, PI1, PI2, PI3, PI4, RT1, RT2, RT3, RT4, IO1, IO2, IO3, IO4, IO5). The results show that all

the items had significant factor loadings i.e., LO1=0.86, LO2=0.88, LO3=0.86, LO4=0.82, ATO1=0.83, ATO2=0.82, ATO3=0.80, ATO4=0.81, ATO5=0.79, CA1=0.86, CA2=0.85, CA3=0.84, CA4=0.85, ACO1=0.82, ACO2=0.84, ACO3=0.85, ACO4=0.82, PI1=0.82, PI2=0.82, PI3=0.81, PI4=0.78, RT1=0.75, RT2=0.76, RT3=0.79, RT4=0.84, IO1=0.84, IO2=0.77, IO3=0.82, IO4=0.85, IO5=0.81. The concept of exploration activities was measured via 3-item scale EA1, EA2, and EA3 and all of these items had the factor loadings well above 0.4, that is, EA1=0.88, EA2=0.82, and EA3=0.87. The scale of response performance also had three items (RP1, RP2, and RP3).

The results showed that all of the three items loaded well above the range of 0.4 which is RP1=0.83, RP2=0.89, and RP3=0.87. A 2-item scale was used to measure access to finance (AF1 and AF2) and both of the items had an acceptable factor loading i.e., AF1=0.86 and AF2=0.80. The construct of active social networking 10-item scale i.e., SN1, SN2, SN3, SN4, SN5, SN6, SN7, SN8, SN9, and SN10. The results depicted factor loadings above 0.40 such as SN1=0.68, SN2=0.72, SN3=0.86, SN4=, SN5=0.84, SN6=0.77, SN7=0.81, SN8=0.85, SN9=0.77, and SN10=0.71. The construct of business success was measured using a 9-item scale (S1, S2, S3, S4, S5, S6, S7, S8, S9, and S10) and all the items illustrated a factor loading above the threshold level that is S1=0.87, S2=0.84, S3=0.82, S4=0.80, S5=0.85, S6=0.85, S7, S8=0.81, and S9=0.80 (see Table 5.5).

Table 5.5: Factor Loadings for Study 1 Variables

Estimate			
LO1	<---	IEO	.869
LO2	<---	IEO	.883
LO3	<---	IEO	.868
LO4	<---	IEO	.825
ATO1	<---	IEO	.833
ATO2	<---	IEO	.826
ATO3	<---	IEO	.800
ATO4	<---	IEO	.812
ATO5	<---	IEO	.796
CA1	<---	IEO	.868
CA2	<---	IEO	.857
CA3	<---	IEO	.845
CA4	<---	IEO	.858
ACO1	<---	IEO	.825
ACO2	<---	IEO	.849
ACO3	<---	IEO	.857
ACO4	<---	IEO	.826
PI1	<---	IEO	.827
PI2	<---	IEO	.822
PI3	<---	IEO	.819
PI4	<---	IEO	.783
RT1	<---	IEO	.757
RT2	<---	IEO	.799
RT3	<---	IEO	.768
RT4	<---	IEO	.796
IO1	<---	IEO	.848
IO2	<---	IEO	.771
IO3	<---	IEO	.823
IO4	<---	IEO	.851
IO5	<---	IEO	.817
EA3	<---	EA	.878
EA2	<---	EA	.829
EA1	<---	EA	.883
RP1	<---	RP	.838
RP2	<---	RP	.892
RP3	<---	RP	.877
AF1	<---	AF	.863
AF2	<---	AF	.804
SN10	<---	SN	.817
SN9	<---	SN	.772
SN8	<---	SN	.853
SN7	<---	SN	.811

Estimate			
SN6	<---	SN	.770
SN5	<---	SN	.718
SN4	<---	SN	.842
SN3	<---	SN	.869
SN2	<---	SN	.724
SN1	<---	SN	.684
S1	<---	S	.867
S2	<---	S	.845
S3	<---	S	.826
S4	<---	S	.808
S5	<---	S	.857
S6	<---	S	.853
S7	<---	S	.855
S8	<---	S	.810
S9	<---	S	.802

The model fit indicates the acceptability of a research model that indicates the models' capability of data reproduction (Barrett, 2007). A good fit ascertains that data are consistent with the specified model and serves as a prerequisite for the subsequent interpretation of causal relationships (Kenny, 2015). It has been suggested that χ^2/df , CFI, IFI, TLI, and RMSEA should be used to demonstrate the model fit for sample size greater than 200 (Hu & Bentler, 1999; Sharma, Mukherjee, Kumar, & Dillon, 2005; Vaughn, 2016). The results of CFA indicated that the hypothesized associations among variables had a good model fit with data, $\chi^2 (df) = 2889.05 (1480)$, $\chi^2/df = 1.95$; CFI= 0.91; IFI = 0.92; TLI =0.91 and RMSEA= 0.06 (see Figure 5.3 and Table 5.6).

Table 5.6: Model Fit Summary

Fit Indices	Values	Acceptable Range	
$\chi^2 (df)$	1.95	Less than 3=Good	
Comparative fit index (CFI)	0.91	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable Less than 0.80=Unacceptable	Hu and Bentier (1999)
Incremental fit index (IFI)	0.92	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable Less than 0.80=Unacceptable	Hair et al. (2010)

Tucker-Levis index (TLI)	0.91	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable Less than 0.80=Unacceptable	Hair et al. (2010)
Root mean square error of approximation (RMSEA)	0.06	Up to 0.05= Great 0.05-0.1=Moderate Above 0.1=Unacceptable	MacCallum, Browne, and Sugawara (1996)

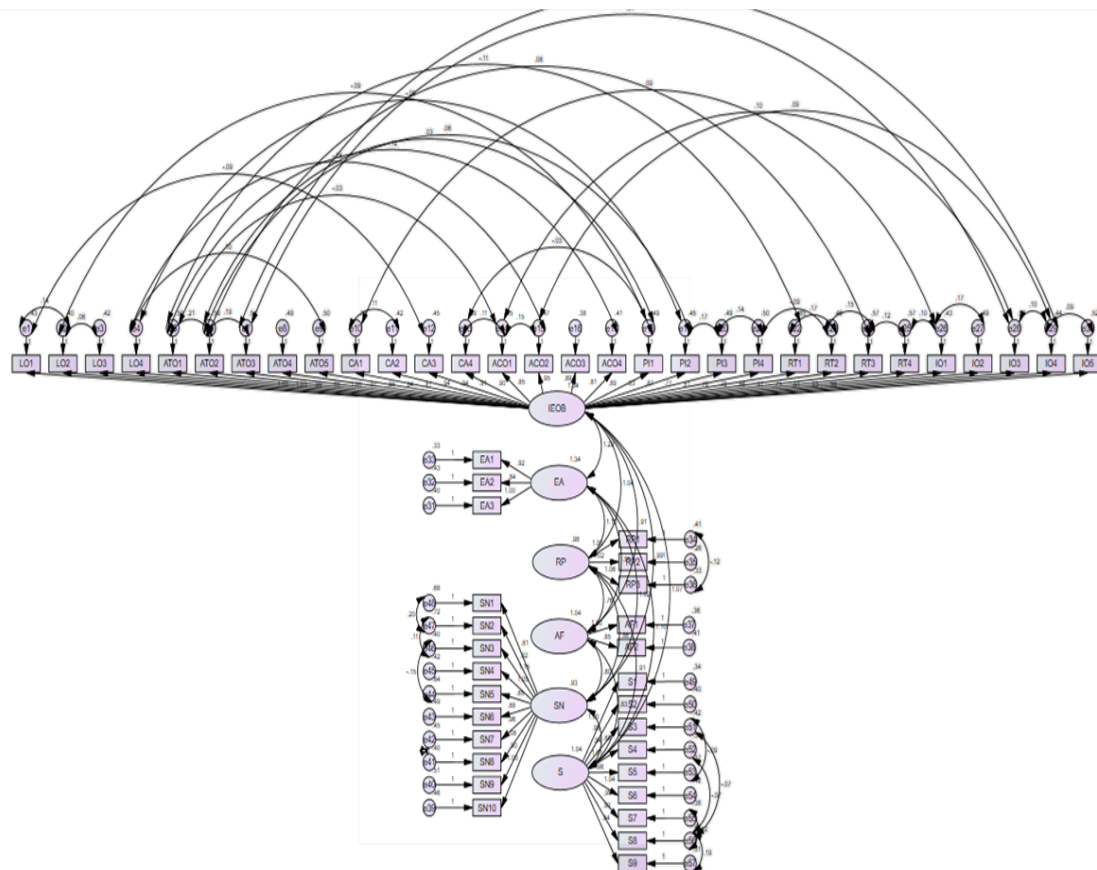


Figure 5.3: CFA for Composite Model of Study 1

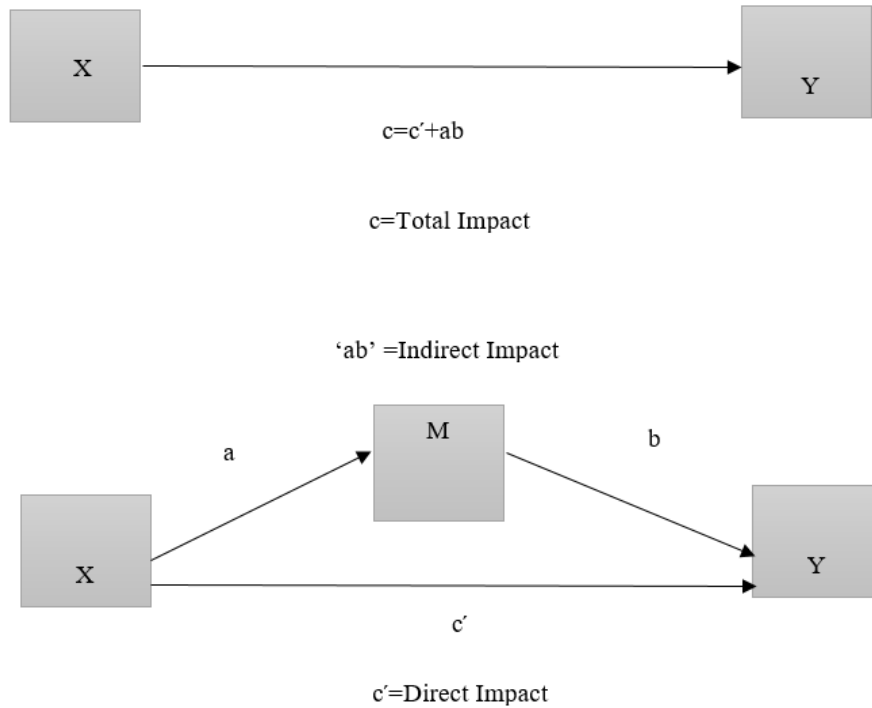
5.1.6 Hypotheses Testing

First of all, the direct and positive relationship was postulated between the IEO and SMEs' success (H1). Moreover, it was hypothesized that action characteristics i.e., exploration activities (H2), response performance (H3), access to finance (H4), and active social networking (H5) mediate the relationship between IEO and SMEs success.

To test the direct and multiple mediation relationships, PROCESS macro (version 3.4) for SPSS was used. Model 4 was employed with a 95% confidence interval (CI) and 5000 draws (bias-corrected bootstrapping). This model allows the quantification and analysis of direct as well as indirect paths via which an independent variable (X) impacts dependent variables (Y) through transmitting variable(s) (M). Model 4 offers the opportunity to simultaneously test the impact of up to 10 mediators and give their comparative impact statistics (indirect effect size) (Hayes, 2017).

Following paths are used to determine the existence of mediation:

- Path ‘a’ is the impact of the independent variable on the dependent variable ($X \rightarrow M$).
- Path ‘b’ is the impact of the mediating variable on the dependent variable ($M \rightarrow Y$).
- Path ‘c’ is the “**total effect**” of the independent variable on the dependent variable ($X \rightarrow Y$).
- Path ‘c’ is the “**direct effect**” of the independent variable on the dependent variable after controlling for the mediators ($X \rightarrow (M) \rightarrow Y$).
- ‘ab’ represents the “**indirect effect**” of the independent variable on the dependent variable after via the mediators (Hayes & Preacher, 2014).
- To establish mediation it is conventionally suggested that X should impact M, M should impact Y. There should be a significant impact of X on Y, after controlling for the mediator(s) if the X and Y relationship becomes insignificant then it is full mediation and if this relationship is significantly reduced, it narrates partial mediation (Baron & Kenny, 1986).
- However recent evidence suggests that mediation exists if ‘ab’ is different from 0 and there is no strict requirement for path ‘c’ to be different from 0 (Hayes, 2009; Hayes & Preacher, 2014; Hayes, 2017).



Following is the generic mediation process based on Hayes (2017)

The paths from IEO to exploration activities, response performance, access to finance, and active social networking are depicted by a_1 , a_2 , a_3 , and a_4 respectively. Similarly, the corresponding paths from exploration activities, response performance, and access to finance, and active social networking to SMEs' success are shown by b_1 , b_2 , b_3 , and b_4 . The total impact of IEO on SMEs' success is shown by (c) and the impact of IEO on SMEs' success after controlling for all four mediators is represented by (c') .

5.1.6.1 Direct Relationship (Total Impact)

To begin with the direct relationship, it was proposed in H1 that IEO has a positive impact on the success of SMEs. The results showed a positive and significant total impact of IEO on the SMEs' success (Path c : $\beta=0.76$ SE, 0.06 $t=12.52$, $p \leq 0.01$). The model was fit at ($R=0.60$, $R^2=0.37$, $F=156.94$, sig. 0.000). Thus, H1 was supported that illustrates that IEO plays a positive role in enhancing the success of SMEs (see Table 5.1.7).

5.1.6.2 Mediated Relationship (Indirect Impact, Direct Impact)

Regarding indirect impacts, it was proposed that exploration activities, response performance, access to finance, and active social networking mediates the IEO and SMEs' success relationship. The results shown in Table 5.7 revealed a positive and significant association between IEO and exploration activities (Path a1: $\beta=0.94$, $SE=0.07$, $t=12.04$, $p \leq 0.01$). A similar trend was found for response performance (Path a2: $\beta=0.30$, $SE=0.05$, $t=7.09$, $p \leq 0.01$), access to finance (Path a3: $\beta=0.68$, $SE=0.07$, $t=9.04$, $p \leq 0.01$), and active social networking (Path a4: $\beta=0.63$, $SE=0.06$, $t=10.49$, $p \leq 0.01$). The model fit was good indicated by ($R=0.59$, $R^2=0.35$, $F=145.02$; sig. 0.000; $R=0.39$, $R^2=0.15$, $F=50.39$; sig. 0.000; $R=0.48$, $R^2=0.23$, $F=81.75$; sig. 0.000; $R^2=0.29$, $F=110.16$; sig. 0.000).

Furthermore, the relationship exploration activities (Path b1: $\beta=0.21$, $SE=0.04$; $t=4.54$, $p \leq 0.01$), access to finance (Path b3: $\beta=0.10$, $SE=0.04$, $t=2.52$ $p \leq 0.01$), and active social networking strategies (Path b4: $\beta=0.37$, $SE=0.05$, $t=6.77$, $p \leq 0.01$) with SMEs success was significantly positive. Nonetheless, response performance and SMEs success association could not be significantly proved (Path b2: $\beta=0.06$, $SE=0.05$, $t=1.06$, n.s). The model fit indices were $R=0.80$; $R^2=0.64$; $F=94.13$; sig. 0.000. After controlling for the mediators (exploration activities, response performance, access to finance, and active social networking), the IEO and SMEs success link was significantly reduced (Path c': $\beta=0.22$, $SE=0.06$, $t=3.69$, $p \leq 0.05$). The model fit indices were $R=0.80$; $R^2=0.64$; $F=94.13$; sig. 0.000. This shows that the impact of IEO on SMEs' success is partially transmitted by mediators.

The total indirect effect size was 0.54 (exploration activities: 0.20, response performance: 0.02, access to finance: 0.07, and active social networking: 0.23). Further probing into mediators, it was revealed that the indirect impact of exploration activities (Effect size=0.20, LLCI=0.10, ULCI=0.30), access to finance Effect size=0.07, LLCI=0.01, ULCI=0.14), and active social networking (Effect size=0.23, LLCI=0.16, ULCI=0.32) were significant. Such that active social networking had the strongest indirect impact, followed by exploration activities, and access to finance. Nonetheless, response performance was not significantly proved as a mediator (Effect size=0.02, LLCI=-0.01, ULCI=0.09). Therefore, H2, H4, and H5 were partially accepted and H3 was not supported.

Table 5.7: The Mediating Impact of Exploration Activities, Response Performance, Access to Finance, and Active Social Networking between IEO and SMEs Success

Variables	Exploration Activities (T2)			SMEs Success (T3)			SMEs Success (T3)			SMEs Success (T3)		
	(a1)			(b1)			(c)			(c')		
	β	SE	t	β	SE	t	β	SE	t	β	SE	t
IEO (T1)	0.94**	0.07	12.04				0.76**	0.06	12.52	0.22**	0.06	3.69
Exploration Activities (T2)				0.21**	0.04	4.54						
R	0.59			0.80			0.60			0.80		
R ²	0.35			0.64			0.37			0.64		
F	145.02			94.13			156.94			94.13		
Sig.	0.000			0.000			0.000			0.000		
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI							
	0.20	<.01		0.10	0.30							
Variables	Response Performance (T2)			SMEs Success (T3)								
	(a2)			(b2)								
	β	SE	t	β	SE	t						
IEO(T1)	0.30**	0.05	7.09									
Response Performance (T2)	0.42**	0.02		0.10	0.04	1.06						
R	0.39			0.80								
R ²	0.15			0.64								
F	50.39			94.13								
Sig.	0.000			0.000								
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI							
	0.02	n.s		-0.01	0.09							
Variables	Access to Finance			SMEs Success								

	(T2)			(T3)		
	(a3)			(b3)		
	β	SE	t	β	SE	t
IEO(T1)	0.68**	0.07	9.04			
Access to Finance (T2)				0.21*	0.04	2.52
R	0.48			0.80		
R ²	0.23			0.64		
F	81.75			94.13		
Sig.	0.000			0.000		
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI	
	0.07	<.01		0.01	0.14	
Variables	Active Social Networking (T2)			SMEs Success (T3)		
	(a3)			(b3)		
	B	SE	t	B	SE	t
IEO(T1)	0.63**	0.06	10.49			
Active Social Networking (T2)				0.37**	0.05	6.77
R	0.54			0.80		
R ²	0.29			0.64		
F	110.16			94.13		
Sig.	0.000			0.000		
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI	
	0.23	<.01		0.16	0.32	
				Total Indirect Impact	Effect Size	p
					0.54	<.01
					LLCI	ULCI
					0.44	0.64

Notes. **p≤0.01, *p≤0.05, n.s. = not significant, LLCI=Lower level confidence interval, ULCI=Upper level confidence interval

5.2 Results Study 2

5.2.1 Demographic Profile

The population of study 2 comprised the students of BBA studying in public and private universities of Lahore. In this section, the demographic profile of the student sample is provided that gives insight into their respective gender, age group, semester, and university sector. A total of 300 questionnaires were distributed, out of which 248 were returned in wave 1, 235 were returned in wave 2 and 227 were returned in wave 3. Out of which only 212 were usable after matching for all three time periods and consideration of missing values. This led to an overall response rate of 70.60%. It was found that 49.5% of the participants were male and 50.5% were female. Out of the total participants, 11.3 % were below 20 years of age, 75.9% were from 20 to 22 years, 10.8% were from 23 to 25 years, and only 1.9% were above 25 years. Concerning the university sector, 48.6% of the participants belonged to public sector universities and 51.4% belonged to private sector universities. From the total participants, 17.4% were in the first semester, 16.5% were in the second semester, 18.3% were in the third semester, 15.5% were in the fourth semester, 15.1% were in the fifth semester, 16.9% were in the sixth semester of BBA (see Table 5.8).

Table 5.8: Demographic Profile of Study 2 Participants

Variable	Categories	Frequency	Percent	Valid Percent	Cumulative Percent
Semester ¹	First	37	17.4	17.4	17.4
	Second	35	16.5	16.5	33.9
	Third	39	18.3	18.3	52.3
	Fourth	33	15.5	15.5	67.9
	Fifth	32	15.1	15.1	83.1
	Sixth	36	16.9	16.9	100.0
	Total	212	100.0	100.0	
Age	Below 20 years	24	11.3	11.3	11.3
	20-22 years	161	75.9	75.9	87.3
	23-25 years	23	10.8	10.8	98.1
	Above 25 years	4	1.9	1.9	100.0
	Total	212	100.0	100.0	
University Sector	Public	103	48.6	48.6	48.6
	Private	109	51.4	51.4	100.0
	Total	212	100.0	100.0	
	Male	105	49.5	49.5	49.5
Gender	Female	107	50.5	50.5	100.0
	Total	212	100.0	100.0	

Notes. ¹ The students of 7th and 8th semester were not included given the issue of availability in the longitudinal nature of the study

5.2.2 Data Normality

In this research skewness and kurtosis were used to determine the data deviation from normality. Tabachnick and Fidell (1996) put forth that data set that is above 200 participants dissolves the impacts of kurtosis and skewness, and does not make it prone to substantial deviations in the analysis (p.73). First of all the participants of study 2 are above this threshold (N=212). Secondly, the values of kurtosis and skewness for all variables were found within the threshold limit that is (-1.96 to +1.96) for skewness and (-2 to +2) for kurtosis. See Table 5.9.

Table 5.9: Normality Statistics

Variables	Skewness		Kurtosis	
	Statistic	Std. Error	Statistic	Std. Error
Individual Entrepreneurial Orientation	-.121	.167	-.844	.333
Alert Scanning and Search	.160	.167	-1.022	.333
Alert Association and Connection	.240	.167	-.570	.333
Alert Evaluation and Judgment	.071	.167	-.868	.333
Entrepreneurial Intention	.002	.167	-1.136	.333

5.2.3 Descriptive Statistics

In this section, the means, standard deviations, and correlations of the study variables are given (see Table 5.10). First of all, it was found that the range of responses for IEO was from 1 to 4.70 and for all dimensions of entrepreneurial alertness (i.e., alert scanning and search, alert association and connection, alert evaluation, and judgment) and entrepreneurial intention, it was from 1 to 5. The mean value for IEO was 2.90, for alert scanning and search was 3.00, for the alert association and connection 2.78, for alert evaluation and judgment 2.83, and for the entrepreneurial intention, it was 2.99. The standard deviations for all study variables ranged from 0.83 to 1.12.

The results of correlation analysis showed that IEO had a positive correlation with alert scanning and search ($r=0.63^{**}$), alert association and connection ($r=0.652^{**}$), alert evaluation and judgment ($r=0.60^{**}$), with entrepreneurial intention ($r=0.60^{**}$). Alert scanning and search was positively correlated with alert association and connection ($r=0.61^{**}$), alert evaluation and judgment ($r=0.58^{**}$), with entrepreneurial intention ($r=0.61^{**}$). Alert association and

connection had a significant and positive correlation with alert evaluation and judgment ($r=0.56^{**}$), with entrepreneurial intention ($r=0.54^{**}$). Alert evaluation and judgment was significantly and positively correlated with entrepreneurial intention ($r=0.58^{**}$).

Table 5.10: Descriptive Statistics of Study 2

Variables	Min	Max	Mean	SD	1	2	3	4	5
1.AS	1.00	5.00	3.00	1.00	1				
2.AA	1.00	5.00	2.78	0.89	.615 ^{**}	1			
3.AE	1.00	5.00	2.83	1.06	.581 ^{**}	.565 ^{**}	1		
4.EI	1.00	5.00	2.99	1.12	.614 ^{**}	.549 ^{**}	.587 ^{**}	1	
5.IEO	1.00	4.70	2.90	0.83	.637 ^{**}	.652 ^{**}	.620 ^{**}	.603 ^{**}	1

Notes. ^{**}. Correlation is significant at the 0.01 level (2-tailed).

Min=minimum, Max=maximum, SD=standard deviation, AS=Alert Scanning and Search, AA= Alert association and connection, AE=Alert Evaluation and Judgment, EI=Entrepreneurial Intention, IEO=Individual entrepreneurial Orientation

5.2.4 Common Method Bias, Data Reliability, and Validity

The questionnaire comprised of concise and vivid statements and they were sequenced differently to minimize the cognitive correlation created by participants as well as the respondents were asked to give honest responses by assuring them confidentially and anonymity (Murray et al., 2005). The data of variables were collected in three waves (Control variables and IEO at Time 1, mediators (alert scanning and search, alert association and connection, alert evaluation and judgment) at Time 2, and entrepreneurial intention at Time 3. To address the concern of inflation impact of common method variance (CMV), first of all, Harman single-factor test was conducted to check for common method variance, it was revealed that the single factor accounted for less than fifty percent of covariance. Thus, multiple remedies were employed ‘ex-ante’ (during data collection) and ‘ex-post’ (after data collection) to alleviate CMV as recommended by Chang et al. (2010).

The construct validity and reliability of all scale items were established as per the recommendations of Hair et al. (2010). The validity of all scales was ensured (IEO=0.53, Alert scanning and search=0.61, alert association and connection= 0.50, alert evaluation and judgment=0.55, and entrepreneurial intention=0.66) such that AVE > 0.50. Composite reliability was present as CR > 0.70 for all scale items (IEO=0.98, Alert scanning and search=0.97, alert association and connection= 0.93, alert evaluation and judgment=0.96, and

entrepreneurial intention=0.95). Also Maximum shared variance (MSV) and average shared variance (ASV) were less than AVE that established discriminant validity. Moreover, the values of Cronbach's Alpha for all scale items were above the threshold limit of 0.70 as suggested by Nunnally (1994) (IEO=0.88, Alert scanning, and search=0.84, alert association and connection= 0.70, alert evaluation and judgment=0.80, and entrepreneurial intention=0.72) (see Table 5.11).

Table 5.11: Validity and Reliability of Scales of Study 2

Variables	Number of Items	AVE	CR	MSV	ASV	Cronbach's Alpha
Individual Entrepreneurial Orientation	10	0.53	0.98	0.42	0.52	0.88
Alert Scanning and Search	6	0.61	0.97	0.39	0.54	0.84
Alert Association and Connection	3	0.50	0.93	0.39	0.48	0.70
Alert Evaluation and Judgment	4	0.55	0.96	0.42	0.54	0.80
Entrepreneurial Intention	3	0.66	0.95	0.38	0.58	0.72

Notes. AVE= Average Variance Extracted, CR=Composite Reliability, MSV=Maximum shared variance, ASV=Average shared variance.

To confirm the uni-dimensionality of IEO construct CFA was run on a single factor model and then on a three factor model showing the separate dimensions of IEO. The results revealed that single factor model had a better fit χ^2 (df) = 52.1 (32), χ^2 /df = 1.63; comparative fit index (CFI) = 0.97; incremental fit index (IFI) = 0.97; Goodness of Fit (GFI)=0.95Tucker-Levis index (TLI)=0.97 root mean square error of approximation (RMSEA) = 0.05 than a three factor model χ^2 (df) = 75.16 (32), χ^2 /df = 2.34; CFI= 0.94; IFI= 0.97; GFI=0.93; TLI=0.92; RMESA=0.08. Therefore, the single dimensional IEO construct was retained for the subsequent analysis. Figure 5.4 and Figure 5.5 show the measurement models of one factor and three factor IEO construct.

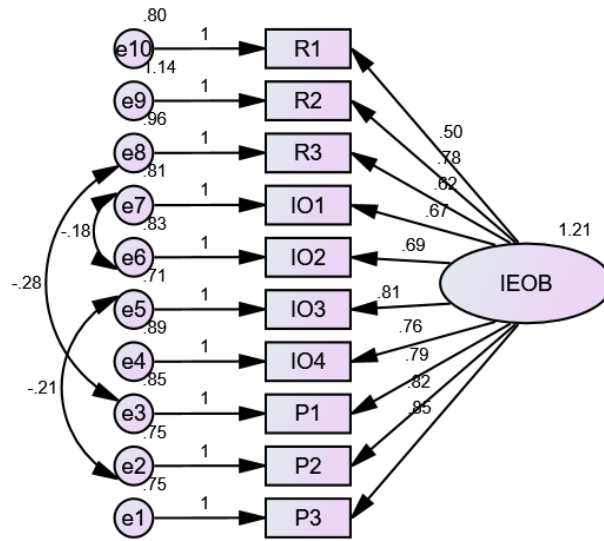


Figure 5.4: Single Factor Measurement Model of IEO (Undergraduate Business Students)

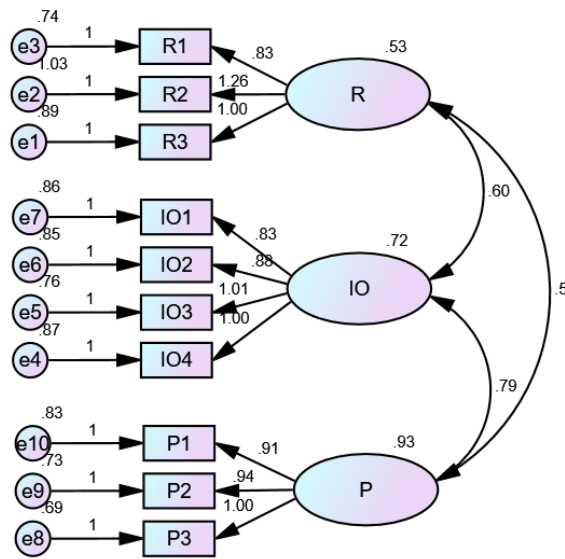


Figure 5.5: Three-Factor Measurement Model of IEO (Undergraduate Business Students)

5.2.5 Model Fit

CFA was done to ensure that all the items significantly belonged to their respective variable. For this purpose, Cua et al. (2001) suggested that a factor loading greater than 0.40 serves as a threshold. A composite FA was done to determine the overall model fit. There were

a total of five factors IEO, Alert scanning and search (AS), alert association and connection (AA), alert evaluation and judgment (AE), and entrepreneurial intention (EI). All factor loadings were beyond 0.40 that illustrated that all the items correlated with their respective constructs

The IEO construct was measured through a ten-item scale (R1, R2, R3, IO1, IO2, IO3, IO4, P1, P2, P3). The results show that all the items had significant factor loadings i.e., R1=0.50, R2=0.77, R3=0.61, IO1=0.67, IO2=0.69, IO3=0.80, IO4=0.75, P1=0.79, P2=0.81, P3=0.85. Alert scanning and search were measured through 6 items AS1, AS2, AS3, AS4, AS5, and AS6. The factor loadings for all the items were above 0.4 showing them to be significantly measuring the pertinent construct (AS1=0.75, AS2=0.91, AS3=0.54, AS4=0.79, AS5=0.99, and AS6=0.61). Alert association and connection was measured through a three-item scale i.e., AA1, AA2, and AA3. The results showed that all of the three items loaded well above the range of 0.4 which is AA1=0.53, AA2=0.83, AA3=0.70. The construct of alert evaluation and judgment was measured on a four-item scale AE1, AE2, AE3, and AE4. The values of factor loadings were beyond 0.4 (AE1=0.64, AE2=0.76, AE3=0.67, and AE4=0.76). The construct of entrepreneurial intention was measured on a three-item scale i.e., EI1, EI2, and EI3. The results depicted factor loadings above 0.40 such as EI1=0.85, EI2=0.95 and EI3=0.61 (see Table 5.12).

Table 5.12: Factor Loadings for Study 2 Variables

			Estimate
P3	<---	IEO	.850
P2	<---	IEO	.818
P1	<---	IEO	.791
IO4	<---	IEO	.758
IO3	<---	IEO	.805
IO2	<---	IEO	.692
IO1	<---	IEO	.673
R3	<---	IEO	.615
R2	<---	IEO	.775
R1	<---	IEO	.504
AS6	<---	AS	.610
AS5	<---	AS	.993
AS4	<---	AS	.799
AS3	<---	AS	.544

			Estimate
AS2	<---	AS	.910
AS1	<---	AS	.753
AA3	<---	AA	.700
AA2	<---	AA	.837
AA1	<---	AA	.532
AE4	<---	AE	.760
AE3	<---	AE	.672
AE2	<---	AE	.767
AE1	<---	AE	.645
EI3	<---	EI	.610
EI2	<---	EI	.958
EI1	<---	EI	.851

The results shown in Table 5.13 indicated that the hypothesized associations among variables have a good model fit with data, χ^2 (df) = 463.51 (271), χ^2/df = 1.71; goodness of fit index (GFI)=0.86, Adjusted goodness of fit index (AGFI)=0.82; comparative fit index (CFI) = 0.92; incremental fit index (IFI) = 0.92; Tucker-Levis index (TLI) =0.91 root mean square error of approximation (RMSEA) = 0.06 (see Figure 5.6 and Table 5.13)

Table 5.13: Model Fit Summary

Fit Indices	Values	Acceptable Range	
χ^2 (df)	1.83	Less than 3=Good	
Comparative fit index (CFI)	0.90	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable Less than 0.80=Unacceptable	Hu and Bentier (1999)
The goodness of fit index (GFI)	0.86	Greater than or equal to 0.90 Greater than 0.80=Sometimes acceptable	Marcoulides and Raykov (2000)
Adjusted goodness of fit index (AGFI)	0.82	Greater than or equal to 0.80	Baumgarther and Homburg (1996)
Incremental fit index (IFI)	0.90	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable Less than 0.80=Unacceptable	Hair et al. (2010)
Tucker-Levis index (TLI)	0.90	Greater than 0.95= Great Greater than 0.90=Traditional Greater than 0.80=Sometimes acceptable	Hair et al. (2010)

Root mean square error of approximation (RMSEA)	0.06	Less than 0.80=Unacceptable Upto 0.05= Great 0.05-0.1=Moderate Above 0.1=Unacceptable	MacCallum et al. (1996)

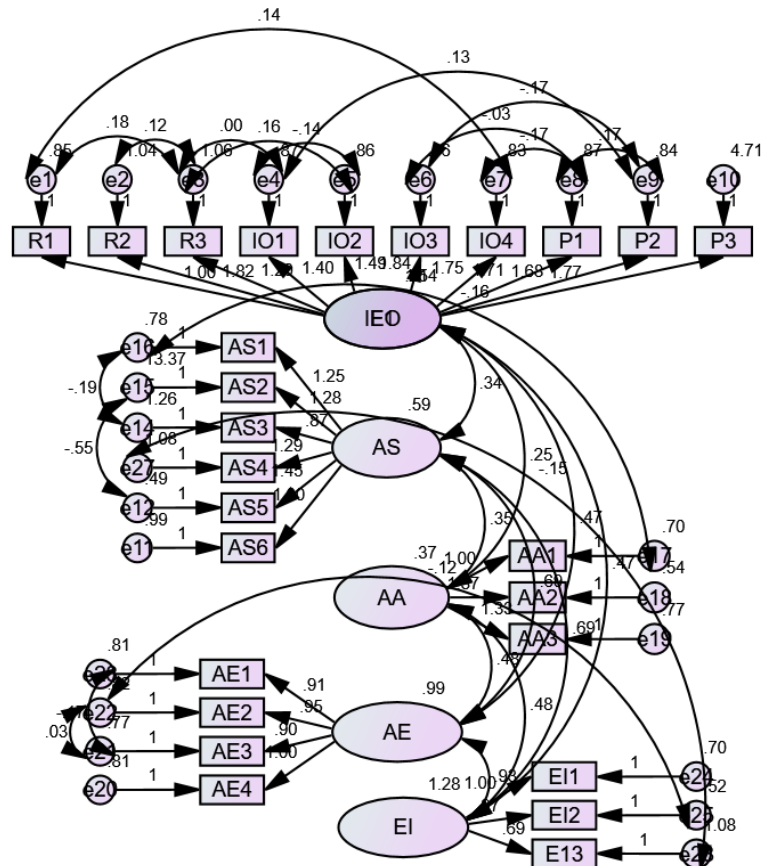


Figure 5.6: CFA for Composite Model of Study 2

5.2.6 Hypotheses Testing

To test the relationship between variables, PROCESS Model 4 with a 95% confidence interval (CI) and 5000 draws (bias-corrected bootstrapping) was employed to test the multiple mediation model. First of all, the direct and positive relationship was postulated between the IE0 and entrepreneurial intention of students. Moreover, it was hypothesized that all dimensions of entrepreneurial alertness (i.e., alert scanning and search, alert association and connection, alert evaluation, and judgment) mediate the relationship between IE0 and entrepreneurial intention of students.

The path from IEO to alert scanning and search is represented by (a1), alert association, and connection is shown by (a2), and alert evaluation and judgment is depicted by (a3). Similarly, the path from alert scanning and search to entrepreneurial intention is represented by (b1), the path from alert association and connection to entrepreneurial intention is shown by (b2), and the path from alert evaluation and judgment to entrepreneurial intention is depicted by (b3). The total impact of IEO on entrepreneurial intention is shown by (c) and the impact of IEO on entrepreneurial intention after controlling for all three mediators is represented by (c'). The mediation analysis is depicted in Table 5.14.

5.2.6.1 Direct Relationship (Total Impact)

To begin with the direct relationship, it was proposed in H6 that IEO has a positive impact on the entrepreneurial intention of students. The results showed a positive and significant total impact of IEO on the entrepreneurial intention of students (Path c: $\beta=0.89$, SE, 0.07 $t=10.94$, $p \leq 0.01$). The model was fit at ($R=0.60$, $R^2=0.36$, $F=119.77$, sig. 0.000). Thus, H6 was supported that illustrates that IEO plays a positive role in enhancing the entrepreneurial intention of business students.

5.2.6.2 Mediated Relationship (Indirect Impact, Direct Impact)

About indirect impacts, it was proposed that alert scanning and search (H7a), alert association, and connection (H7b), alert evaluation, and judgment (H7c) mediates the IEO and entrepreneurial intention relationship. The results revealed a positive and significant association between IEO and alert scanning and search (Path a1: $\beta=0.76$, SE=0.06, $t=11.98$, $p \leq 0.01$). A similar trend was found for alert association and connection (Path a2: $\beta=0.69$, SE=0.05, $t=12.47$, $p \leq 0.01$) and alert evaluation and judgment (Path a3: $\beta=0.78$, SE=0.06, $t=11.43$, $p \leq 0.01$). The model fit was good indicated by ($R=0.63$, $R^2=0.40$, $F=143.68$; sig. 0.000; $R=0.65$, $R^2=0.42$, $F=155.57$; sig. 0.000; $R=0.61$, $R^2=0.38$, $F=130.78$; sig. 0.000).

Moreover, the relationship between alert scanning and search and entrepreneurial intention (Path b1: $\beta=0.30$, SE=0.07; $t=3.93$, $p \leq 0.01$) as well as with alert evaluation and judgment was significantly positive (Path b3: $\beta=0.24$, SE=0.07, $t=3.47$, $p \leq 0.01$). However, the

alert association and connection and entrepreneurial intention association could not be significantly proved (Path b2: $\beta=0.13$, $SE=0.08$, $t=1.5$, n.s). The model fit indices were $R=0.70$; $R^2=0.49$, $F=50.47$; sig. 0.000. After controlling for the mediators (alert scanning and search, alert association and connection, alert evaluation, and judgment), the IEO and entrepreneurial intention association was significantly reduced (Path c': $\beta=0.28$, $SE=0.10$, $t=2.81$, $p \leq 0.01$). The model fit indices were $R=0.70$; $R^2=0.49$, $F=50.47$; sig. 0.000. This shows that the impact of IEO on entrepreneurial intention is partially transmitted by mediators.

The total indirect effect size was 0.52 (alert scanning and search: 0.23; alert association and connection: 0.09, and alert evaluation and judgment: 0.19). Further probing into mediators showed that the indirect impact of scanning and search (Effect size=0.23, LLCI=0.10, ULCI=0.36) and alert evaluation and judgment (Effect size=0.19, LLCI=0.08, ULCI=0.31) were significant. It depicted that the indirect impact of scanning and search is stronger as compared to alert evaluation and judgment. Nonetheless, alert association and connection was not proved to be the significant mediator (Effect size=0.09, LLCI=-0.04, ULCI=0.23). Therefore, H7a and H7c were partially accepted and H7b was not supported.

Table 5.14: The Mediating Impact of IEO on Entrepreneurial Intention through Alert Scanning and Search, Alert Association and Connection, and Alert Evaluation and Judgment

Variables	Alert Scanning and Search (T2)			Entrepreneurial Intention (T3)			Entrepreneurial Intention (T3)			Entrepreneurial Intention (T3)		
	(a1)			(b1)			(c)			(c')		
	β	SE	T	β	SE	t	β	SE	T	β	SE	t
IEO (T1)	.76**	0.06	11.98				0.89**	0.07	10.94	0.28	0.10	2.81
Alert Scanning and Search (T2)				0.30**	0.07	3.93						
R	0.63			0.70			0.60			0.70		
R ²	0.40			0.49			0.36			0.49		
F	143.68			50.47			119.77			50.47		
Sig.	0.000			0.000			0.000			0.000		
Bootstrapping for Indirect Impact	Effect Size	P		LLCI	ULCI							
	0.23	<.01		0.10	0.36							
Variables	Alert Association and Connection (T2)			Entrepreneurial Intention (T3)								
	(a2)			(b2)								
	β	SE	T	β	SE	t						
IEO(T1)	0.69**	0.05	12.47									
Alert Association and Connection (T2)	0.42**	0.02		0.13	0.08	1.55						
R	0.65			0.70								
R ²	0.42			0.49								
F	155.57			50.47								
Sig.	0.000			0.000								
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI							
	0.09	n.s		-0.04	0.23							
Variables	Alert Association and			Entrepreneurial Intention								

	Connection (T2)			(T3)						
	(a3)			(b3)						
	β	SE	T	β	SE	t				
IEO(T1)	0.78**	0.06	11.43							
Alert Evaluation and Judgment (T2)				0.24**	0.07	3.47				
R	0.61			0.70						
R ²	0.38			0.49						
F	130.78			50.47						
Sig.	0.000			0.000						
Bootstrapping for Indirect Impact	Effect Size	p		LLCI	ULCI	Total Indirect Impact	Effect Size	P	LLCI	ULCI
	0.19	<.01		0.08	0.31		0.52	<.01	0.37	0.68

Notes. ** ≤ 0.01 , n.s. = not significant, LLCI=Lower level confidence interval, ULCI=Upper level confidence interval

5.3 Results Study 3

5.3.1 Demographic Profile of Training and Control Group

Study 3 was experimental and SME owners constituted the population. It was based on one treatment group (IEO training) and a matched control group (no IEO training). There were 42 participants in the control group and their demographic profile indicated that 71.4 % of the participants were male and 28.6% were female. Out of the total 11.6% were less than 25 years old, 23.3% were 25 to 30 years old, 25.6% were 31 to 35 years old, 23.3% were 36 to 40 years old and 16.3% were more than 40 years old. Regarding the educational profile of the participants, 26.2% had education less than matriculation, 21.4% of the participants had education till matriculation, 16.7% were intermediate, 19% were bachelors, 14% were masters and only 7% had education above masters. Only 37.2% of the participants had obtained education related to their relevant field of business and 62.8% had obtained education that was not relevant to their business filed. Of the total participants, 26.2% had business education, 59.5% had general education, and 14.3% had technical education.

The demographics of business size indicate that 66.7% of them were small scale and 33.3% were operating on a medium scale. Of the total 78.6% were in the formal sector and 21.4% were in the informal sector. Among those 26.2% were in the manufacturing sector, 45.2% were in the trading sector, and 28.6% were in the services sector. The tax-paying status revealed that 91% of the business were taxpayers and only 9% were non-taxpayers. Of the total 47.7% of the business had 1 to 5 years of operations, 23.8% had 6-10 years of operations and 19% had business operations beyond 15 years. The personal business experience of participants revealed that 57.2% had 1 to 5 years of experience, 19% had 6 to 10 years of experience 9.5% had 11 to 15 years of experience and 14.3% had more than 15 years of experience. The mean intelligence score was ($M=3.04$) and generalized self-efficacy score was ($M=3.10$).

The training group comprised 43 participants and their demographic profile indicated that 81.4 % of the participants were male and 18.6% were female. Out of the total 11.6% were less

than 25 years old, 23.3% were 25 to 30 years old, 25.6% were 31 to 35 years old, 23.3% were 36 to 40 years old and 16.3% were more than 40 years old. Regarding the educational profile of the participants 16.3% had education less than matriculation, 23.3% of the participants were education till matriculation, 14% were intermediate, 32.6% were bachelors, 9.3% were masters and only 4.7% had education above masters. Only 39.5% of the participants had obtained education related to their relevant field of business and 60.5% had obtained education that was not relevant to their business filed. Of the total participants, 27.9% had business education, 55.8% had general education, and 16.3% had technical education.

The demographics of business size indicate that 60.5% of them were small scale and 39.5% were operating on a medium scale. Of the total, 81.4% were in the formal sector and 18.6% were in the informal sector. Of the total participants 25.6% in the manufacturing sector, 46.5% were in the trading sector, and 27.9% were in the services sector. The tax-paying status revealed that 90.7% of the business were taxpayers and only 9.3% were non-taxpayers. Of the total 48.4% of businesses had 1 to 5 years of operations, 20.9% had 6-10 years of operations, 14% had 11 to 15 years and 16% had business operations beyond 15 years. The personal business experience of participants revealed that 55.8% had 1 to 5 years of experience, 20.9% had 6 to 10 years of experience 7% had 11 to 15 years of experience and 16.3% had more than 15 years of experience. The mean intelligence score was ($M=3.13$) and the generalized self-efficacy score was ($M=3.06$). Both groups had almost similar demographic makeup as suggested by Kumar (2002). The demographic profile of training, as well as the control group, is depicted in Table 5.15.

Table 5.15: Demographic Profile of Study 3 Participants

Variables	Categories	Control Group		Training Group	
		Frequency	Percent	Frequency	Percent
Gender	Male	30	71.4	35	81.4
	Female	12	28.6	8	18.6
	Total	42	100.0	43	100.0
Age	Below 25	4	9.5	5	11.6
	25-30 Years	10	23.8	10	23.3
	31-45 Years	12	28.6	11	25.6
	36-40 years	7	16.7	10	23.3
	Above 40 years	9	21.4	7	16.3
	Total	42	100.0	43	100.0
Educational Level	Below matriculation	8	19.0	7	16.3
	Matriculation	9	21.4	10	23.3
	Intermediate	7	16.7	6	14.0
	Bachelors	11	26.2	14	32.6
	Masters	5	11.9	4	9.3
	Above Masters	2	4.8	2	4.7
	Total	42	100.0	43	100.0
Educational Relevance with business	Yes	15	35.7	17	39.5
	No	27	64.3	26	60.5
	Total	42	100.0	43	100.0
Field of Education	Business	11	26.2	12	27.9
	General	25	59.5	24	55.8
	Technical	6	14.3	7	16.3
	Total	42	100.0	43	100.0
	1-5 years	24	57.2	24	55.8
Personal Business Experience	6-10 years	8	19.0	9	20.9
	11-15 years	4	9.5	3	7.0
	Above 15 years	6	14.3	7	16.3
	Total	42	100.0	43	100.0
Age of Business	1-5 years	24	57.2	21	48.9
	6-10 years	8	19.0	9	20.9
	11-15 years	4	9.5	6	14.0
	Above 15 years	6	14.3	7	16.3
	Total	42	100.0	43	100.0

Size of Business	Small Scale	28	66.7	26	60.5
	Medium Scale	14	33.3	17	39.5
	Total	42	100.0	42	100.0
Business Sector	Manufacturing	11	26.2	11	25.6
	Trading	19	45.2	20	46.5
	Services	12	28.6	12	27.9
	Total	12	100.0	43	100.0
Chamber of commerce membership	Participative	33	78.6	35	81.4
	Passive	9	21.4	8	18.6
	Total	42	100.0	43	100.0
Taxpaying status	Filer	39	91.0	39	90.7
	Non Filer	3	9.0	4	9.3
	Total	42	100.0	43	100.0

5.3.2 Data Normality, Outliers, Linearity, and Correlation

To proceed with the tests to compare the training and control group before and after IEO training it was ensured that the dependent variables were normally distributed for each level of the independent variable. For this purpose skewness, kurtosis, and Shapiro-Wilk test were used, the results revealed that all the dependent variables for training group (i.e., IEO training reaction measures, learning, behavior, and success) and control group (i.e., IEO learning, behavior, and success) fulfilled these criteria. Table 5.16 shows that values of skewness (-1.96 to +1.96) and kurtosis (-2 to +2) were within the specified range and the Shapiro-Wilk test was insignificant ($p>0.05$). Moreover, the box plots indicated that there were no significant outliers and the scatter plots of Time 1 (covariates) and Time 2 (dependent variables) had an almost linear relationship.

Table 5.16: Normality Statistics for Study 3

Variables	Control Group				Training Group			
	Skewn ess	Kurtosi s	Shapiro- Wilk statistic	P	Skewnes s	Kurtosi s	Shapiro- Wilk statistic	P
IEO Training Reaction Measures ¹								
Satisfaction					0.15	-0.58	0.96	0.23
Utility					0.12	0.01	0.98	0.15
Transfer					0.10	-0.90	0.96	0.71
IEO learning	0.56	-0.03	0.95	0.08	-0.06	-1.11	0.94	0.06
IEO behavior	0.48	-0.68	0.95	0.06	0.18	-0.87	0.95	0.08
SMEs success	0.32	-0.56	0.95	0.08	0.25	-0.32	0.94	0.06

Notes.¹only measured for the training group, $p \geq 0.05$ =n.s., p =significance value, IEO=individual entrepreneurial orientation

The correlation between the study variables for training as well as the control group was lower than 0.80 that removed the concern for multi-collinearity except for Time 1 and Time 2 IEO learning, behavior, and SMEs success that is not surprising as they remained almost same in the absence of training. Table 5.17 depicts the correlation among the control group variables and Table 5.18 shows the correlations among training group variables.

Table 5.17: Correlations among Study 3 Variables (Control Group)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Gender	1																		
Business category	-.163	1																	
Age	-.083	.249	1																
Education	-.057	.175	.009	1															
Educational relevance	-.409**	.091	.098	.092	1														
Field of education	.036	.470**	.205	.136	.335*	1													
Age of business	.112	.001	.144	.082	-.029	-.070	1												
Personal business experience	-.007	.202	.516**	-.007	-.025	.093	.469**	1											
Size	.112	-.091	-.132	-.161	-.211	-.350*	.153	.234	1										
Sector Formality	.183	-.017	.068	-.374*	-.095	-.086	-.075	.108	-.246	1									
Tax filing status	.096	-.180	.175	-.057	.235	-.005	-.131	-.110	-.343*	.338*	1								
IEO Learning (T1)	.138	-.065	-.393*	.018	-.274	-.330*	-.109	-.231	.133	.009	-.269	1							
IEO behavior (T1)	.039	-.113	-.156	.266	.032	-.037	-.165	-.148	.171	-.083	.120	.020	1						
SMEs success (T1)	-.072	-.130	-.091	.031	.121	.090	-.109	-.163	.015	-.089	.131	-.003	.602**	1					
IEO Learning (T2)	.142	-.056	-.310*	-.067	-.173	-.347*	-.083	-.190	.167	-.013	-.130	.419**	.035	.054	1				
IEO behavior (T3)	.051	-.210	-.055	.327*	-.056	-.144	-.151	-.157	.037	-.106	.166	.059	.373**	.631**	.075	1			
SMEs success (T3)	-.113	-.080	-.020	.199	.226	.061	-.192	-.134	.005	-.089	.181	-.034	.777**	.521**	.010	.753**	1		
Generalized self-efficacy	.198	.202	.120	-.141	-.161	.047	.101	-.021	-.141	.167	.147	-.178	.147	.113	-.123	-.011	.080	1	
Intelligence	.019	.184	-.082	.227	.111	.259	-.386*	-.265	-.194	.218	.131	.021	.274	.191	-.098	.335*	.282	-.046	1

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

Table 5.18: Correlations among Study 3 Variables (Training Group)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Gender	1																					
Business category	-.015	1																				
Age	-.178	.150	1																			
Education	-.243	.043	.048	1																		
Educational relevance	-.225	.286	-.054	-.082	1																	
Field of education	-.098	.297	.127	-.039	.074	1																
Age of business	.179	-.212	.176	-.176	-.087	-.070	1															
Personal business experience	.193	.033	.371*	-.207	-.157	.114	.136	1														
Size	-.020	-.026	-.325*	-.053	-.027	-.220	.287	-.002	1													
Sector Formality	-.229	.067	.155	.180	.142	-.098	-.324*	-.007	-.387*	1												
Tax filing status	.053	-.120	-.024	.036	-.069	.057	-.183	-.005	-.095	.053	1											
IEO Learning (T1)	-.062	.044	.125	-.009	-.253	.036	-.085	-.009	-.003	-.049	.141	1										
IEO behavior (T1)	.028	.028	-.298	.225	-.128	.054	.059	-.154	.124	-.264	-.025	.061	1									
SMEs success (T1)	.068	-.120	-.388*	.224	-.045	.038	-.057	-.237	.154	-.159	-.172	-.097	.311*	1								
IEO Learning (T2)	.190	.312*	-.002	-.014	.033	-.159	-.085	-.195	-.033	.235	-.008	.049	.045	-.046	1							
IEO behavior (T3)	-.090	.218	-.143	.143	.045	.040	-.055	-.261	.085	.002	-.146	.160	.671**	.177	.341*	1						
SMEs success (T3)	.174	.006	-.195	-.063	-.119	.104	-.163	-.009	-.065	-.057	.370*	.183	.622**	.154	.122	.440**	1					
Training satisfaction (T2)	-.200	.006	.172	.206	.048	.178	.008	.093	.024	-.014	-.268	-.007	.140	.144	-.162	.204	.127	1				
Transfer of Training (T2)	-.086	.032	.198	.127	-.035	.149	-.053	.196	-.008	.050	-.218	.002	-.078	.116	-.054	.088	.059	.625**	1			
Training utility (T2)	-.171	.006	.137	.240	.025	.127	-.120	.206	.052	.077	-.265	-.018	-.045	.113	-.140	.057	.025	.530**	.464**	1		
Generalized self-efficacy	.234	.114	.131	-.052	-.044	.085	.059	-.124	-.056	-.086	.082	.077	.156	.157	.082	.272	.175	-.050	.016	-.087	1	
Intelligence	-.006	.159	-.246	.006	.218	.354*	-.226	-.176	-.299	.147	.167	-.017	.288	.084	.068	.145	.267	-.138	-.187	-.243	-.036	1

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

5.3.3 Hypotheses Testing

Hypotheses testing for study 3 is represented in the following sections.

5.3.3.1 Reaction Measures

The training reaction measures included the satisfaction with training, perceived utility, and the transfer intention. These variables were measured only for the training group so their mean values were computed (see Table 5.19). The results revealed that participants were satisfied with training ($M=4.06$) and they perceived it to be useful ($M=3.94$) and had the intention to transfer the training content at their business settings ($M=3.94$). Therefore, H8 was supported.

Table 5.19: Mean Values for Training satisfaction, Training Utility, and Training Transfer

Reaction Measures	N	Mean		
	Statistic	Statistic	Std. Error	Std. Deviation
Satisfaction with training	43	4.0626	.07973	.52283
Perceived training utility	43	3.9249	.07039	.46155
Transfer motivation	43	3.9426	.08943	.58641

5.3.3.2 IEO Learning

It was hypothesized that the IEO learning will increase significantly after IEO training, however, it may remain the same or reduce for the control group. For this purpose independent sample t-test was employed for IEO learning at T1 and T2 to differentiate between training as well as the control group. The results shown in Table 5.20 indicated that IEO learning was almost the same for training ($M=9.37$) as well as control ($M=9.47$) group before training. However, after training the mean values of the training group enhanced ($M=23.8$) but they had a slight decline for the control group ($M=8.11$). A paired t-test for the control group revealed that this decline was significant ($p \leq 0.05$, $t=4.63$, $LLCI=0.76$, $ULCI=1.94$).

Table 5.20: Group Difference for T1 and T2 IEO Learning

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
IEO Learning (T1)	Training	43	9.3721	4.87961	.74413
	Control	42	9.4762	4.74336	.73192
IEO Learning (T2)	Training	43	23.8140	2.70146	.41197
	Control	42	8.1190	4.70704	.72631

Levene's test was done to determine the homogeneity of variance, it helps to determine whether the data obtained for two or more groups has equal variance or not. IEO learning (T1) showed equal group variance ($F=0.17$, $p>0.05$) and independent sample t-test illustrated that IEO learning before training was not significantly different in both groups ($M_{diff}=-0.10$, $t=-0.1$, $p=0.92$, $LLCI=-2.18$, $ULCI=1.97$). Nonetheless, Levene's test for IEO learning (T2) showed unequal group variance ($F=7.05$, $p \leq 0.05$). Therefore this assumption was not fully met, however, for the interventions having almost similar participants as in this research (training group=43 and control group=42) violation from this assumption does not have serious consequences on the subsequent data analysis (Sweet & Martin, 2010). The results of the independent sample t-test showed that IEO learning after training was significantly different in both groups ($M_{diff}=15.69$, $t=18.90$, $p \leq 0.05$, $LLCI=14.02$, $ULCI=17.36$) (see Table 5.21).

Table 5.21: Independent Sample t-test for IEO Learning

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	P	t	df	P	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
								Lower	Upper
IEOL_1	Equal variances assumed	.017	.896	-.100	83	.921	-.10410	1.04411	-2.18080 1.97260
	Equal variances not assumed			-.100	82.998	.921	-.10410	1.04376	-2.18010 1.97190
IEOL_2	Equal variances assumed	7.057	.009	18.909	83	.000	15.69491	.83001	14.04404 17.34577
	Equal variances not assumed			18.796	65.052	.000	15.69491	.83501	14.02729 17.36252

Notes. $p \leq 0.05$ = significant, IEOL_1 = IEO learning (T1), IEOL_2 = IEO learning (T2)

To further testify the impact of IEO training on post-training IEO learning in the presence of demographical characteristics, intelligence, generalized self-efficacy, and pre-training IEO learning a univariate ANCOVA was done. The Levene's test illustrated equality of variance between training and control group ($F=1.16$, $p>0.05$). The results shown in Table 5.22 indicated a significant impact of IEO training on post-training IEO learning ($F=551.39$, $p \leq 0.01$, $\eta^2=0.88$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test IEO learning).

Table 5.22: Univariate ANCOVA for post-test IEO Learning

Variables	Mean Square	F	p	Partial Eta Squared (Eta ²)
Corrected Model	413.139	43.504	.000	.897
Intercept	78.217	8.236	.005	.105
Gender	38.402	4.044	.048	.055
Business Category	44.926	4.731	.033	.063
Age	2.028	.213	.645	.003
Educational Level	1.620	.171	.681	.002
Educational Relevance	10.177	1.072	.304	.015
Field of education	41.112	4.329	.041	.058
Age of business	.015	.002	.968	.000
Personal business experience	16.029	1.688	.198	.024
Size	.015	.002	.969	.000
Sector formality	6.797	.716	.400	.010
Intelligence	5.228	.551	.461	.008
Generalized self-efficacy	7.750	.816	.369	.012
IEO Learning (T1)	303.918	32.003	.000	.314
Group	5241.577	551.939	.000	.887
Error	9.497			

Moreover as shown in Table 5.22 the adjusted means for post-training IEO learning were statistically different, such that IEO learning (T2) for training group was higher (M=23.94, LLCI=7.02, ULCI=8.94) as compared to control group (M=7.98, LLCI=23.01, ULCI=24.89).

Table 5.23: Post-training IEO Learning Adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	7.984 ^a	.479	7.028	8.940
Training	23.946 ^a	.474	23.001	24.890

a. Mean values after adjusting for covariates

The above-mentioned results support H9, H13a, and H15a. However, H14a was rejected.

5.3.3.3 IEO Behavior

It was proposed that IEO behavior will significantly enhance in the training group but it may remain the same or will decline for the control group. To test this hypothesis, first of all, the mean comparison was done for pre-test and post-test IEO behavior for training as well as the control group. The pre-test IEO behavior was almost the same in training (M=2.30) and control group (M=2.36) but post-test IEO behavior in training group was higher (M=3.67) and lower in the control group (M=1.88) (see Table 5.22). A paired t-test for the control group revealed that this decline was significant ($p \leq 0.05$, $t=6.37$, LLCI=0.32, ULCI=0.62).

Table 5.24: Group Difference for T1 and T2 IEO Behavior

	Group	N	Mean	Std. Deviation	Std. Error Mean
IEO Behavior (T1)	Training	43	2.3078	.86858	.13246
	Control	42	2.3619	.88940	.13724
IEO Behavior (T2)	Training	43	3.6771	.50433	.07691
	Control	42	1.8875	.56550	.08726

The Levene's test for pre-test IEO behavior was insignificant, revealing equality of variance ($F=0.08$, $p>0.05$). Moreover, independent sample t-test for pre-test IEO behavior showed no significant difference between training and control group ($M_{diff}=-0.05$, $t=-.028$, $p>0.05$, LLCI=-0.43, ULCI=0.32). The Levene's test for post-test IEO behavior also illustrated equality of variance ($F=0.78$, $p>0.05$). The independent sample t-test for post-test IEO behavior showed a significant difference between training and control group ($M_{diff}=1.78$, $t=15.38$, $p \leq 0.05$, LLCI=1.55, ULCI=2.02) (see Table 5.24)

Table 5.25: Independent Sample t-test for IEO Behavior

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	p	t	df	P	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
										Lower	Upper
IEOB_1	Equal variances assumed	.085	.772	-.284	83	.777	-.05415	.19068	-.43341	.32510	
	Equal variances not assumed			-.284	82.813	.777	-.05415	.19073	-.43353	.32522	
IEOB_2	Equal variances assumed	.781	.379	15.407	83	.000	1.78959	.11616	1.55856	2.02063	
	Equal variances not assumed			15.386	81.457	.000	1.78959	.11631	1.55818	2.02100	

Notes. $p \leq 0.05$ = significant, IEOB_1 = IEO behavior (T1), IEOB_2 = IEO behavior (T2)

To control for the impact of demographical variables, intelligence, generalized self-efficacy, and pre-test IEO behavior a univariate ANCOVA was done for post-test IEO behavior. First of all the equality of variance was depicted via Levene's test ($F=3.08$, $p>0.05$). The results shown in Table 5.3.12 revealed a significant impact of IEO training on post-training IEO behavior ($F=562.39$, $p \leq 0.01$, $\text{Eta}^2=0.89$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test IEO behavior).

Table 5.26: Univariate ANCOVA for post-test IEO Behavior

Variables	Mean Square	F	P	Partial Eta Squared (Eta^2)
Corrected Model	5.954	49.146	.000	.908
Intercept	1.437	11.859	.001	.145
Gender	.005	.043	.837	.001
Business Category	.025	.205	.652	.003
Age	.370	3.051	.085	.042
Educational Level	.017	.136	.713	.002
Educational Relevance	.011	.090	.765	.001
Field of education	.130	1.073	.304	.015
Age of business	.019	.153	.697	.002
Personal business experience	.299	2.466	.121	.034
Size	6.55	.001	.982	.000
Sector formality	.057	.474	.493	.007

Intelligence	.002	.014	.907	.000
Generalized self-efficacy	.011	.087	.769	.001
IEO Behavior (T1)	10.765	88.856	.000	.559
Group	68.137	562.394	.000	.889
Error	.121			

The adjusted means for post-training IEO behavior were statistically different as shown in Table 5.26, such that IEO behavior (T2) for training group was higher (M=3.69, LLCI=3.58, ULCI=3.80) as compared to control group (M=1.87, LLCI=1.76, ULCI=1.97).

Table 5.27: Post-training IEO Behavior adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	1.870 ^a	.054	1.762	1.978
Training	3.694 ^a	.054	3.587	3.801

^aMean values after adjusting for covariates

The above-mentioned results support H10, H13b, and H15b, but the support for H14b could not be attained.

5.3.3.4 SMEs Success

It was hypothesized that post-training SMEs' success will increase in the training group while it may remain the same or will decline in the control group. First of all, the mean differences of success were computed for both groups at T1 (before training) and T2 (after training). It was found that the mean success was nearly the same for the training (M=2.13) and the control group (M=2.05) before IEO intervention. However, the mean value for SME success increased for the training group (M=3.89) and reduced for the control group (M=1.67) after IEO training (see Table 5.27).

Table 5.28: Group Difference for T1 and T2 SMEs Success

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
SMEs Success (T1)	Training	43	2.1316	.49404	.07534
	Control	42	2.0538	.51058	.07878
SMEs Success (T2)	Training	43	3.8930	.57462	.08763
	Control	42	1.6726	.42637	.06579

Levene's test for pre-test SMEs' success was insignificant, revealing equality of variance ($F=0.17$, $p>0.05$). Moreover, independent sample t-test for pre-test SMEs success showed that there was no significant difference between training and control group ($M_{diff}=-0.07$, $t=-.071$, $p>0.05$, $LLCI=-0.13$, $ULCI=0.29$). Levene's test for post-test SMEs' success was marginally significant ($F=4.12$, $p\leq 0.05$). The independent sample t-test for post-test SMEs' success showed a significant difference between training and control group ($M_{diff}=2.22$, $t=20.26$, $p\leq 0.05$, $LLCI=2.00$, $ULCI=2.43$) (see Table 5.28). A paired t-test for the control group revealed that this decline was significant ($p\leq 0.05$, $t=8.28$, $LLCI=0.25$, $ULCI=0.42$).

Table 5.29: Independent Sample t-test for SMEs Success

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	Df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
S_1	Equal variances assumed	.172	.679	.714	83	.477	.07782	.10897	-.13891 .29455
	Equal variances not assumed			.714	82.734	.477	.07782	.10901	-.13901 .29464
S_2	Equal variances assumed	4.123	.046	20.194	83	.000	2.22040	.10996	2.00171 2.43910
	Equal variances not assumed			20.263	77.476	.000	2.22040	.10958	2.00223 2.43858

Notes. $p\leq 0.05$ =significant, S_1 = SMEs success (T1), S_2 =SMEs success (T2)

To control for the impact of demographical variables, intelligence, generalized self-efficacy, and pre-test SMEs' success a univariate ANCOVA was done for post-test IEO behavior (see Table 5.29). A significant Levene's test ($F=26.78$, $p\leq 0.05$) failed to establish the homogeneity of variance, however, due to the approximate equal size of training ($N=43$) and

control group (N=42) the violation of this assumption was ignored (Sweet & Martin, 2010). The results shown in Table 5.3.16 indicated a significant impact of IEO training on post-training SMEs' success ($F=443.64$, $p \leq 0.01$, $\eta^2=0.86$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test SMEs success).

Table 5.30: Univariate ANCOVA for post-test SMEs Success

Source	Mean Square	F	p	Partial Eta Squared (η^2)
Corrected Model	7.901	35.770	.000	.877
Intercept	1.309	5.927	.017	.078
Gender	.005	.022	.882	.000
Business Category	.041	.187	.667	.003
Age	.009	.040	.842	.001
Educational Level	.003	.013	.911	.000
Educational Relevance	.003	.012	.913	.000
Field of education	.033	.149	.701	.002
Age of business	.341	1.545	.218	.022
Personal business experience	.321	1.455	.232	.020
Size	.028	.126	.724	.002
Sector formality	.254	1.149	.287	.016
Intelligence	.879	3.980	.050	.054
Generalized self-efficacy	.272	1.229	.271	.017
GSE	2.545	11.523	.001	.141
Group	97.991	443.640	.000	.864
Error	.221			

The adjusted means for post-training SMEs' success were statistically different as shown in Table 5.30, such that IEO behavior (T2) for the training group was higher ($M=3.67$, $LLCI=3.73$, $ULCI=4.02$) as compared to control group ($M=1.69$, $LLCI=1.54$, $ULCI=1.83$).

Table 5.31: Post-training SMEs success adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	1.690 ^a	.073	1.544	1.836
Training	3.876 ^a	.072	3.732	4.020

a. Mean values after adjusting for covariates

The above-mentioned results support H11, H13c, and H15c. Nonetheless, the results could not substantiate H14c.

5.3.4 Relationship of IEO Training on SMEs' Success Through the Mediating Role of IEO Behavior (Total Impact, Indirect Impact, Direct Impact)

It was proposed in H12 that IEO training will impact the success of SMEs through the development of IEO behavior. To test this hypothesis a mediation analysis was done using PROCESS model 4. All demographic variables, intelligence, generalized self-efficacy, and pre-training IEO learning, behavior, and SMEs' success were taken as covariates in the mediation model for ensuring the true reflection of intervention results. The results showed a positive and significant total impact of IEO training on the SMEs' success (Path c: $\beta=2.24$, $t=27.11$, $p \leq 0.01$). The model was fit at ($R=0.96$, $R^2=0.92$, $F=52.51$, sig. 0.000) (see Table 5.31). The results shown in Table 5.3.18 revealed a positive and significant association between IEO training and IEO behavior (Path a: $\beta=2.91$, $t=24.10$, $p \leq 0.01$). The model fit was well indicated by ($R=0.95$, $R^2=0.91$, $F=43.70$, sig. 0.000). Furthermore, the relationship of IEO behavior (Path b: $\beta=0.58$, $t=5.59$, $p \leq 0.01$) with SMEs' success was significantly positive. The model fit indices were $R=0.97$; $R^2=0.94$; $F=73.72$; sig. 0.000). After controlling for the mediator (IEO behavior), the IEO training and SMEs' success link was significantly reduced (Path c': $\beta=1.11$, $t=5.52$, $p \leq 0.01$). The model fit indices were $R=0.97$, $R^2=0.94$, $F=73.72$, sig. 0.000. This shows that the impact of IEO training on SMEs' success is partially transmitted by IEO behavior. The indirect effect size was significant (effect size=1.12, LLCI=0.78 ULCI=1.53). Therefore, partial support was received for H12

Table 5.32: Indirect Impact of IEO Training On SMEs Success through IEO Behavior

Variables	IEO behavior (a) (T3)		SMEs Success (b) (T3)		SMEs Success (c) (T3)		SMEs Success (c') (T3)	
	Model 1		Model 2		Model 3		Model 4	
	B	t	B	T	β	t	B	t
Gender	0.14	1.43	-0.04	-0.50	0.04	0.38	-0.04	-0.50
Age	0.03	0.88	-0.00	-0.16	0.01	0.35	-0.00	-0.16
Education	-0.00	-0.04	-0.04	-1.89	-0.04	-1.60	-0.04	-1.89
Educational Relevance	0.01	0.15	0.07	0.90	0.08	0.84	0.07	0.90
Field of Education	-0.05	-0.68	0.03	0.49	0.00	0.02	0.03	0.49
Business Age	-0.02	-0.63	-0.04	-1.28	-0.05	-1.42	-0.04	-1.28
Business Sector	0.00	0.01	-0.02	-0.34	-0.01	-0.28	-0.02	-0.34
Personal Business experience	-0.04	-1.11	0.08*	2.23	0.05	1.24	0.08*	2.23
Size	-0.14	-1.14	-0.06	-0.72	-0.14	-1.40	-0.06	-0.72
Sector Formality	0.08	0.05	-0.09	-0.99	-0.04	-0.40	-0.09	-0.99
Intelligence	0.00	0.20	0.00	0.27	0.01	0.34	0.00	0.27
Generalized Self-efficacy	-0.06	-0.60	0.05	0.55	0.01	0.12	0.05	0.55
IEO Behavior (T1)	0.44**	7.8	0.11	1.74	0.37**	6.41	0.11	1.74
IEO Learning (T1)	0.01	1.31	0.00	0.62	0.01	1.26	0.00	0.62
SMEs Success (T1)	0.10	1.11	0.11	1.42	0.17	1.82	0.11	1.42
IEO Training	2.91**	24.10			2.24**	27.11	1.11**	5.25
IEO Behavior (T3)			0.58**	5.59				
R	0.95		0.97		0.96		0.97	
R ²	0.91		0.94		0.92		0.94	
F	43.70		73.72		52.51		73.72	
P	0.000		0.000		0.000		0.000	
Bootstrapping for Indirect Impact	Effect Size	p	LLCI	ULCI				
	1.12	<.01	0.78	1.53				

Notes. ** $p \leq 0.01$, LLCI=Lower level confidence interval, ULCI=Upper level confidence interval

5.3.5 Qualitative Results

To substantiate the training outcomes, interviews were carried out from the selected training and control group participants. The psychological entrepreneurial perspective renders a qualitative substantiation useful for the exploration of the lived experiences of entrepreneurs (Neergaard & Ulhoi, 2010). For this purpose in-depth semi-structured interviews were conducted from the training group as well as control group participants. The qualitative insights regarding the reaction measures were only taken from the training group. The participants in both groups were inquired about their IEO learning, behavior, and business success. “TE” is used to depict an entrepreneur in the training group while “CE” depicts an entrepreneur in the control group.

5.3.5.1 Demographics of Interview Participants

From each group 12 participants were selected, their demographical profile is shown in Table 5.32.

Table 5.33: Demographic Profile of Study 3 Interview Participants

Variables	Categories	Control Group		Training Group	
		Frequency	Percent	Frequency	Percent
Gender	Male	9	72.0	8	66.6
	Female	3	28.0	4	33.3
	Total	12	100.0	12	100.0
Age	Below 30 years	4	33.3	3	25.0
	31-45 Years	3	25.0	4	33.3
	36-40 years	3	25.0	2	16.7
	Above 40 years	2	16.6	3	25.0
	Total	12	100.0	12	100.0
Educational Level	Below matriculation	2	16.6	2	16.6
	Matriculation	3	25.0	2	16.6
	Intermediate	1	8.3	3	25.0
	Bachelors	4	33.3	3	25.0
	Masters	2	16.6	2	16.6
	Above Masters	0	0.0	0	0.0
	Total	12	100.0	12	100.0
Educational Relevance with business	Yes	4	33.3	5	41.7

	No	8	66.7	7	58.3
	Total	12	100.0	12	100.0
Field of Education	Business	3	25.0	4	33.3
	General	2	16.7	1	8.3
	Technical	7	58.3	7	58.3
	Total	12	100.0	12	100.0
Personal Business Experience	1-5 year	2	16.6	3	25.0
	6-10 years	5	41.7	4	33.3
	11-15 years	3	25.0	3	25.0
	Above 15 years	2	16.7	2	16.7
	Total	12	100.0	12	100.0
Age of Business	1-5 years	3	25.0	2	16.6
	6-10 years	4	33.3	5	41.7
	11-15 years	3	25.0	3	25.0
	Above 15 years	2	16.7	2	16.7
	Total	12	100.0	12	100.0
Size of Business	Small Scale	8	66.7	7	58.3
	Medium Scale	4	33.3	5	41.7
	Total	12	100.0	12	100.0
Business Sector	Manufacturing	11	26.2	11	25.6
	Trading	19	45.2	20	46.5
	Services	12	28.6	12	27.9
	Total	12	100.0	43	100.0
Chamber of commerce membership	Participative	7	58.3	6	50.0
	Passive	5	41.7	6	50.0
	Total	12	100.0	12	100.0

5.3.5.2 Reaction Measures

The participants were inquired about the extent to which they were satisfied with the training. The participants revealed that the training was worth their time, and they had important learning experiences via this intervention. It was reported that;

“At first, when I decided to participate in this training I had doubts, I thought it would be much time-consuming... to be honest I was not much hopeful regarding its benefits. But I feel that I have learned some basic principles that I can apply in my everyday business” (TE 3).

“The use of native language made it much easier to understand the training content as well as the exercises” (TE 6).

Another participant said,

“It was useful... I liked the way practical exercises were used rather than mere lecture-based methods” (TE 11).

“The real case examples made me understand how the routine behaviors can lead to huge business success and failures” (TE 7).

“The practice that I made on the sample case and then the application to my own business allowed excellent improvement in my learning” (TE 2).

All the participants were positive regarding their intention to use the training content in their business. As it is evident through the following statements,

“After training, I am looking forward to implementing all the new learning to my business... especially the concept of feedback taking and self-evaluation would be most useful” (TE 9).

“Now I realize what were the common day to day mistakes I was making in my business ... I would improve my concrete business planning. I will start making more detailed and realizable plans” (TE12).

“I plan to be more proactive and action-oriented in my business operations, I will use what I have learned and practiced in the sessions” (TE 3).

5.3.5.3 IEO Learning

To access the level of IEO knowledge first of all the training as well as control group participants were asked to describe all the IEO behaviors and then it was inquired either their learning of the concept has improved overtime or not. For the training group, the participants were quite accurate in the description of IEO

Such as when inquired the participant explained IEO as,

“This is the behavior of individual entrepreneurs... and it is evident in how one takes the risk, be the one to take initiative, actively learns from the mistakes, has the guts to make business decisions... someone who is attracted by challenges and more future-oriented than others in dealing with competition as well as I think in making ones’ business more distinctive” (TE11).

Another training participant gave a clear picture of the concept,

“For me, the business owner is the prime decision-maker, therefore his core traits in making the independent choice, taking move before competitors and being prepared for future opportunities and threats... primarily a business owner should be able to distinguish himself from others and be distinctive in attracting consumers” (TE 4).

It was repeatedly reflected that trained entrepreneurs had better knowledge of the IEO dimension. As narrated by another participant,

“Yes! Now I have a clear picture of entrepreneurial orientation as an individual feature of a business owner in taking risks, being innovative, competitive, and a challenge seeker. One quality of a successful businessman is that he constantly learns new things and is capable of realizing his goals and plans that are made from a present as well as future perspective” (TE 1).

“It’s a strategy which helps any person in initiating his own work... like his own business, normally it involves innovativeness, risk taking , and activeness of any individual toward his goals” (TS 12).

It was asked that over 6 months did their understanding of IEO has changed. The responses of trained entrepreneurs showed a stark improvement as illustrated by the following responses,

“I had just a generic idea of this concept before, now I clearly understand its dynamics” (TE 3).

“Before training, I never had much detailed knowledge of IEO construct” (TE 7).

“Definitely! I am now familiar with this term and know to a great extent about its meanings and implications and I attribute it to the training session” (TE 11).

In contrast, the control group participants displayed a vague understating of the theoretical IEO foundations. As shown in their narratives,

“Entrepreneurial orientation is simply a way an entrepreneur thinks and behaves” (CE 8).

“It is an overall inclination towards starting a business or experience when someone is already engaged in the business” (CE2).

“Doing something innovative” (CE 1).

When inquired if they had any changed knowledge about this concept. Some participants stated that they had the same concepts,

“No! I don’t think that anything has changed about my concepts” (CE 5)

“I hold the same concepts” (CE 2).

While others indicated deterioration of IEO concepts, they were also asked the potential causes of decline.

“I did not make any effort to learn about the inquired construct I believe it’s an entrepreneurial mindset in general” (CE 10).

“I think to retain a quality knowledge one has to be active in improving it otherwise after some time the learning can decrease. I do not rely on theoretical concepts I just base my decisions on my experience” (CE 3).

5.3.5.4 IEO Behavior

To get an exploratory insight into the way IEO has changed before and after the training, the training participants were inquired about the way they adopt IEO constructs in their business. It was revealed that most of them have altered behavior to display learned IEO behavior. As depicted in the following statements,

The participants reflected on their risk-taking behavior as:

“Yes. In my day to day business activities, I do not hesitate to jump into new things... my business of suspension automobile parts is an example in itself... in my business as the economic landscape of Pakistan is unstable still I make investments and take calculated risks to maintain my market share” (TE 1).

“All businessmen are risk-takers... what is training has helped me in taking calculated moves. I am planning to enter the European market and develop my expanded warehouse and now I am more vigilant in planning my risk moves and I care about the possible outcomes that I can have on my business... in case if any plan fails I have kept alternatives” (TE 6).

The initiative behavior and competitiveness were elaborated as:

“It is simple. Whenever I think there should be something to compete I take some initiative. Specifically, I am now making alternative energy sources arrangements so that our

business is least impacted by the cut-down of electricity. Mostly now I am taking a future perspective towards my rival rather being somewhat passive” (TE 7).

“Taking the first step is always tough... I used to hesitate from taking new steps until some of my counterparts do so. But now I know that this fear can be reduced by making alternate plans as well as keeping a vigilant eye on the environment. Such that I was worried about the lower purchasing power of consumers that were bringing my sales down. Now I have taken it as an opportunity and started a low-cost segment that has helped to enhance my sales and consumers” (TE 4).

“I keep an eye what my rivals are doing rather getting news about their moves. The prices are continuously going-up and people now prefer economical products. I have introduced low-cost promotional strategies and value deals” (TE 1).

The innovative attitude was reflected in the following statements:

“In today’s environment without bringing something new, no business can prosper. Therefore, I noticed that in addition to the traditional Pakistani designs, new and modern weaving is also liked and I have incorporated a contemporary line recently” (TE 8).

“Retailing is a routine business but now from time to time, use of technology and artificial intelligence like one load application, NADRA E-SAHULAT, and now I have introduced a computerized billing system in my outlet that is far better than the manual cash handling” (TE 3).

The achievement and autonomy orientation was shown as follows:

“I do not believe in full autonomy. I share my plans before taking any step. But I actively participate in business decisions and now I am practicing better ways to keep track of my goals and realizing them. I self-evaluate myself on the outcomes of my actions... Now I am more receptive towards the feedback of consumers and I try to incorporate it in my plans” (TE 6).

Learning orientation was also evident through the participants' behavior:

"Yes! I avoid mistakes that hurt my business. As a routine matter in business development, I like to find some innovation. I usually don't make hard targets. But after this training, this shortcoming is improved and I now I am incorporating some goals that are beyond my comfort zone but still attainable" (TE 10).

"Of course, improvements are always welcomed. I have now developed a more feedback oriented approach and on major decisions, I call a meeting of my pertinent staff about the outcomes. We critically evaluate what we did right and what went wrong. Then we make strategies to avoid those issues in the future and I now keep myself updated about the new market happenings" (TE 15).

"...by actively taking the customers' feedback, observing them, and positively addressing their complaints have improved my learning. I never thought that mistakes can serve as a guide as well" (TE 12).

However, the control group participants did not reflect a high IEO as seen through their narratives.

"My business deals in mass production and I do not feel that much innovation is needed here" (CE 1).

"I focus on routine business activities" (CE 11).

"I mostly delegate my business decision making to my staff... though I oversee what they are doing. Sometimes I set a plan and then I come to know that it is not attained in the designated period. It is frustrating" (CE 3).

"Yes, I do learn from mistakes... but I do not actively seek my clients' and employees' feedback on the business issues" (CE 10).

“I do take risks, but sometimes I fail to mitigate their negative outcomes. I think not having a concrete plan to tackle risk makes it worse” (CE 11).

Their views on competitive behavior and achievement orientation also reflected a passive stance.

“I consider that competitive moves should be considered. When they take any action I try to offset it by making a reactive strategy” (CE 9).

“I set goals but I keep them moderate... I do not set such high aims that cannot be attained” (CE 4).

Because the quantitative results indicated a decline in IEO behavior for the control group, therefore, an additional question about the causes of reduced IEO behavioral display was asked.

“If I talk about being innovative, competitive, or achievement-oriented, I think retention of any behavior requires motivation, either internal or external. Sometimes, setbacks decline our positive aptitudes, the unstable business environment caused some business losses and I lost the motivation of being entrepreneurial, rather I just focused on survival” (CE 8).

“I had a competitor that was surpassing my business, so I became more competitive and innovative a few months back to counter that, now I have returned to routine. I am not much learning-oriented unless the situation calls for it” (CE 3).

“There are some internal and external factors that shape the way I take my business stance. Nowadays, things are getting worse, businesses are not thriving, in such circumstances now I am more motivated on cost-cutting rather being innovative. I am careful in taking risks, and I try to be on the safe side by following the moves of others” (CE 7).

5.3.5.5 SMEs Success

The training participants indicated improved business outcomes such as:

“...Though I am in the middle of my business journey, I am much more satisfied with my business success” (TE 11).

“Despite our country’s economic landscape is not much favorable, I feel now sales are steadily improving as compared to last quarter” (TE 13).

It was reported by another participant,

“ALHMDU LILLAH... starting from zero to satisfied, concerning (profit, market share, customers, and employees) my business is on a gradual improvement path” (TE 5).

The control group participants showed plateaued or downhill success.

“ I feel no difference in my business financials” (CE 2).

“Yes my profits are almost as same as they were in the last quarter” (CE 11)

It was stated by others that their business performance declined,

“My sales reduced and I blame the external causes for it” (CE 2)

“you know well now the businesses all over the country are in declining phase, now prices have gone up and consumers are dwindling” (CE 7).

The overall interviews are summarized in a schematic diagram (see Figure 5.7).

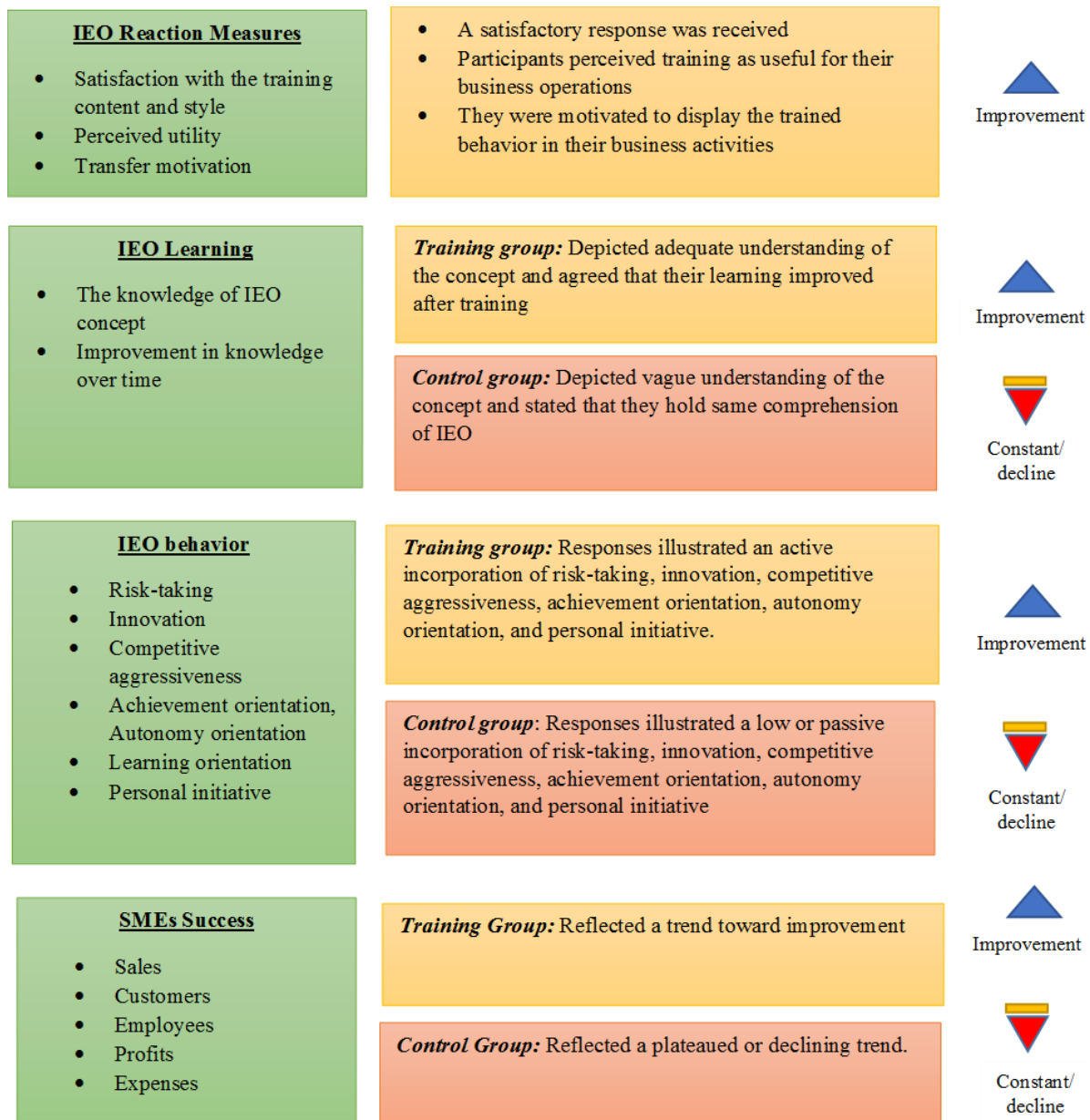


Figure 5.7: Schematic Diagram of Qualitative Results of Study 3

5.4 Results Study 4

5.4.1 Demographic Profile of Training and Control Group

Study 4 was based on the experimental design with undergraduate business students as its population. It comprised one treatment group (IEO training) and a matched control group (no IEO training). The demographics of training group indicated that 52.8% were male and 47.2% were female. At the time of training, 13.2% of students were in the first semester,

15.09% were in second semester, 18.86% in the third semester, 16.98% were in the fourth semester, 15.09% were in fifth semester and % were in 20.75% were in the sixth semester. Moreover, 49.1% belonged to the public sector universities and 50.9% belonged to private sector universities. The age of 37.7% of the students were below 20 years, 60.4% of them were between 20 to 22 years and only 1.9% were between 23-25 years. The average intelligence score was (M=3.60) out of 5 and generalized self-efficacy was (M=2.84) out of the maximum value of 4.

The demographical profile of participants in the control group indicated that 55.4% were male and 44.6% were female. At the time of training, 12.5% of students were in the first semester, 16.0% were in the second semester, 19.64% in the third semester, 16.07% were in the fourth semester, 14.28% were in fifth semester and % were in 21.42% were in the sixth semester. Of the total 48.2% of the participants were from public universities and 51.8 were from the private sector. The average intelligence score was (M=3.48) out of 5 and generalized self-efficacy was (M=2.92) out of the maximum value of 4. Both groups had almost similar demographic makeup as suggested by Kumar (2002). The demographic profile of both groups is shown in Table 5.34.

Table 5.34: Demographic Profile of Study 4 Participants

Variable	Categories	Frequency	Percent	Frequency	Percent
Semester	First	7	13.20	7	12.5
	Second	8	15.09	9	16.0
	Third	10	18.86	11	19.64
	Fourth	9	16.98	9	16.07
	Fifth	8	15.09	8	14.28
	Sixth	11	20.75	12	21.42
	Total	53	100.0	56	100.0
Age	Below 20 years	20	37.7	19	33.9
	20-22 years	32	60.4	37	66.1
	23-25 years	1	1.9	0	0.0
	Above 25 years	0	0.0	0	0.0
	Total	53	100.0	56	100.0
University Sector	Public	26	49.1	27	48.2
	Private	27	50.9	29	51.8
	Total	53	100.0	56	100.0
Gender	Male	28	52.8	31	55.4
	Female	25	47.2	25	44.6
	Total	53	100.0	56	100.0

5.4.2 Data Normality, Outliers, Linearity, and Correlation

To proceed with the tests to compare the training and control group before and after IEO training it was ensured that the dependent variables were normally distributed for each level of the independent variable. For this purpose skewness, kurtosis, and Shapiro-Wilk test were used, the results revealed that all the dependent variables for training group (i.e., IEO training reaction measures, learning, behavior, and entrepreneurial intention) and control group (i.e., IEO learning, behavior, and entrepreneurial intention) fulfilled these criteria. Table 5.35 shows that values of skewness (-1.96 to +1.96) and kurtosis (-2 to +2) were within the specified range and the Shapiro-Wilk test was insignificant ($p > 0.05$). Moreover, the box plots indicated that there were no significant outliers and the scatter plots of Time 1 (covariates) and Time 2 (dependent variables) had an almost linear relationship.

Table 5.35: Normality Statistics for Study 4

Variables	Control Group				Training Group			
	Skewness	Kurtosis	Shapiro-Wilk statistic	P	Skewness	Kurtosis	Shapiro-Wilk statistic	p
IEO Training Reaction Measures ¹								
Satisfaction					0.27	-0.28	0.96	0.09
Utility					-0.35	0.69	0.95	0.06
Transfer					-0.50	-0.21	0.97	0.41
IEO learning	-0.10	-0.43	0.95	0.05	-0.03	-1.81	0.96	0.08
IEO behavior	0.68	-0.73	0.97	0.19	-0.02	-0.98	0.95	0.07
Entrepreneurial Intention	-0.23	-0.74	0.96	0.06	0.28	-0.56	0.96	0.18

Notes.¹only measured for the training group, $p \geq 0.05 = n.s.$, $p = \text{significance value}$, IEO=individual entrepreneurial orientation

The correlation between the study variables for training as well as the control group was lower than 0.80 that removed the concern for multi-collinearity. Table 5.36 depicts the correlation among the control group variables and Table 5.36 shows the correlations among training group variables.

Table 5.36: Correlations among Study 4 Variables (Control Group)

Variables	1	2	3	4	5	6	7	8	9	10	11	12
Gender	1											
Semester	.231*	1										
Age	.112	-.091	1									
Sector	-.140	-.163	0.232*	1								
Intelligence	-.263	-.268*	.520**	0.09	1							
Generalized Self-efficacy	.058	-.074	-.124	.080	0.322*	1						
IEO Learning (T1)	-.069	.003	-.180	-.107	-.157	-.081	1					
IEO Behavior (T1)	.234	.179	-.195	-.261	-.019	-.066	.088	1				
Entrepreneurial Intention (T1)	.166	.014	-.376**	-.260	-.108	.116	.377**	.061	1			
IEO Learning (T2)	-.033	-.063	.117	.022	.009	.693**	-.115	-.003	-.089	1		
IEO Behavior (T3)	-.282*	-.531**	.184	.047	.012	-.056	-.049	-.165	-.063	0.132	1	
Entrepreneurial Intention (T3)	-.057	.182	-.268*	-.128	-.007	.137	-.037	-.232	-.121	-.149	-.212*	1

Notes. ** Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level (2-tailed).

Table 5.37: Correlations among Study 4 Variables (Training group)

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gender	1														
Semester	-.121	1													
Age	-.222	-.098	1												
Sector	-.282*	-.315*	.009	1											
Intelligence	-.236	-.145	.156	.166	1										
Generalized Self-efficacy	.210	.213	.109	.200	.211	1									
IEO Learning (T1)	.092	-.066	-.023	.078	.199	.008	1								
IEO Behavior (T1)	.015	.070	-.080	-.017	-.064	-.145	.016	1							
Entrepreneurial Intention (T1)	-.068	.089	.231	.073	.101	-.188	.366**	.019	1						
IEO Learning (T2)	-.109	-.016	.133	.117	.275*	.665**	.017	-.153	-.122	1					
IEO Behavior (T3)	-.383**	.009	-.046	.261	-.252	-.003	-.056	-.022	-.152	.023	1				
Entrepreneurial Intention (T3)	-.073	-.217	-.106	.121	-.284*	.219	-.055	-.038	.099	.190	.234*	1			
Training Satisfaction	-.006	-.079	.066	.004	.040	.041	-.108	-.052	.025	.009	.006	.001	1		
Training Utility	.111	.107	-.139	.043	.246	-.137	.142	.114	-.001	-.098	-.185	.096	.011	1	
Training Transfer Motivation	-.033	.012	-.097	.020	-.012	-.129	.046	-.104	-.120	.013	-.115	.317*	.175	.054	1

Notes. ** Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level (2-tailed).

5.4.3 Hypotheses Testing

5.4.3.1 Reaction Measures

The training reaction measures included satisfaction with training, perceived utility, and transfer intention. These variables were measured only for the training group so their mean values were computed (see Table 5.38). The results revealed that participants were satisfied with training (M=3.99) and they perceived it to be useful (M=3.81) and had the intention to transfer the training content at their business settings (M=3.90). Therefore, H16 was supported.

Table 5.38: Mean Values for Training satisfaction, Training Utility, and Training Transfer

Reaction Measures	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
Satisfaction with training	53	3.9911	.05149	.37487
Perceived training utility	53	3.8119	.05409	.39381
Transfer motivation	53	3.9023	.05799	.42215

5.4.3.2 IEO Learning

It was hypothesized that the IEO learning will increase as a result of IEO training, however, the level of learning may remain the same or decline in the control group. For this purpose independent sample t-test was employed for IEO learning at T1 and T2 to differentiate between training as well as the control group. The results shown in Table 5.38 indicated that IEO learning was almost the same for training (M=5.15) as well as control (M=5.37) group before training. However, after training the mean values of the training group enhanced (M=8.32 but they had a slight decline for the control group (M=5.23). A paired t-test for the control group revealed that this decline was not significant ($p>0.05$, $t=1.14$, LLCI=-0.9, ULCI=0.38).

Table 5.39: Group Difference for T1 and T2 IEO Learning

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
IEO Learning (T1)	Control	56	5.3750	1.77418	.23709
	Training	53	5.1509	1.74748	.24004
IEO Learning (T2)	Control	56	5.2321	1.64030	.21919
	Training	53	8.3208	2.11017	.28985

Levene's test was done to determine the homogeneity of variance, it helps to determine whether the data obtained for two or more groups has equal variance or not. IEO learning (T1) showed equal group variance ($F=0.11$, $p>0.05$) and independent sample t-test illustrated that IEO learning before training was not significantly different in both groups ($M_{diff}=0.22$, $t=0.64$, $p=0.50$, $LLCI=0.33$, $ULCI=-0.44$). Nonetheless, Levene's test for IEO learning (T2) showed unequal group variance ($F=4.80$, $p \leq 0.05$). Therefore this assumption was not fully met, however, for the interventions having almost similar participants as in this research (training group=53 and control group=56) violation from this assumption does not have serious consequences on the subsequent data analysis (Sweet & Martin, 2010). The results of the independent sample t-test showed that IEO learning after training was significantly different in both groups ($M_{diff}=-3.08$, $t=8.55$, $p \leq 0.05$, $LLCI=-0.80$, $ULCI=-2.36$) (see Table 5.40).

Table 5.40: Independent Sample t-test for IEO Learning

		Levene's Test for Equality of Variances					t-test for Equality of Means			
		F	Sig.	t	df	p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
IEOL_1	Equal variances assumed	.011	.915	.664	107	.508	.22406	.33752	-.44505	.89316
	Equal variances not assumed			.66	106.82	.508	.22406	.33738	-.44478	.89289
	Equal variances assumed	4.809	.030	-8.55	107	.000	-3.08861	.36092	-3.80410	-2.37313
IEOL_2	Equal variances not assumed			-8.49	98.13	.000	-3.08861	.36340	-3.80976	-2.36746

Notes. $p \leq 0.05$ = significant, IEOL_1 = IEO learning (T1), IEOL_2 = IEO learning (T2)

To further testify the impact of IEO training on post-training IEO learning in the presence of demographical characteristics, intelligence, generalized self-efficacy, and pre-training IEO learning a univariate ANCOVA was done. Levene's test failed to illustrate equality of variance between training and control group ($F=12.56$, $p \leq 0.05$) but this does not pose a serious threat to the subsequent results as the training and control groups had almost equal sizes (Sweet & Martin, 2010). The results shown in Table 5.39b indicated a significant impact of IEO training on post-training IEO learning ($F=186.38$, $p \leq 0.01$, $\eta^2=0.65$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test IEO learning).

Table 5.41: Univariate ANCOVA for post-test IEO Learning

Source	Mean Square	F	P	Partial Eta Squared (Eta ²)
Corrected Model	53.914	34.645	.000	.759
Intercept	.372	.239	.626	.002
Gender	1.071	.688	.409	.007
Semester	0.87	.543	.322	.003
Age	.060	.038	.845	.000
Sector	5.294	3.402	.068	.033
Intelligence	.907	.583	.447	.006
Generalized Self-efficacy	5.009	3.219	.076	.031
IEO learning (T1)	212.617	136.627	.000	.580
IEOB Behavior (T1)	2.201	1.414	.237	.014
Entrepreneurial intention (T1)	.327	.210	.648	.002
Group	290.047	186.384	.000	.653
Error	1.556			

Moreover as shown in Table 5.41 the adjusted means for post-training IEO learning were statistically different, such that IEO learning (T2) for training group was higher (M=8.43, LLCI=8.09, ULCI=8.78) as compared to control group (M=5.12, LLCI=4.78, ULCI=5.45).

Table 5.42: Post-training IEO Learning adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	5.123 ^a	.169	4.788	5.458
Training	8.436 ^a	.174	8.091	8.781

^aMean values after adjusting for covariates

The above-mentioned results support H16, H21a, H22a, and H23a.

5.4.3.3 IEO Behavior

It was proposed that IEO behavior will significantly enhance in the training group but it may remain the same or will decline for the control group. To test this hypothesis, first of all, the mean comparison was done for pre-test and post-test IEO behavior for training as well as the control group. The pre-test IEO behavior was almost the same in training (M=1.96) and control group (M=2.03) but post-test IEO behavior in training group was higher (M=3.99) and

lower in the control group (M=1.87) (see Table 5.43). A paired t-test for the control group revealed that this decline was not significant ($p>0.05$, $t=1.89$, LLCI=-0.00, ULCI=0.17).

Table 5.43; Group Difference for T1 and T2 IEO Behavior

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
IEO Behavior (T1)	Control	56	1.9661	.26987	.03606
	Training	53	2.0094	.40727	.05594
IEO Behavior (T2)	Control	56	1.8795	.28866	.03857
	Training	53	3.9942	.34747	.04773

Levene's test for pre-test IEO behavior was significant, revealing inequality of variance ($F=6.66$, $p\leq 0.05$) so the results of unequal variances were reported given almost equal group size ((Sweet & Martin, 2010). Moreover, independent sample t-test for pre-test IEO behavior showed no significant difference between training and control group ($M_{diff}=-0.04$, $t=-0.65$, $p>0.05$, LLCI=-0.17, ULCI=0.08). The Levene's test for post-test IEO behavior also illustrated equality of variance ($F=3.83$, $p>0.05$). The independent sample t-test for post-test IEO behavior showed a significant difference between training and control group ($M_{diff}=-0.211$, $t=34.46$, $p\leq 0.05$, LLCI=-2.23, ULCI=-1.99) (see Table 5.44).

Table 5.44: Independent Sample t-test for IEO Behavior

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	P	t	df	p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
IEOB_1	Equal variances assumed	6.612	.011	-.659	107	.512	-.04336	.06584	-.17389 .08716
	Equal variances not assumed			-.651	89.572	.516	-.04336	.06656	-.17560 .08888
IEOB_2	Equal variances assumed	3.836	.053	-34.636	107	.000	-2.11469	.06106	-2.2357 -1.9936
	Equal variances not assumed			-34.460	101.268	.000	-2.11469	.06137	-2.2364 -1.9929

Notes. $p\leq 0.05$ =significant, IEOB_1= IEO behavior (T1), IEOB_2= IEO behavior (T2)

To control for the impact of demographical variables, intelligence, generalized self-efficacy, and pre-test IEO behavior a univariate ANCOVA was done for post-test IEO behavior. First of all the equality of variance was depicted via Levene's test ($F=3.45$, $p>0.05$). The results shown in Table 5.45 revealed a significant impact of IEO training on post-training IEO behavior ($F=1298$, $p\leq 0.01$, $\eta^2=0.92$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test IEO behavior).

Table 5.45: Univariate ANCOVA for post-test IEO Behavior

Source	Mean Square	F	P	Partial Eta Squared (η^2)
Corrected Model	13.674	141.616	.000	.928
Intercept	8.523	88.269	.000	.471
Gender	.003	.031	.860	.000
Semester	.025	.065	.588	.009
Age	.017	.176	.675	.002
Sector	.120	1.245	.267	.012
Intelligence	.127	1.316	.254	.013
Generalized Self-efficacy	.697	7.214	.008	.068
IEO learning (T1)	.173	1.789	.184	.018
IEOB Behavior (T1)	.202	2.096	.151	.021
Entrepreneurial intention (T1)	.003	.033	.855	.000
Group	116.678	1208.360	.000	.924
Error	.097			

The adjusted means for post-training IEO behavior were statistically different as shown in Table 5.46, such that IEO behavior (T2) for the training group was higher ($M=3.98$, $LLCI=3.90$, $ULCI=4.07$) as compared to control group ($M=1.88$, $LLCI=1.80$, $ULCI=1.96$).

Table 5.46: Post-training IEO Behavior adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control Group	1.884 ^a	.042	1.801	1.967
Training Group	3.989 ^a	.043	3.904	4.074

Mean values after adjusting for covariates

The above-mentioned results support H17, H21b, H22b, and H23b.

5.4.3.4 Entrepreneurial Intention

It was hypothesized that post-training entrepreneurial intention will increase in the training group while it may remain the same or will decline in the control group. First of all, the mean differences of entrepreneurial intention were computed for both groups at T1 (before training) and T2 (after training). It was found that the mean entrepreneurial intention was nearly the same for the training (M=1.83) and the control group (M=1.96) before IEO intervention. However, the mean value for SME entrepreneurial intention increased for the training group (M=3.98) and had a slight reduction for the control group (M=1.77) after IEO training (see Table 5.47). A paired t-test for the control group revealed that this decline was significant ($p \leq 0.05$, $t = 2.55$, LLCI=0.03, ULCI=0.33).

Table 5.47: Group Difference for T1 and T2 Entrepreneurial Intention

Variables	Group	N	Mean	Std. Deviation	Std. Error Mean
Entrepreneurial Intention (T1)	Control	56	1.9655	.49344	.06594
	Training	53	1.8365	.50899	.06992
Entrepreneurial Intention (T2)	Control	56	1.7798	.35862	.04792
	Training	53	3.9826	.37340	.05129

The Levene's test for pre-test entrepreneurial intention was insignificant, revealing equality of variance ($F = 0.00$, $p > 0.05$). Moreover, an independent sample t-test for pre-test entrepreneurial intention showed that there was no significant difference between training and control group ($M_{diff} = 0.12$, $t = 1.34$, $p > 0.05$, LLCI=-0.06, ULCI=0.31). Levene's test for the post-test entrepreneurial intention was found to be insignificant ($F = 0.00$, $p > 0.05$). The independent sample t-test for post-test entrepreneurial intention showed a significant difference between training and control group ($M_{diff} = -2.20$, $t = -31.38$, $p \leq 0.05$, LLCI=-2.34, ULCI=-2.06) (see Table 5.48).

Table 5.48: Independent Sample T-Test for Entrepreneurial Intention

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	P	t	df	p	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
										Lower Upper
EI_1	Equal variances assumed	.000	.983	1.343	107	.182	.12900	.09602	-.06135	.31935
	Equal variances not assumed			1.342	106.204	.182	.12900	.09610	-.06153	.31953
EI_2	Equal variances assumed	.000	.993	-31.417	107	.000	-2.20282	.07012	-2.34181	-2.06382
	Equal variances not assumed			-31.382	106.025	.000	-2.20282	.07019	-2.34198	-2.06365

Notes. $p \leq 0.05$ = significant, EI_1 = Entrepreneurial intention (T1), EI_2 = Entrepreneurial intention (T2)

To control for the impact of demographical variables, intelligence, generalized self-efficacy, and pre-test entrepreneurial intention a univariate ANCOVA was done for post-test IEO behavior (see Table 5.49). An insignificant Levene's test ($F=0.21$, $p>0.05$) established the homogeneity of variance. The results shown in Table 5.4.16 indicated a significant impact of IEO training on post-training entrepreneurial intention ($F=965.16$, $p \leq 0.01$, $\eta^2=0.90$) after controlling for the covariates (demographics, intelligence, generalized self-efficacy, and Pre-test entrepreneurial intention).

Table 5.49: Univariate ANCOVA for post-test Entrepreneurial Intention

Source	Mean Square	F	p	Partial Eta Squared (η^2)
Corrected Model	14.828	112.953	.000	.911
Intercept	14.439	109.985	.000	.526
Gender	.037	.284	.595	.003
Semester	.023	.174	.132	.002
Age	.083	.632	.428	.006
Sector	.300	2.285	.134	.023
Intelligence	.081	.617	.434	.006
Generalized Self-efficacy	.399	3.038	.084	.030
IEO learning (T1)	.123	.934	.336	.009
IEOB Behavior (T1)	.182	1.389	.241	.014
Entrepreneurial intention (T1)	.021	.160	.690	.002
Group	126.705	965.166	.000	.907
Error	.131			

The adjusted means for post-training entrepreneurial intention were statistically different as shown in Table 5.50, such that IEO behavior (T2) for the training group was higher (M=3.97, LLCI=3.87, ULCI=4.07) as compared to control group (M=1.78, LLCI=1.68, ULCI=1.88).

Table 5.50: Post-Training Entrepreneurial Intention Adjusted for Covariates

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control Group	1.784 ^a	.049	1.688	1.881
Training Group	3.978 ^a	.050	3.878	4.077

^aMean values after adjusting for covariates

The above-mentioned results support H18, H21c, and H23c, but H22c was rejected.

5.4.4 Impact of IEO Training on SMEs Success Through the Mediating Role of IEO Behavior (Total Impact, Indirect Impact, Direct Impact)

It was proposed in H20 that IEO training will impact the entrepreneurial intention of business students through the development of IEO behavior. To test this hypothesis a mediation analysis was done using PROCESS model 4. All demographic variables, intelligence, generalized self-efficacy, and pre-training IEO learning, behavior, and entrepreneurial orientation were taken as covariates in the mediation model for ensuring the true reflection of intervention results. The results showed a positive and significant total impact of IEO training on entrepreneurial intention (Path c: $\beta=2.19$, $t=31.06$, $p \leq 0.01$). The model was fit at ($R=0.95$, $R^2=0.91$, $F=112.95$, sig. 0.000) (see Table 5.49). The results shown in Table 5.49 revealed a positive and significant association between IEO training and IEO behavior (Path a: $\beta=2.10$, $t=34.76$, $p \leq 0.01$). The model fit was good indicated by ($R=0.96$, $R^2=0.92$, $F=141.61$ sig. 0.000). Furthermore, the relationship of IEO behavior (Path b: $\beta=0.48$, $t=4.48$, $p \leq 0.01$) with entrepreneurial intention was significantly positive. The model fit indices were $R=0.96$; $R^2=0.92$; $F=123.30$; sig. 0.000). After controlling for the mediator (IEO behavior), the IEO training and entrepreneurial intention link was significantly reduced (Path c': $\beta=1.18$, $t=5.02$, $p \leq 0.01$). The model fit indices were $R=0.96$, $R^2=0.92$, $F=123.20$, sig. 0.000. This shows that the impact of IEO training on entrepreneurial intention is partially transmitted by IEO behavior. The indirect effect size was significant (effect size=1.01, LLCI=0.48 ULCI=1.50). Therefore, partial support was received for H20.

Table 5.51: The Indirect Impact of Individual Entrepreneurial Orientation Training on Entrepreneurial Intention Through IEO

Variables	Entrepreneurial Intention (a) (T3)		Entrepreneurial Intention (b) (T3)		Entrepreneurial Intention (c) (T3)		Entrepreneurial Intention (c) (T3)	
	Model 1		Model 2		Model 3		Model 4	
	β	t	B	t	β	t	β	t
Gender	-0.01	-0.17	-0.03	-0.05	-0.04	-0.53	-0.03	-0.05
Age	0.02	0.42	-0.07	-1.05	-0.06	-0.79	-0.07	-1.05
Sector	-0.07	-1.11	-0.08	-1.14	-0.11	-1.51	-0.08	-1.14
Intelligence	0.03	1.14	-0.46	-1.26	-0.02	-0.78	-0.46	-1.26
Generalized Self-efficacy	-0.15*	-2.68	-0.42	-0.66	-0.11	-1.74	-0.42	-0.66
IEO Learning (T1)	0.02	1.33	-0.03	-1.64	-0.19	-0.96	-0.03	-1.64
IEO Behavior (T1)	0.11	1.14	-0.16	-1.92	-0.10	-1.17	-0.16	-1.92
Entrepreneurial Intention (T1)	-0.01	-0.18	0.03	0.51	0.03	0.39	0.03	0.51
IEO Training	2.10**	34.76			2.19**	31.06	1.18**	5.02
IEO Behavior (T3)			0.48**	4.48				
R	0.96		0.96		0.95		0.96	
R ²	0.92		0.92		0.91		0.92	
F	141.61		123.20		112.95		123.20	
P	0.000		0.00		0.00		0.00	
Bootstrapping for Indirect Impact	Effect Size	P	LLCI	ULCI				
	1.01	<.01	0.48	1.50				

Behavior

Notes. ** $p \leq 0.01$, * $p \leq 0.05$, LLCI=Lower level confidence interval, ULCI=Upper level confidence interval

5.4.5 Qualitative Results

To validate the results of the experimental study, in-depth semi-structured interviews were conducted from 12 training group, as well as, control group participants. “TS” is used to depict a student in the training group while “CS” depicts a student in the control group. The qualitative insights regarding the reaction measures were only taken from the training group. The participants in both groups were inquired about their IEO learning, behavior, and business success.

5.4.5.1 Demographics of Interview Participants

The demographical profile of the qualitative study is shown in Table 5.52.

Table 5.52: Demographic Profile of Study 4 Interview Participants

Variable	Categories	Frequency	Percent	Frequency	Percent
Age	Below 20 years	5	41.6	6	50.0
	20-22 years	7	58.3	6	50.0
	23-25 years	0	0.0	0	0.0
	Above 25 years	0	0.0	0	0.0
	Total	12	100.0	12	100.0
Semester	First	2	1.66	2	1.66
	Second	2	1.66	2	1.66
	Third	2	1.66	2	1.66
	Fourth	2	1.66	2	1.66
	Fifth	2	1.66	2	1.66
	Sixth	2	1.66	2	1.66
	Total	12	100.0	12	100.0
University Sector	Public	7	58.3	6	50.0
	Private	5	41.6	6	50.0
	Total	12	100.0	12	100.0
Gender	Male	7	58.3	8	66.6
	Female	5	41.6	4	33.3
	Total	12	100.0	12	100.0

5.4.5.2 Reaction Measures

The participants were inquired about the extent to which they were satisfied with the training. The participants revealed that the training was worth their time, and they had important learning experiences via this intervention. It was reported that;

“The content of the training was practical and the student based case examples were useful to link the concepts with the real scenario” (TS 1).

“Yes! The training was useful and I got some practical insights into making my behavior more entrepreneurial. Being proactive, taking initiative, and planning for risk is useful for not only being self-employed in the future but also managing other life activities” (TS 4).

Other participants highlighted the satisfaction on the mode of delivery.

“The exercises were easy to understand and they were brief yet comprehensive. It was great that at first the case example was given and then we were asked to apply that in our situation” (TS 8).

“I think the best part was a hands-on practice of each step” (TS 3).

“I learned how to practically apply the things we study in books” (TS 9).

All the participants were positive regarding their intention to use the training content in the future. As it was stated by the respondents,

“Though I am just at the beginning of my degree now I am thinking of starting some small side business based on online selling” (TS 5).

“Application of these approaches will make me more vigilant in scanning for the opportunities and ideas where I can initiate some earning at this stage” (TS 1).

“The action principles are useful in planning my day to day actions in becoming a more practical person. I plan to implement these concepts in my routine life as well as in my studies. In this way when I will be having a business degree I might be more prepared to create jobs and being self-employed” (TS 6).

5.4.5.3 IEO Learning

It was evident that the training participants were very clear in their concepts of IEO. When inquired they provided almost vivid conceptual knowledge. It is illustrated through the following excerpts:

“It is related to the qualities that the potential entrepreneurs may have. Like if I am a business student and have more ability to take risks and to be prepared for its worst outcomes if I can take action and recognize opportunities for the future and have a more creative mindset, I will be more suitable for being self-employed” (TS 1).

Another training participant gave a clear picture of the concept,

“It is a concept that depicts the potential of becoming an entrepreneur in the future. It has three basic elements that are taking calculated risks, being creative, and having a future orientation” (TS 3).

It was repeatedly reflected that trained business students had better knowledge of the IEO dimension. As narrated by another participant,

“It is the basic mental model that is needed for a successful start-up. Taking risks and being mindful about their potential positive and negative aspects, having distinctive ideas and the guts of starting something new are its prime elements” (TS 12).

It was asked that after did their understanding of IEO has changed. The responses of trained students showed a stark improvement as illustrated by the following responses,

“I had not much idea of this concept before, I only knew that it is related to starting a business, but now I am well averse with all its dimensions” (TE 5).

“Yes! After training, I have knowledge of entrepreneurial orientation and how it relates to the behavior of a potential business owner like a business student” (TE 10).

In contrast, the control group participants displayed a vague understating of the theoretical IEO foundations. Some of them said they do not know about it,

“I do not possess much knowledge about this concept” (CS 7).

“I have no clear idea... I can only guess that it the attitude of entrepreneurs” (CE2).

While others have some imprecise idea of this concept,

“When someone inclines to invest his/her finances to realize a new market venture” (CE 11).

“It is a firm-level orientation to make strategies that are entrepreneurial, from entrepreneurial it is meant having a business idea and converting it to reality” (CE 9).

When inquired if they had any changed knowledge about this concept. All participants stated that they had the same concepts,

“I did not actively search what is this concept” (CS 4)

“Not as such, we have read basics of entrepreneurship and I do not remember that I have studied this exact term but I know that entrepreneurs are risk-takers” (CS 7).

“I did not make any effort to learn about the inquired construct I believe it’s an entrepreneurial mindset in general” (CS 11).

5.4.5.4 IEO Behavior

To get an exploratory insight into the way IEO has changed before and after the training, the training participants were inquired about the way they adopt IEO constructs in their routine as a business student. It was revealed that most of them have altered behavior to display learned IEO behavior. As depicted in the following statements,

The participants reflected on their risk-taking behavior as:

“I had some of the risk-taking aptitudes before this session because I think it imparts more returns, but now I always think about pros and cons of taking a risk in everyday life, I decide which one is worth taking and which is not” (TS 3).

“There is no station which is free from risk, either there is low risk or high risk... I used to avoid risks because I was afraid of the unknown outcomes, what if I have to face negative consequences? The exercise of risk planning was effective and now I feel an improvement in this behavior” (TS 11).

“I have improved my risk-taking behavior, such that now I feel less fear in adopting something new, like going to a new place to eat, trying out a new product, or making an effort to invest my savings” (TS 6).

The initiative behavior and competitiveness were elaborated as:

“The first change I made is that I now do not wait for my fellows to start working on a new idea like in any project or some personal plan, I now try to be the first one to take action” (TS 9).

“I am hesitant in taking the first move in everyday life, but through the practice sessions and knowing the benefits of being the one to start a new thing I have incorporated this in my routine, now I try to stay firm on taking any action that is new and also think about future” (TS 2).

“I actively scan the potential business ideas, such as we have a spare house and I am now thinking of converting it into student hostel with the help of my family investment” (TS 4).

“Now I feel responsible to secure my better future from now, I plan ahead of time. I have now started planning for home-based food service for hostel students” (TS 8).

The innovative attitude was reflected in the following statements:

“Now I have quit my habit of copy-pasting a lot of stuff in assigned projects and I try to brainstorm and focus on real business issues rather than internet-based knowledge, it has improved my creativity” (TS 4).

“I never thought I am an innovative person, but now I am taking baby steps. Like now I have started thinking about how can I do and plan things that are different from others... and all that for good reasons... I am nowadays trying to improve my personality and also try out cost-effective and innovative purchasing choices” (TS 12).

However, the control group participants did not reflect a high IEO behavior as seen through their narratives. Regarding innovation the students said,

“I do not think I have any innovative capability” (CS 1).

“I adopt mainstream things, it is safe to do what others are doing, and what is in trend” (CS 8).

“I do not make any drastic changes in my life” (CS 3).

Risk-taking behavior was quite low,

“I do not have the guts of indulging in things that are new for me” (CS 10).

“I would say I am a risk-taker, but I choose options that have minimum risk” (CS 2).

“Fear of loss holds me back from taking risks” (CS 5)

Their views on the personal initiative were as follows:

“I am not a leader like I just follow what the brilliant classmates are doing” (CS 9).

“Whenever I start something new, as soon as any hurdle comes I leave it or become demotivated” (CS 5).

“I usually focus on how I can survive in the short-term, I do not actively plan for future” (CS 2).

5.4.5.5 Entrepreneurial Intention

The training participants indicated an improved intention of being self-employed such as:

“...I now think that it is better to be a boss, I would prefer to be the one giving instructions rather than taking them” (TS 12).

“It is eye-opening for me, I now feel that even if I do a job I will have a side business, the future is much more challenging reading the labor market conditions” (TS 8).

It was reported by another participant,

“To be honest, I started this degree because I wanted to be a banker. But now I am open to new ideas, there are many more avenues than only completing a degree to get a few thousand rupees employment” (TS 5).

Another student narrated a potential business idea,

“I have done some short courses and now I think I could open an academy to train others, initially I’ll start by online sessions and social media marketing” (TS 7).

The control group participants showed an aptitude towards being jobholders, however, two of them were interested in their own business, further probing one revealed that he had a family business background.

“I would be self-employed because my father has a garment shop and I would just follow his footsteps. I think it is an easy option” (CS 4).

Another had a personal inclination towards entrepreneurship.

“I will start a business and I think it is a wise choice” (CS 3)

It was stated by others that they aim to be self-employed

“I aim to apply in any well-reputed company” (CS 5)

“I would try my best to attain a government job, it is secure and has long term benefits” (CS 7).

“I want to pursue a career as a lecturer. I think it is respectable and also has good earning, I will further pursue my education to be able to get this job” (CS 9).

As contrary to the expectations there was a slight reduction in the entrepreneurial intention of the control group. Therefore, this was additionally probed.

One of the participants said he had the aim of becoming self-employed but now due to the economic downturn he thinks that the investment is not favorable,

“Now our country is not in a position for thriving new business... I will try for immigration” (CS 11).

Another stated that,

“At the start of degree I was quite motivated for being self-employed but till now I did not find the educational system well equipped to make us business owners. They are just producing employees” (CS 2).

The overall interviews are summarized in Figure 5.8.



Figure 5.8: Schematic Diagram of Qualitative Results of Study 4

5.5 Visual Summary

The summary of the results of 4 studies is presented in Figure 5.9.

Study 1 and Study 2		Study 3 and Study 4	
Study Nature: Quantitative time-lagged survey		Study Nature: Mixed-method (Experiment + interview)	
H1: There is a significant Impact of IEO on SMEs success (Accepted)	H8: Training of individual entrepreneurial orientation develops reaction measures i.e. satisfaction, perceived utility and transfer motivation for operational SME owners. (Accepted)	H16: Training of individual entrepreneurial orientation develops reaction measures i.e. satisfaction, perceived utility and transfer motivation for business students (would-be entrepreneurs)(Accepted)	
H2: Exploration activities mediate the relationship between IEO and SMEs success (Accepted)	H9: Training of individual entrepreneurial orientation improves the learning of IEO construct for operational SMEs owners. (Accepted)	H17: Training of individual entrepreneurial orientation improves the learning of IEO construct for business students (would-be entrepreneurs)(Accepted)	
H3: Responsive performance mediate the relationship between IEO and SMEs success (Rejected)	H10: Training of individual entrepreneurial orientation creates IEO behavior in operational SMEs owners. (Accepted)	H18: Training of individual entrepreneurial orientation creates IEO behavior in business students (would-be entrepreneurs) (Accepted)	
H4: Access to finance mediates the relationship between IEO and SMEs success (Accepted)	H11: Operational SMEs owners who are trained for IEO will be more successful. (Accepted)	H19: Business students (would-be entrepreneurs) who are trained for IEO will have higher entrepreneurial intention (Accepted)	
H5: Active social networking mediates the relationship between IEO and SMEs success (Accepted)	H12: IEO behavior of trained SMEs owners acts as a mediator between IEO training and success of SMEs. (Accepted)	H20: IEO behavior of trained business students (would-be entrepreneurs) acts as a mediator between IEO training and entrepreneurial intention.(Accepted)	
H6: The students' IEO has a positive impact on their entrepreneurial intention.(Accepted)	H13: The post-test (a) IEO learning, (b) IEO behavior, and (c) SMEs success will be improved as compared to pre-test IEO learning, IEO behavior, and SMEs success in the training group (existing entrepreneurs). (Accepted)	H21: The post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved as compared to pre-test IEO learning, IEO behavior, and entrepreneurial intention in the training group (would-be entrepreneurs). (Accepted)	
H7a: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert scanning and search.(Accepted)	H14: The post-test (a) IEO learning, (b) IEO behavior, and (c) SMEs success will remain same in the SMEs owners (existing entrepreneurs) in the control group. (Rejected)	H22: The post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will remain same in the business students (would-be entrepreneurs) in the control group. (H22a and H22b accepted, H22c rejected)	
H7b: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert association and connection. (Rejected)	H15: The post test (a) IEO learning, (b) IEO behavior, and (c) SMEs success will be improved in the operational SMEs' owners training group as compared to the control group. (Accepted)	H23: The post test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved in the operational SMEs' owners training group as compared to the control group. (Accepted)	
H7c: The positive relationship between students' IEO and their entrepreneurial intention is mediated by alert evaluation and judgment. (Accepted)	The qualitative interviews substantiated quantitative findings except for H14	The qualitative interviews substantiated quantitative findings except for H22c	

Figure 5.9: Visual Summary of Results of Study 1, 2, 3, and 4

CHAPTER FIVE: DISCUSSION AND CONCLUSION

This is the concluding chapter of this dissertation, first of all it delineates the hypotheses wise discussion for all the studies. After that, the implications from a theoretical, methodological, practical, and contextual perspective are elaborated. In theoretical implications highlighted the importance of psychology for SMEs' success and entrepreneurial intention, the focus on the individualized construct of IEO, and the use of evidence-based action orientation. From a methodological standpoint, the use of triangulation (time-lag survey, experiment, and qualitative interviews) are emphasized. The practical use of the findings for SMEs owners, SMEDA, undergraduate business students, HEIs, and development of entrepreneurial training programs are outlined along with the importance of this research in Pakistan. Then the limitations and future research avenues are outlined and the chapter ends with concluding the thesis findings and a summarized visual display of chapter 6.

6.1 Discussion of Hypotheses

The aim of study 1 was to determine the impact of IEO on SMEs' success and to further examine the mediating role of action characteristics (i.e., exploration activities, response performance, access to finance, and active social networking) between IEO and SMEs' success. H1 postulated that IEO improves SMEs' success. The results offered support for this hypothesis, such that the combined impact of all dimensions of IEO i.e., learning orientation, achievement orientation, autonomy orientation, risk-taking, competitive aggressiveness, innovation orientation, and personal initiative on the success of SMEs was significantly positive. This affirmed the seminal conceptualization of IEO given by Krauss et al. (2005) who advocated the holistic influence of business owners' IEO on successful business outcomes.

Theoretically, it is in line with the emotive approach that advocates the importance of entrepreneurs' psychological traits in deciding their business outcomes (Van Gelder et al., 2007). Moreover, it gave strength to the concept that owners' psychological traits play an important role in business success (Frese & Gielnik, 2014; Gindling & Newhous, 2012). In SMEs business

owners decide the strategic department, therefore, exhibiting IEO as a psychological stance results in successful business operations in the same way as the firm-level IEO (Irwin et al., 2018; Krauss et al., 2005). Taking a deeper insight reveals how each component of IEO enables the business to perform better than rivals and its previous bottom line. First of all, risk-taking “conceptualized as one’s orientation toward taking chances in a decision-making situation” (Sexton & Bowman, 1985, p. 13) is a prime feature of business owners. In the specific context of SMEs, it is the propensity of a business owner to take the calculated and moderate risk (Begley, 1995). By incorporating risk in the decision-making, as well as, in crafting business activities, the SMEs’ owners look at the market opportunities in a more optimistic way and capture them before the “conservative” counterparts that promote its survival and growth (Watsons & Newby, 2005; Pett, Errami, & Sie, 2019).

Secondly, being innovative an SME owner decides to create or transform a product, service, process or taps a unique market. By doing so the SME owner undergoes a process from conception of a new idea to making it a marketable opportunity. Thus it allows the SME to tap those market opportunities that are unique and capture higher market share as compared to the imitative competitors (Covin & Wales, 2019). The third pillar of IEO is personal initiative that is the ability of a business owner to take lead in designing vision and strategies to realize the market opportunities. This also encompasses taking a future and proactive perspective and the ability to overcome any obstacle in the realization of proactive objectives (Lumpkin & Dess, 1996; Pett et al., 2019; Storey, 2016). This preemptive posture allows not only to be prepared for the realization of market opportunities but also enables the SME owners to prepare themselves for the potential business threats that their competitors foresee (Covin & Slevin, 1989). These three dimensions are a prime contributor in taking first-mover advantage and leading the industry (Sok, O’Cass, & Miles, 2016; Van Gelderen, Thurik, & Bosma, 2005). Besides, the autonomous behavior of SME owners is also linked to good performance.

Autonomy orientation imparts the capacity to independently create a business vision and have the guts to take it to completion. The drive for independence also acts as a source of motivation for improved performance (Kollmann, Christofer, & Kuckertz, 2007). This behavior aids in not only developing business goals but also in realizing those goals that are an important

aspect of SMEs' success (Nakku, Agbola, Miles, & Mahmood, 2020). Being competitive aggressive makes a business owner take an active stance towards dealing with their competitors (Lumpkin & Dess, 2000) and their urge to outperform their counterparts leads to successful operations (Buli, 2017). The quest of setting challenging goals and making efforts to successfully attain them has been linked to the behavior of successful entrepreneurs (Goktan & Gupta, 2015). Lastly, learning orientation, that is the ability to take an active knowledge seeking perspective and learning from mistakes, also has been linked to improved SMEs performance (Gnizy, Baker, & Grinstein, 2014; Rhee, Park, & Lee, 2010; Staniewski & Awruk, 2019). When a business owner takes initiative in attaining the business and market knowledge and reflect on the outcomes of his decision to avoid the mistakes in future, it greatly enhances the chances of being successful (Beneke, Blampied, Dewar, & Soriano, 2016; Real, Roldán, & Leal, 2014). All the above literature explains how SMEs owners can become more successful by their IEO.

Furthermore, to unlock the IEO and SMEs' success relationship the mediating role of action characteristics i.e., exploration activities, response performance, access to finance, and active social networking was postulated. These underlying mechanisms were proposed on the foundation of the theory of action regulation (Zacher & Frese, 2018). The premise of this theory is that entrepreneurial action is essential for business outcomes. Moreover, the psychological characteristics of entrepreneurs cannot be adequately understood until their impact on tangible business actions and outcomes is known (Frese, 2007). Frese (2011) stated that the psychology of entrepreneurship is incomplete unless it gets them started to take entrepreneurial action. Therefore, this theory offered the basis for a selection of mediating mechanisms that were classified as major action characteristics (Frese & Gielnik, 2014). In H2 it was hypothesized that exploration activities will mediate the relationship of IEO and SMEs' success.

The results offered support for this postulation, such that when a small business owner has IEO, his capabilities of risk-taking, innovation, and personal initiative will influence his decision making to be more explorative (Abebe & Angriawan, 2014). Such that they are more active in searching for new products, services, technology, and processes for the potential introduction in their companies. The competitive aggressiveness, learning, autonomy, and achievement orientation also promote exploration in terms of products, services, and business operations.

Moreover, the SME owner becomes keen to learn new business skills (Russo & Vurro, 2010; Sariol & Abebe, 2017).

The indulgence in exploration activities enhances a firms' chances to outperform their competitors and have good profit (Osiyevskyy, Shirokova, & Ritala, 2019). IEO, therefore, enhances the capability of SMEs for reconfiguration of its resources and knowledge for the provision of novel product and market options. The new combination of knowledge and resources multiply the chances of capturing new market opportunities ahead of competitors. Individuals with high IEO have a different and more optimistic view of the market that enables them to capture higher market share and customers (Hughes et al., 2007; Slater & Narver, 1995). The extant literature has supported the impact of strategic three-dimensional EO construct exploration activities (Bauer & Leker, 2013; Yeniaras & Unver, 2016) and SMEs' success (Osiyevskyy et al., 2019). This study has approved that the seven-dimensional IEO construct holds in case of SMEs as well, as it has been shown that IEO of SMEs owners makes them engage in exploration activities in terms of product, service, and process innovation coupled with unique ways to operate the business and take their business to the elevated bottom line.

In H3 it was postulated that the IEO and SMEs success relationship will be mediated by the action characteristic of response performance. Contrary to the expectations, the results did not support this hypothesis. Response performance is the ability of an organization to adapt to the changes in the market and counter the competitive moves in a timely fashion (Grewal & Tansuhaj, 2001). It is deemed as the adaptive capacity of any firm that illicit adequate responses to the market change. In the past, the impact of firm-level EO construct comprising three dimensions has been established on response performance. However, this impact was diminished in the presence of an exploitative learning orientation (Hughes et al., 2007; Hughes, Hodgkinson, Hughes, & Arshad, 2018). The seven-dimensional IEO construct includes learning orientation as one of its components that do not specify the learning mode (Krauss et al., 2005), therefore it can be one of the possible reasons that mediating the role of response performance could not be proven. Covin and Lumpkin (2011) and Wales (2016) argued that learning and contextual factors are responsible for the inconsistent relationship between EO and its outcomes.

The use of improvisation and absorptive capacity aids the positive outcomes of EO by improving the owners/top managers' decision-making capacity. Also, the EO and response performance are strongly related to newly developed firms (Hughes et al., 2007; 2018) as the sample of this study contained firms of all age ranges so maybe this impact is not evident in this case. Hughes et al. (2018) also stated that SMEs EO in middle-income and Eastern economies may have different outcome implications as compared to their western and high-income equivalents. A catalyzing role of absorptive capacity, improvisation, and deliberate practice may be needed to moderate this mediating role of response performance between IEO and SMEs' success.

In H4, the mediating role of access to finance was hypothesized between IEO and SMEs' success. The findings of empirical analysis offered affirmation for this hypothesis. The results are in line with the assertion of Frese and Gielnik (2014) who advocate that the psychological traits of entrepreneurs can facilitate access to different resources they need to operate the business and leads toward business success. Fatoki (2012) found that risk-taking, innovativeness, proactivity, autonomy, and competitive aggressiveness that are core elements of EO aid SMEs to obtain financial resources. Furthermore, having higher learning orientation also improves knowledge-seeking about the financial resources and learning from past experiences also improves the acquisition of financial capital for SMEs in emerging economies (Aminu & Shariff, 2015; Ibrahim & Shariff, 2016). Accessing the financial resources is one of the prime actions of business owners that makes them successful especially in SMEs (Lee et al., 2015). A higher drive for achievement leads the entrepreneurs to set challenging goals to obtain financial resources and motivates them to put maximum efforts in this aspect (Frese & Gielnik, 2014). Hence, the SMEs owners that have high IEO will face fewer barriers in seeking financial resources and will less likely to face the capital shortage (Sidek, Mohamad, Wan, & Nasir, 2019). The adequate amount of financial resources needed to run the business operations is a key to success in SMEs of developing countries (Ndiaye, Razak, Nagayev, & Ng, 2018).

H5 was regarding the role of active social networking in explaining the relationship of IEO with SMEs' success. The findings of this research substantiated this mediation, and it is according to the meta-analytical findings of Frese and Gielnik (2014) who put forth that EO as a psychological trait of an entrepreneur can enable better and active social networking that is

essential for the successful business. Social networks are the connections with other business and non-business related entities that can potentially help in SME operations. Smaller size businesses are usually resource-constrained and having social capital is an effective source for their survival (DeGhetto, Sutton, Holcomb, & Holme, 2016). This is, in particular, true for the SMEs operating in emerging and collectivist economies where the founder ties play a vital role in subsequent business growth (Fatima & Bilal, 2019). The small business owners rely on informal networks, i.e. family, friends, and other associates (Zimmer, 1986).

Evidence exists that the social networking process can be geared up through psychological factors that, ultimately, results in business growth (Zhao, 2005; Zhao et al., 2010). The business owners having entrepreneurial orientation may generate innovative ideas, take calculated risks, learn proactively, exercise autonomy, and pursue achievement and competitiveness (Krauss et al., 2005). These traits are key factors that help such individuals to grow social networks that, in turn, serve well their business needs (Frese & Gielnik, 2014). The social networks with business entities, government bodies, and personals, family, friends, and acquaintances, etc., allows for gaining expert opinion, knowledge and seizure of market prospects, facilitation of resource acquisition, and social support that leads to improved SMEs performance (Bika & Kalantaridis, 2019; Zhou, Wu, & Luo, 2007). Therefore, entrepreneurial orientation contributes significantly towards business success by easing the social networking process (Heavey, Simsek, & Fox, 2015).

Moreover, the multiple analysis of indirect impact revealed that the strongest mediator between IEO and SMEs success association was active social networking, followed by exploration activities and access to finance, however, response performance could not be proven as a significant mediator. This shows that South Asian and developing country's context, the IEO of SMEs' owners helps to make them more successful through improving their active social networking strategies (Realo, Allik, & Greenfield, 2008; Solano & Rooks, 2018). In this kind of national context, formal and informal social networking with "right people" is an important source of accessing resources and overcoming the administrative barriers in SMEs (Alrubaishi & Robson, 2019; Bika & Kalantaridis, 2019; Michailova et al., 2013). Moreover, IEO helped in improving the exploration activities of SME owners that helped them in attaining better performance

outcomes. Search for new opportunities, experimentation, and discovery is also very important to outperform their counterparts in developing countries (Michailova et al., 2013).

SMEs are resource-constrained and their owners play an active role in decision making, thus the innovative use of resource combinations due to IEO enable them to have unique products, services, and processes that lead to the competitive edge (Abebe & Angriawan, 2014; Osiyevskyy et al., 2019). The mediating role of access to finance was somewhat weaker in all, though it has been proved that firm-level EO leads to better access to financial resources and resultant SMEs success in developing countries (Ahmad & Arif, 2015; Fatoki, 2012), this impact may be stronger depending on the government support for the financial accessibility and the relevant quality of information related to the availability of financial resources (Ahmad & Arif, 2015; Chit, 2019). Lastly, as already discussed the insignificant mediating role of response performance could be attributed to the learning style (i.e., absorptive capacity, improvisation, and deliberate practice), age of SMEs and cultural context (Hughes et al., 2018).

Study 2 was related to the impact of business students IEO on their entrepreneurial intention through the role of entrepreneurial alertness (i.e., alert scanning and search, alert association and connection, alert evaluation and judgment). The conceptualization of Bolton and Lane (2012) was used for the student sample because these three dimensions capture the characteristics and attitudes that indicate the propensity of successfully engaging in entrepreneurial activity.

First of all, in H6 it was hypothesized that students' IEO will improve their entrepreneurial intention. The findings substantiated this hypothesis, such that an undergraduate business student who possesses the innovative capacity, is a risk-taker, and proactive will have more inclination towards starting his/her venture (Bolton & Lane, 2012). Here again, the theoretical foundation of emotive perspective is used that upholds the view of psychological dispositions being an important determinant of potential entrepreneurial action (Ferreira, Raposo, Rodrigues, Dinis, & Paço, 2012; Khelil, 2016). The innovative aptitude of an individual reflects a predisposition for experimentation and creativity. The extant literature has revealed that innovativeness is linked with intention of initiating ones' own business because such individuals have a higher desire to seek

uniqueness and novelty (Ashourizadeh, Chavoushi, & Schott, 2014). If the business student has a tendency towards creativity and innovation in his everyday life i.e., trying new things, seeking new technologies, and indulging in creative problem solving his potential for becoming self-employed enhances. This is because innovation is a trait that has been linked with the entrepreneurial mindset as compared to others. Entrepreneurs have a higher preference for supporting and engaging in new ideas and it aids in exploring ideas for business start-ups (Bell, 2019).

Moreover, the studies of university alumni also revealed that those students who were more innovative during their study span adopted entrepreneurship as their career choice (Eid, Badewi, Selim, & El-Gohary, 2019). Proactivity is a behavior where an individual is forward-looking and seeks and acts on the opportunities ahead of others (Bolton & Lane, 2012). Every individual shows different responses to the opportunities present in the market. Proactive personality has been linked to the creation of one's own business. Such individuals have an active mindset towards positive and constructive changes (Kumar & Shukla, 2019). In the context of students, the literature offers support for the strong relationship between proactive personality and the intention to start one's business because such individuals see opportunities before others and remain persistent in achieving them. This "forward-looking" perspective motivates students to initiate actions ahead of others to capture potential business activities (Mustafa, Hernandez, Mahon, & Chee, 2016).

The planning and implementation of business ideas are more evident in the mental model of proactive students (Neneh, 2019). The capacity of risk-taking imparts the attitude of tolerance towards the unknown and the ability to take bold actions with calculated risk management. In this case, an individual commits resources to an activity that others see as risky (Rauch, Wiklund, Lumpkin, & Frese, 2009). Risk-taking is the prime distinguishing factor between the job seeker and job creator. Thereby, it is argued that business students that have the element of taking calculated risks in their daily lives will be more likely to have the tolerance to face the unknown. Despite choosing the secure and certain option of seeking employment, these students will have a better and calculative risk aptitude that is a prerequisite for start-up intention (Anwar & Saleem,

2019). Therefore, it is affirmed that undergraduate business students that are innovative, risk-taker, and proactive have positive entrepreneurial intentions.

Alike in the sample of SME owners, for the sample of undergraduate business students, the relationship between IEO and the entrepreneurial intention was further explained based on the theory of action regulation (Frese, 2007). It was postulated in H7 that IEO will impact entrepreneurial intention through the development of entrepreneurial alertness (a) alert scanning and search, (b) alert association and connection, and (c) alert evaluation and judgment. The tenet of action regulation holds that psychological orientations are of no use if they do not inspire the entrepreneurial actions that result in tangible entrepreneurial outcomes (Zacher & Frese, 2018). Botha, Carruthers, and Venter (2019) argue that the choice of vocation is not an over-simplistic phenomenon, therefore, it is necessary to investigate the interplay of factors between IEO and students' entrepreneurial intention.

Hence, the action is aimed at formulating goals for the future and the self-regulation aspect offers a foreground to comprehend the way human beings shape their actions, focus, and intentions (Frese & Sabini, 1985; Keith & Frese, 2005). For the student sample, as the outcome was entrepreneurial intention so the self-regulation aspect of action regulation is more evident. Self-regulated actions are important in shaping the individual's motivation and vision for future goals based on knowledge and monitoring that improves the aptitude of realizing their vision (Higgins & Spiegel, 2004). This kind of action regulation acts as a bridge in translating the entrepreneurial mindset of students into their behavioral intentions of choosing entrepreneurship as their career choice (Pihie & Bagheri, 2013). IEO is a psychological mindset that spurs entrepreneurial alertness that is a key attitude and action of seeking, connecting, and evaluating entrepreneurial information and shape self-employment as their career choice (Obschonka et al. 2017). Therefore, IEO results in entrepreneurial alertness that is the ability of an individual to detect opportunities that others may overlook, and having the propensity to envision future based on the identified opportunities (Kerzner, 1985) and improves the entrepreneurial intention (Hu et al., 2018).

The findings offered support for H7a such that the IEO of undergraduate business students develop their entrepreneurial intention through alert scanning and search. Alert scanning and

search indicate a consent quest for environmental scanning for the identification of information and changes that are not noticed by others (Tang et al., 2012). Thus, the innovation that is a predisposition to creativity and experimentation (Rauch et al., 2009) is associated with entrepreneurial alertness as the individual makes unconventional attempts to seek information about the market opportunities. Thus, it facilitates the search for novel and useful ideas and market information to pursue the opportunities of business start-ups (Hu et al., 2018; Obschonka et al., 2017). Moreover, proactive individuals actively scan and search the entrepreneurial opportunities given their capacity for taking initiatives (Tang et al., 2012). This improves the tendency to find out the solutions to the unmet market needs and build their domain-related knowledge base (Patel, 2019). The risk-taking tendency imparts the capacity of indulging in bold actions and endeavoring unknown (Rauch et al., 2009). The research has indicated that it depends on the risk-taking attitude of an individual that either they consider a certain market disruption as an opportunity or a threat. The risk-taking inclination decides whether an individual will consider a change in the market as a viable source of initiating a market search and scanning to pursue a business opportunity or miss it completely (Cui et al. 2016). Ultimately the alert scanning for entrepreneurial opportunities improves the tendency of business students to be self-employed (Samo & Hashim, 2016; Urban, 2020; Uy et al., 2015).

However, the results of this study did not offer support to H7b, such that alert association and connection was not proven as a significant mediator between IEO and entrepreneurial intention of business students. Alert association and connection refers to the act of using the information obtained about market opportunities for the development of new alternatives (Tang et al., 2012). The focus of this dimension of entrepreneurial alertness is the development of logical association for developing multiple product and service alternatives. The seemingly discrete information is deliberately manipulated to see it from different perspectives to form a bigger picture of the potential business idea (Patel, 2019). Nonetheless, in addition to having the right psychological disposition such as IEO certain other factors impact this action such as deliberate practice and expertise (Tang et al., 2012). Moreover, the cognitive abilities of individuals also play a vital role in this specific stage of alertness (Patel, 2019; Simsek & Heavey, 2011).

Besides, most of the studies regarding entrepreneurial alertness has taken it as a consolidated construct (Ho, Uy, Kang, & Chan, 2018; Obschonka et al., 2017; Patel, 2019) therefore, the understanding about how each dimension of alertness responds to IEO is still lacking. Hence, it is argued that this insignificant mediating role of alert association and connection between IEO and students' entrepreneurial intention may be attributed to the conditional impacts. Moreover, Tang et al. (2012) argued that expertise plays an important role in shaping the association between information in the form of conceiving a novel opportunity. The undergraduate students are in their adolescence and have less practical IEO and thereby the dimension of alert association and connection could not be proved as a significant explanatory mechanism between IEO and entrepreneurial intention. It strengthens the argument of Tang et al. (2012) that "the three dimensions of alertness are distinct and measure different aspects of alertness" (p.88).

The findings also authenticated H7c, which postulated a positive mediating impact of alert evaluation and judgment between IEO and entrepreneurial alertness. Alert evaluation and judgment incorporate the assessment and judgment reading the identified information and changes and categorizing them as a profitable business opportunity (Tang et al., 2012). First of all, a conceptual link in creativity and alertness has been reported in the literature (Kirzner, 2009). The innovative aptitude of an individual makes them better searching and using the information sources for opportunity recognition that is a prime element of alert evaluation and judgment as it involves appraisal of profitable business options (Solevik, Westhead, Matlay, & Parsyak, 2013). This leads an individual to distinguish between the alternatives based on their potential profitability (Hu et al., 2018). The creative and innovative traits make a person have a novel conception of a profitable business idea. Business students "need to be creative to continually adapt and invent in an ever-changing and increasingly complex world" (Jackson et al., 2006, p. 1).

Although everyone is creative to some extent, yet the students who possess a high level of creativity have distinctive attributes of originality, independence, and persistence (Shane & Nicolaou, 2015). Due to this they are better in the judgment of a potential business idea and evaluate form multiple innovative perspectives rather quick assessment. This kind of approach has been linked to a better evaluation of potential business ideas (Matlay, Heinonen, Hytti, & Stenholm, 2011). Proactive individuals are seen to have more alertness about the entrepreneurial

opportunities given their capacity for taking initiatives (Tang et al., 2012). Uy et al. (2015) found entrepreneurial alertness to be a significant mediator in linking students' proactive personality and the subsequent boundless career mindset. This allows the individuals to foresee the industry gaps and take initiative in evaluating the pros and cons of their potential business idea that are aimed at challenging status-quo (Neneh, 2019; Wu, 2009). The risk-taking element of IEO also participates in improving the evaluation and judgment of potential business ideas (Cui et al., 2016). The capacity of risk-taking imparts the attitude of tolerance towards the unknown. Thus, the students having a risk-taking mindset are willing to evaluate a relatively risky idea as potentially profitable because they are willing to take bold actions with calculated risk management. In this case, they plan to commit resources to an activity that others see as ambiguous and uncertain (Rauch, Wiklund, Lumpkin, & Frese, 2009). This makes their evaluation and judgment better by taking moderate and calculated risk in view (Mauer, 2019). Thus, it is evident that the IEO of undergraduate business students improves their creativity, initiative, and calculated risk acceptance based evaluation of a business idea as profitable and in turn enhances their entrepreneurial intention.

The comparative indirect showcased that alert scanning and search had a stronger indirect impact on IEO and entrepreneurial intention relationship as compared to alert evaluation and judgment, while alert association and connection could not be proved as a significant mediating impact. This affirms the meta-analytical finding of Frese and Gielnik (2014) who deem alert information seeking as a strong action characteristic in linking psychological traits and entrepreneurial outcomes. Moreover, Obschonka et al. (2017) also stated that creativity and proactivity are more strongly linked with the scanning and search facet of entrepreneurial alertness in the case of business students. This is since the sample of this study was undergraduate business students, as they are adolescent and in this stage, active information seeking that is the first level of entrepreneurial alertness is more evident. The explicit knowledge obtained during education may be more related to the alert scanning and search whilst the tacit knowledge that is obtained by practical experience is profound in the alert association and connection (Sharma, 2019). As argued by Tang et al. (2012) the connection and association are further dependent on the expertise that is low in the educational stage. The indirect impact of alert evaluation and judgment was comparatively lower than alert scanning and search but it was still significant. As the alert

evaluation and judgment are greatly dependent on recursive scanning and search therefore this relationship also held (Sharma, 2019; Tang et al., 2012). The recent investigation by Mauer (2019) also substantiated that during the educational era, the construct of evaluation and judgment is more overpowering as compared to the rest of the two dimensions of entrepreneurial alertness. Thus, overall IEO of undergraduate business students influences their propensity of starting their own business through the alert scanning and search and evaluation and judgment while at this stage alert association and connection do not significantly intervene in this process.

Study 3 was a field experiment in which the operational SME owners were given training for the development of IEO (i.e., learning orientation, achievement orientation, autonomy orientation, risk-taking, competitive aggressiveness, innovation orientation, and personal initiative) based on an action regulation approach. The aim was to find out the impact of action-based IEO training on reaction measures (H8), IEO learning (H9), IEO behavior (H10), and SMEs' success (H11). Moreover, it was hypothesized that IEO training will influence SMEs' success through the development of IEO behavior (H12). These participants were evaluated before and after training (H13 a, b, c) as well as they were compared with a non-treatment control group (H14a, b, c) via quantitative as well as qualitative data analysis.

In the first place, H8 posited the impact of IEO intervention on reaction measures (i.e., satisfaction, utility, and transfer motivation). Kirkpatrick's (1975) model of training evaluation indicates that the initial impact of any training is the reaction to it, that is the measure of how well the trainees have perceived training content, including the factors of training satisfaction, transfer intention, and perceived utility. This hypothesis was only pertinent to the training group and the findings offered substantial support to it. It was found that all the participants were satisfied with the content of training, exercises, and the training delivery method. Moreover, they agreed that the training was relevant to their business and they showed motivation to practice it in their business routine. This is in line with the extant research on action-based psychological training programs in developing countries yield satisfactory participants' reaction (Frese et al., 2016; Glaub, 2009; Glaub et al., 2014; Mensmann, 2017). This shows that the trainees' expectations for the program matched their experience. Furthermore, they are satisfied in terms of the contents covered in the

training program and the materials and methods used for delivering the training program (Bezrukova et al., 2016).

Trainees deemed that training was useful in practical terms and they had the motivation to apply the trained concepts in their business settings (Kirkpatrick 1975; Kirkpatrick & Kirkpatrick, 2006). This also affirms that the action-oriented and wise training interventions yield a higher level of satisfaction among participants because they include the practical exercises that are easily understandable and enable the participants to overcome the ‘learning-doing’ gap. Also, they are designed to be short so that they generate maximum output at an optimal time (Walton, 2014; Walton & Wilson, 2018). The practical nature of training exercise and their implementation during the training enhanced the understanding of its practical application to the SME owners’ business project not only improved its perceived workability but also improved the propensity of transfer of training (Glaub & Frese, 2011; Zacher & Frese, 2018).

H9 postulated that the IEO training program will improve the IEO learning of participating SME owners. For training to be successful the second level of evaluation the learning derived from (Kirkpatrick, 1975) it which implies how much knowledge of IEO is attained after training. The results also offered support to this notion, such that it was found that after IEO learning of participants was significantly improved. This is in line with the generalized model of training evaluation that after the immediate impact, the training influences the learning of participants. Learning is “a relatively permanent change in knowledge or skill produced by experience” (Weiss, 1990, p. 172). Such that they have better knowledge about the aspects of trained content and their skills are upgraded in that specific area (Kirkpatrick, 1975; Kirkpatrick & Kirkpatrick, 2016). The participants' scores on all dimensions of IEO i.e., of achievement-orientation, autonomy-orientation, learning-orientation, competitive aggressiveness, proactiveness, innovation, and risk-taking were significantly improved post-training. This is in line with the other psychological interventions that improved the learning of participants regarding the dimensions of the trained construct (Frese et al., 2016; Glaub et al., 2014; Mensmann, 2017).

The action-bases wise interventions are based on theoretical foundations that are translated into practical exercises for the facilitation of hands-on learning (Glaub, 2009). This is the reason

that the active nature of training augments the learning of training participants. It has been supported in training literature (Cui, 2013; Riley & Ward, 2017) as well as in the extant entrepreneurial education research stream (Byrne, Delmar, Fayolle, & Lamine, 2016; Campos et al., 2017; Roelofs, Vrielink, & Slagter, 2018) that action-based teaching methods are more successful in generating learning outcomes.

It was hypothesized in H10 that the IEO training of SME owners will improve their IEO behavior. In keeping with the Kirkpatrick (1975) training evaluation model, the third level training outcome is changed post-training behavior. This level of evaluation is a barometer of the magnitude to which the trained material has impacted the intended behavior of participants and its materialization in the way actual work is performed (Arthur et al., 2003; Praslova, 2010). Behavioral criteria have been deemed an important element in measuring the training outcomes in diverse contexts (Bezrukova et al., 2016). In the case of this study, it is the measure of superior behavior in terms of autonomy orientation, innovativeness, risk-taking, personal initiative, and competitive aggressiveness, learning and, achievement orientation. This hypothesis was also authenticated by the findings and significant improvement in IEO behavior was traced after training. This illustrates the actual application and display of the trained behavior (Razanaufal & Lantu, 2019), such that the SME owners become more autonomous, competitive, proactive, innovative, risk-taker, learning and, achievement-oriented in their actual business settings.

It is the inherent characteristic of action-based psychological training programs for operational entrepreneurs that their practical exercises and active involvement during training improves the demonstration of trained behavior in actual context (Frese et al., 2016). The scientific intervention was based on action principles developed for all facets of individual entrepreneurial orientation i.e. achievement orientation, learning orientation, personal initiative, risk-taking orientation, competitive aggressiveness, autonomy orientation and innovation orientation (Krauss et al., 2005). The business owners were trained by converting abstract theoretical knowledge of entrepreneurial orientation into teachable content for each facet (Glaub, 2009; Frese et al., 2016). This affirms the notion of Blume et al. (2010) that training is deemed as effective if it enables the trainee to apply the learned behaviors and skills in their work settings. Moreover, as the behavior was measured 6 months post-training, it is suggested that the impacts of training on behavior are

greater when the measurement waves are closer. Entrepreneurial training interventions based on psychological factors, evidence has been traced that the action-based training changes the behavior of business owners and they reported improved performance based on the practice of learned content in the day to day business operations (Bilal & Fatima, 2019; Frese et al., 2016; Glaub, 2009; Glaub et al., 2014; Mensmann, 2017).

It was postulated in H11 that IEO training will have a significantly positive impact on SMEs' success. Again referring to the training evaluation framework devised by Kirkpatrick (1975), the last level of training evaluation is the results. In the case of business they are measured as exceptional business performance in terms of sales, employees' efficiency, expenses, and profits (Glaub, 2009; Praslova, 2010). The findings signified that IEO training had a positive effect on the overall success index. It was reported that the trained SME owners had improved sales, profits, employee efficiency, along with a decline in operational expenses. The most advanced training evaluation criteria of results measure the impact of training on large scale business outcomes (Bates, 2004). The prior evidence also supports these findings such that it has been established that entrepreneurial training programs have positive outcomes on the success of business ventures. It was uncovered that out of the training interventions done for business management skills and development of psychological factors; those aimed at later aspect, had higher success rates in terms of business survival, sales, and profits (Campos et al., 2017; Nieman, 2001; Klinger & Schündeln, 2011) and proved to have a positive impact on the economic success of entrepreneurs (with greater learning capabilities) in case of small businesses in developing nations (Bilal & Fatima, 2019; Glaub, 2009; Glaub & Frese, 2011; Mensmann, 2017).

This study also explained the ways by which the IEO training influences SMEs' success. In H12, it was posited that IEO training will have a positive effect on SMEs' success through the development and display of IEO behavior. The findings revealed that IEO behavior acted as a partial mediator in the relationship between training intervention and business success. These results have their roots in the theory of action regulation (Frese, 2007) that advocates the paramount role of entrepreneurial actions in linking the psychological traits with business success. It has been evinced that to ensure the improved business outcomes are due to training intervention the mediating role of trained behavior is essential (Glaub, 2009). Thus, it is reasoned that post IEO

training, the SME owners demonstrated the behaviors of autonomy, achievement-orientation, learning-orientation, innovativeness, risk-taking, proactiveness, and competitive aggressiveness. SME owners displayed proactivity in terms of foreseeing future opportunities and overcoming the barriers that come in the path of exploiting these opportunities.

The calculative moderate risk-taking along with the development of risk mitigation strategies enabled the SME owners to capture and take advantage of high yielding opportunities and improve the business outcomes. The development of innovative strategies for products, services, and business processes also helps the SMEs owners to leverage the market opportunities and capitalize on them to gain market share (Lumpkin & Dess, 1996; Rosenbusch, Rauch, & Bausch, 2013). The learning-orientation, enabled the SMEs owners for improving mental models based on learning from experience along with the high degree deliberate attempts gaining business and market-related knowledge also enabled them to improve their business operations and reap financial benefits (Fang He et al., 2018; Van Dyck et al., 2005). The trained SMEs owners also set more challenging business goals (i.e. ideas to expand the business) for themselves and others that helped in improving business growth (Kraus et al., 2008; Utsch & Rauch, 2000). Moreover, the enhanced competitive aggressiveness in SME owners facilitated the active development of strategies to combat competition rather being reactive or avoiding competition altogether. This entailed making price-cutting strategies and setting the budgets for advertisement, quality, and service improvement to win the competition (Zacca et al., 2015). Lastly, the improved level of autonomy improved realization of business vision and achieving the desired business outcomes (Gelderens, 2000). Collectively the display of all dimensions of IEO behavior post-training, convalesced the outlook of SMEs in terms of sustained sales, reduce expenses, boosting employees' output, and improved bottom lines. This is because, in contrast to the traditional training programs that are based on lecture-based delivery of theoretical knowledge, action-based training programs convert theory into actionable principles that yield the desired behavior and business success (Campos et al., 2017; Glaub et al., 2014).

This affirms the findings of Krauss et al. (2005) who stated the positive impact of a seven-dimensional IEO construct on small business success. Moreover, it also supported the past evidence that psychological action-based wise training programs facilitate the trainees in

exhibiting the trained behavior and yield improved business performance (Glaub 2009; Glaub & Frese, 2011; Frese et al., 2016). However, in contrast to some of the prior evidence (Glaub, 2009; Glaub & Frese, 2011) the impact of IEO training on SMEs' success was not fully mediated by IEO behavior. It infers that other factors can mediate the training and outcome relationship. Such as entrepreneurial self-efficacy, error-competence, and entrepreneurial passion were deemed to be the mediators in personal initiative training and small business success (Mensmann, 2017).

The pre-test and post-test comparison of the training group in terms of (a) IEO learning, (b) behavior, and (c) SMEs' success were hypothesized in H13. It was postulated that the pre-test IEO learning, behavior, and SMEs' success will enhance after participation in IEO training. The findings backed H13 and it was found that the participants had significantly high IEO learning, IEO behavior, as well as they reported their business to be more successful after training participation. Even after controlling for the generalized self-efficacy, cognitive ability, demographic variables, pre-test measures of IEO learning, behavior, and SMEs performance the IEO training had a considerable impact on the post-test measures of the training group. This is in agreement with the prevailing research in the field of psychological action-based entrepreneurial interventions for small scale business owners.

The filed experiments measuring the outcomes of personal initiative training for small business owners in developing countries found that the personal initiative knowledge was high, as well as, the participants exhibited more initiative behaviors in their day to day business activities and were more successful in terms of sales, profits, and number of employees (Campos et al., 2017; Bilal & Fatima, 2019; Glaub, 2009; Glaub et al., 2014; Frese et al., 2016; Mensmann, 2017). The foundation lies in the theory of action regulation (Frese, 2007) and principles of evidence-based management (Pfeffer & Sutton, 2006) in which the theoretical concepts are coupled with the empirical evidence and operationalized into action principles (Glaub, 2009). The participants were trained for all dimensions of IEO by the principles of goal setting, information seeking, planning, and feedback (Glaub et al., 2014; Zacher & Frese, 2018). This enabled the SME owners in the training group to practically apply all the constructs on their own business and reap its benefits. This results into overcoming the 'knowing-doing' gap that is proven to improve the taught behavior (Frese, Bausch, Schmidt, Rauch, & Kabst, 2012; Frese, Rousseau, & Wiklund, 2014) and

subsequently the link between behavior and outcome is evident (Rauch, Van Doorn, & Hulsink, 2014).

Regarding the pre-test and post-test impacts, it was hypothesized in H14 that there will be no change in the post-test (a) IEO learning, (b) behavior, and (c) success of SMEs for participants in the control group. Contrary to the anticipation, the findings were not as expected. Some of the prior experimental evidence suggest that the behavior and outcomes in control group remain intact (De Luca, 2008; Murphy, 2013). In the present study, it was revealed that in the control group, the post-training IEO learning, behavior and SMEs' success declined with time instead of remaining constant. Glaub et al. (2014) reported that the post-test personal initiative behavior for the control group was less than the pre-test whilst sales, and the number of employees decreased in same manner. They did not measure the learning of personal initiative in the control group. The learning pyramid indicates that those individuals who just learn by reading, observing, or repetitive aimless performance of the task may find it difficult to retain it. As opposed to them, individuals who practically perform the learned concepts and have the aim of improving their knowledge base have an advanced level of knowledge retention (Fernando & Nishant, 2019).

In this case, the participants in the control group only had the IEO knowledge that they obtained from their education, personal reading, social contacts, observation, or performing routine business activities. Research in the field of learning holds that mere learning from experience and aimless practice is not ample for knowledge retention and it may fade over time. However, the formal teaching and active learning approach not only improve the learning but also sustain knowledge base (Day, 2010; Keith, Unger, Rauch, & Frese, 2016). The reason behind reduction in a display of IEO behavior is also attributed the same cause, such that active learning is a precursor of the behavioral display, although entrepreneurial learning is usually based on a routine practice that is not aimed to attain altered behaviors or results, so the behavioral preservation is less likely (Lans, Biemans, Versteegen, & Mulder, 2011). Most of the learning in the control group was passive so the resultant behavioral display was also not retained. This shows that lower elements of achievement and learning orientation—a core part of IEO—in the control group also reduced their IEO behaviors because a lack of these factors reduces the motivation of entrepreneurs to exhibit entrepreneurial actions (Keith et al., 2016). The reduction in success is in line with the

extant evidence on action-based psychological training in which the control group's business success has witnessed a slight decline over time (Glaub, 2009; Glaub et al., 2014; Mensmann, 2017). This affirms the findings of Glaub et al. (2014) that control group participants are unable to cope with the non-favorable market and economic landscape and consequently suffer the decline in their performance. This is because the control group lacks the learning and IEO behavior that is needed to retain business survival even in the face of the adverse economic and competitive market. The inadequate network ties, government support, and financial barriers were reported to be an obstacle in SMEs success (Sandhu & Azhar, 2019). In the past year, the economy of Pakistan has faced upheavals, causing a serious toll on the business sector (Abbasi, 2019) therefore untrained SME owners could not maintain their business performance.

To further validate the impact of IEO training it was conjectured in H15 that the post-test (a) IEO learning, (b) behavior, and (c) success of SMEs will be higher in training group as compared to control group. The findings of group comparison revealed that the SME owners in the training group outperformed their counterparts in the control group in IEO learning, behavior, and business success. These results comply with the extant training literature that implies that the training group scores better in the evaluation measurements post-training (Bezrukova et al., 2016) because training altered behavior of participants and developed the desired attitude to manage the business operations in an effective manner (Choen, 2005). Action-regulation based training exercises are known to generate lasting improvement in knowledge and subsequent behavior (Frese et al., 2016). The knowledge of IEO improved in participant SME owners and significantly enhanced their autonomous, innovative, competitive, risk-taking, personal initiative, learning, and achievement-oriented behavior as compared to the non-trained participants in the control group. The training intervention increased all the success measures i.e. level of average sales rose, the employees' efficiency enhanced, the number of customers increased, and the overall success boosted. In contrast, the participants in the control group showed a decline in all the success measures. In the post-training period, Pakistan faced economic and political changes after the change of the ruling party that had implications for business outcomes (Abbasi, 2019).

The trained SME owners had sufficient IEO knowledge and displayed it in managing their business operations that sustained business success. EO imparts the capability of survival in a

hostile economic landscape specifically in the small business sector (Eggers & Kraus, 2011; Shirokova, 2013). The recent evidence has proved that EO enables the small business in developing economies to retain their performance even in the face of adverse economic circumstances (Laskovaia, Marino, Shirokova, & Wales, 2019). Therefore, the training group participants leaped ahead of the participants in the control group who scored relatively lower on IEO and suffered losses due to the external economic downturn. Moreover, the assignment of participants to the training and control group showed they were almost equivalent in terms of demographical characteristics that minimized the impact of demographical and contextual changes. This mitigated the concern regarding the accidental increase in the outcomes in the training group. It has been indicated by the prior psychological entrepreneurial training programs that the participants had better outcomes in terms of learning, behavior, and results in the training group, while the participants in the control group showed little or no improvement in these outcomes (e.g., Glaub et al., 2011; Glaub et al., 2014; Mensmann, 2017).

The training evaluation was also done through the qualitative insights from the training as well as control group participants. The use of the explanatory approach in experimental research improves the substantiation of the results and offer a further explanation into why certain outcomes were achieved and why some of the hypotheses could not hold (Azorin, Gamero, Moliner, & Ortega, 2012; Glaub, 2009; Kraus, Meier, & Niemand, 2016). This research extended the methodological approach of Glaub et al. (2014) who only took the qualitative acumens of trained small business owners regarding their post-training satisfaction. It took a more exhaustive stance by conducting the exploration of not only the post-test training satisfaction of the training group, but also taking the qualitative responses on IEO learning, behavior, and SMEs' success in training as well as the control group. This imparted more enriched insights regarding (Azorin et al., 2012) the impact of IEO training on SME owners and how and why the control group participants lagged behind them. Entrepreneurship predominantly relies on the psychological mindset and the actions of business owners, specifically in SMEs.

Therefore, the investigation of their lived experience is sought (Neergaard & Ulhøi, 2010). The qualitative narratives of participants in the training group that the IEO training met their expectations, it was useful for their business and they were motivated to apply the learned content

in their business. It was revealed that participants in the training group behaved had improved learning of IEO and depicted a correct understating of all dimensions while the control group participants remained ignorant. Moreover, the training group participants explained how they incorporated learning orientation, achievement orientation, autonomy orientation, risk-taking, competitive aggressiveness, innovation orientation, and personal initiative in their business. They dealt with even unfavorable circumstances with an entrepreneurial mindset, such as the business owners saw the increased inflation as a source of opportunity to compete based on low-cost strategy.

In the face of the increased energy crisis, the training participants proactively arranged for back-up plans. Better risk evaluations were done before expanding into foreign markets, active learning from mistakes in the form of constructive feedback-seeking from employees and customers, and being participative in day to day business operations. Contrarily the control group participants adopted ‘firefighting’ philosophy and bore losses, reducing the level of success in comparison to the trained participants. They blamed their failures on the external economic circumstances and faulty government policies instead of improving their conduct to sustain performance. These qualitative findings explained that a psychological mindset is developed built on action-oriented wise interventions (Mensmann, 2017) and makes the SMEs owners able to cope with the environmental factors better than untrained business owners (Walton & Wilson, 2018) and sustain success (Campos et al., 2017).

Another similar field experiment was carried out in Study 4 in which undergraduate business students were trained for developing IEO (i.e., risk-taking, innovation orientation, and proactiveness). This training program was also based on the action regulation approach. The objective was to find out the impact of action-based IEO training on reaction measures (H16), IEO learning (H17), IEO behavior (H18), and entrepreneurial intention (H19). Moreover, it was hypothesized that IEO training will inculcate entrepreneurial intention through the improvement of IEO behavior (H20). The pre-test and post-test evaluation of participants were done for the difference in IEO learning, behavior, and entrepreneurial intention (H21a, b, c), as well as they, were compared with a non-treatment control group (H 22 a, b, c) via quantitative as well as qualitative data analysis on these measures.

It was hypothesized in H16 that the undergraduate business students who undertook the IEO training will be satisfied in terms of training content, perceived utility, and will have training transfer motivation. This hypothesis was only tested in the training group participants. The results were as expected, and authenticated that the trainees reported a high level of satisfaction with the training materials, exercises, and the way content was conveyed. Because they were business students so they perceived the training to be useful in their future choice of occupation. The Kirkpatrick (1975) model of training evaluation has suggested reaction measures as the first measure of effective training. He stated that to be successful, a training program should meet the expectations of participants in terms of the way training was delivered and the way the trainer imparted the training content.

Moreover, the participants should also consider that the training was useful and relevant for them and they can practically apply the acquired knowledge. Lastly, the training should inspire and motivate the participants to apply what they have gained from training. The action-based entrepreneurship training programs that involve real case examples, practical exercise, and participants' input in form of their projects are more engaging and students report them to be more satisfying (Rasmussen & Sorheim, 2006). Kassean, Vanevenhoven, Liguori, and Winkel (2015) also indicated a paradigm shift in teaching entrepreneurship through action-based principles and active involvement of students. This kind of training program teaches the entrepreneurial actions practically with hands-on practice for students (Gielnik et al., 2015). The high level of involvement improves understanding of participants that how the theoretical concepts are applied in real-world settings. This improves the awareness of the perceived usefulness of training material when the participants are clear about the application of concepts they are taught (Bhatti, Ali, Isa, & Battour, 2014). Training design and the level of participants' interest in training are important predictors of training transfer intention (Gegenfurtner, Knogler, & Schwab, 2020). When the participants are well aware of applying the trained knowledge it will improve their intention to implement it in their routine life as well as for their future career decision.

H17 postulated that IEO training for undergraduate business students will enhance their knowledge of IEO (i.e., innovation, risk-taking, and proactivity). This assumption was based on level two of the training evaluation framework (Kirkpatrick, 1975). The evaluation of training in

terms of learning outcomes, the level of conceptual clarity and knowledge of the trained constructs is monitored (Langmann & Thomas, 2019). To test the level of IEO knowledge a paper and pencil multiple-choice test was developed that contained questions about innovation, risk-taking, and proactiveness. This kind of test is previously used successfully to measure the knowledge of psychological constructs (Glaub, 2009; Mensmann, 2017). The results indicated that IEO training had a significantly positive impact on the level of students' learning and their test scores revealed a stark improvement in post-intervention measurement.

This indicated that IEO training was successful in improving knowledge about innovation, risk-taking, and proactiveness. This is in line with the extant research on action-based psychological training programs for teaching entrepreneurship that lead to enhanced learning of the trained contents (Bilal & Fatima, 2019; Glaub et al., 2014; Mensmann, 2017). The underlying reason behind this improved IEO learning is the incorporation of action principles and practical teaching methodology. It means that IEO training enabled them to gain knowledge of innovation, risk-taking, and proactiveness based on action sequence (Glaub et al., 2014). The students learned to develop the goals, identified the sources of seeking information about those goals, made plans to attain their stipulated goals and lastly monitored and took feedback on their implementation. First of all, they implemented the learned knowledge in provided case studies, and then applied these action principles to identify the ways they can improve IEO behavior in their present and future life. Lastly, the use of a personal project ensured that they have now learned to apply the trained knowledge outside of the classroom context. The training literature (Cui, 2013; Riley & Ward, 2017) and research in the field of entrepreneurship education and training advocates the adoption of action perspective for improved learning of entrepreneurial mindset (Byrne et al., 2016; Roelofs et al., 2018; Kassean et al., 2015).

In H18 it was hypothesized that IEO training for undergraduate business students will improve their IEO behavior. This assertion was developed based on the third level of the training evaluation model, which gauge the change in trained behavior (Kirkpatrick, 1975). Behavioral outcomes of the training are referred to as the transfer of training in which the trainee alters his/her conduct to match the desired behavior (Langmann & Thomas, 2019). For the student population, it is the transfer of knowledge and skills attained in training in real-life settings in educational and

general life domains as well as for the future career planning (Praslova, 2010). The results indicated that IEO training improved the display of innovative, risk-taking, and proactivity in the students' behaviors. The trigger for this change in behavior was the use of an action regulation perspective (Frese, 2007) in designing the training content.

Zacher and Frese (2015) postulate that one can become agentic by following the action sequence of i.e., goal setting, gaining environmental knowledge, formulating and executing the plan of action, monitoring the plan and seeking feedback. Following the three dimensions of IEO grounded in the above-mentioned action sequence, enable a person to regulate actions based on cognition and bridge the knowing and doing gap by translating declarative knowledge into operational knowledge (Frese et al., 2012). Secondly, for being agentic, one must have a connection with higher and lower level cognitions, such that the upper-level thoughts are connected with lower-level actions through learning by doing approach. Practicing and rehearsing the actions in face of changing contexts and situations allows the person to become adept in displaying the learned behavior in real-world situations (Gielnik et al., 2015; Siemon & Otter, 2007). Thus, the facets of IEO learned through action sequence and practiced through hierarchical regulation enabled the undergraduate business students to show an improvement in post-training IEO behavior. It was depicted by Steinmetz, Knappstein, Ajzen, Schmidt, and Kabst (2016) that any behavior can be changed based on theoretically grounded interventions built on the tenet of planned behavior. This study extended this line of inquiry in the domain of entrepreneurship by demonstrating that IEO training based on the theory of action regulation is successful in changing the entrepreneurial mindset of business students.

The last level of Kirkpatrick's (1975) model was hypothesized in H19 such that IEO training for undergraduate business students will increase their entrepreneurial intention. The results revealed that IEO training was a significant predictor of entrepreneurial intention. This denotes the success of IEO training on the most advanced level of assessment i.e., training results. Results are the most depict the impact of training on a larger level of outcome (Bates, 2004). In operational business, these results are the firms' profits (Praslova, 2010) but for the pre-start-up phase, results were regarded as the entrepreneurial intention of the trained students. The intention, in general, insinuates a mental state essential for directing the concentration and action of a person

toward a certain decision. More specifically, the entrepreneurial intention is defined as a mental state that precedes one's attention and actions toward being a job creator rather than a job seeker (Kolvereid, 1996, 2016).

It was pointed out by Souitaris et al. (2007) that students taking entrepreneurial programs are inclined to develop entrepreneurial intentions. High entrepreneurial intention leads to the possibility of becoming nascent entrepreneurs and engaging in business start-ups. This shows that the IEO training program enabled the students to learn and display the behaviors of innovativeness, risk-taking, proactiveness that are linked with enhancing the likelihood of business start-up (Bae & Lee, 2018; Bolton & Lane, 2012). The findings signify the role of entrepreneurial training and education in building the entrepreneurial intent of students (Nabi et al., 2017). Such that active learning approaches are an effective method of inducing entrepreneurial intentions in students (Kassean et al., 2015). This also strengthens the view that the student training programs based on action-regulation principles are fruitful in facilitating the entrepreneurial action of students (Gielnik et al., 2015). Therefore, the action-based IEO training promoted the entrepreneurial intention in undergraduate business students.

It was posited in H20, that IEO training will enhance undergraduate business students' entrepreneurial intention through the improvement in IEO behavior. The results offered partial support to this hypothesis, such that the impact of IEO training on entrepreneurial intention was transmitted through the display of IEO behavior to a certain extent. Training is an important HR practice that plays a vital role in attempting to improve present or future performance by increasing efficiency and ability through learning that changes the behavior and improves knowledge and skill of trainee (Noe & Peacock, 2002). Moreover, these findings are consistent with the general tenet of the theory of action regulation (Frese, 2007). This theory posits that action is the centerpiece in entrepreneurship research and it is emphasized that before entering the business market an active behavior is equally important as it is in the post-start-up phase. This is a meta-theory that describes the way one actively regulates his/her actions for the attainment of a goal in the routine as well as novel situations (Zacher & Frese, 2018). In the psychology of entrepreneurship, this specifically refers to the actions based on the psychological mindset for the pursuit of business activities (Baum, Frese, & Baron, 2014).

The training interventions designed based on action regulation theory are found to develop appropriate action-oriented behavior that leads to the attainment of the intended outcomes (Glaub, 2009). Therefore, it clarifies that IEO training for undergraduate students enabled them to display innovative, risk-taking, and proactive behavior in their routine activities as well as for their future career orientation. Such that these psychological traits are converted into goal-directed behaviors. Students started displaying more innovative behaviors in their daily life as well as for their future vocational decisions. The innovative behaviors enhanced the students' ability for creative thinking and new idea generation (Bolton & Lane, 2012). Innovative behavior improves the capacity of new idea conception but also stimulates the planning to execute these visions in the future (Carter et al., 2002). Laguia et al. (2019) found that university students that perceive themselves to be highly creative showed greater motivation for choosing entrepreneurship as a profession. Students' risk-taking attitudes are linked with the pursuit of high-risk choices and the greater tendency of venturing into the unknown (Bolton & Lane, 2012; Rauch et al., 2009). Being a risk-taker is an important factor in the process of "making an entrepreneur" that is proven to a precursor of self-employment aspirations of university students (Luthje & Franke, 2003). The ability of risk identification, planning, and mitigation leads to an inclination of students for committing resources into risky ventures and augment the likelihood of starting a business in the future (Marques et al., 2018).

Proactiveness is "a dispositional construct that identifies differences among people in the extent to which they take action to influence their environment" (Bateman & Crant, 1993, p. 103). The display of proactive behavior by students enables them to actively influence the environment rather than being a passive reactor to it. They are likely to actively look for, plan, and exploit the business opportunities instead of passive employment seeking. Proactivity gives the needed action propensity that is an essential element of entrepreneurial intention (Bell, 2019). It has been found that proactive students tend to opt for self-employment as a career option as compared to working for others despite their families do not own business (Mustafa et al., 2016). Hence, it implies that the action-based IEO training encouraged IEO behavior in students that increased their propensity of being self-employed. It has been advocated by Nabi et al. (2017) that the interactive and simulative entrepreneurial educational programs improve the entrepreneurial intention in students.

Moreover, they stated that besides teaching general business knowledge to business graduates, their psychological capabilities should also be developed.

In past, the action-based training programs for helping the students to become entrepreneurs have been linked to better opportunity recognition and subsequent entrepreneurial action (Gielnik et al., 2015). Moreover, the partial mediating role of IEO indicates that certain other outcomes of training results in the higher entrepreneurial intention of undergraduate business students. Some of these factors include the entrepreneurial knowledge, self-efficacy (Frese, Gielnik, & Mensmann, 2016), and opportunity recognition (Newman, Obschonka, Schwarz, Cohen, & Nielsen, 2019). It was also suggested that certain factors amplify the influence of entrepreneurial training on entrepreneurial such as the level of action planning (Gielnik et al., 2015) and passion for starting a new business (Turner & Gianiodis, 2018). While there can be certain other factors that cause hindrance in transferring the impact of entrepreneurship training on the development of entrepreneurial intention, such as lack financial resources, unsupportive government policies (Arranz, Arroyabe, & Arroyabe, 2019) and fear of failure (Testa & Frasche, 2015; Tubadji, Dietrich, Angelis, Haas, & Schels, 2019).

It was hypothesized in H21 that the post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved as compared to pre-test IEO learning, IEO behavior, and entrepreneurial intention in the training group (would-be entrepreneurs). The findings supported that the participants depicted adequate knowledge of IEO after training. This substantiates that training improves the learning of participants (Noe & Peacock, 2008). The participants also displayed greater innovative, risk-taking, and proactive behavior after the training. Bell (2015) elaborated that the use of experiential learning and action approach is found useful for the students' entrepreneurial trait development. Moreover, the training programs that are developed based on action principles are found to change behaviors to the desired state (Frese et al., 2016). Therefore, it is argued that the students gained action-oriented IEO learning from the training that helped them in practicing IEO behavior. The students in the training group reported greater entrepreneurial intentions. This shows that the behavioral tendencies of innovation, risk-taking, and proactivity were practiced by students that are linked with self-employment propensity (Bolton & Lane, 2012; Nabi et al., 2017). It has been found that entrepreneurial education that

focuses on practical knowledge enhances the entrepreneurial intention of university students (Fayolle, & Gailly, 2015; Karimi, et al., 2016; Mulder, 2016; Nabi et al., 2017; Passaro et al., 2018). This shows that entrepreneurial education and training is important in shaping the entrepreneurial behavior of students (Gielnik et al., 2015; Rodrigues et al., 2012; Souitaris et al., 2007) and psychological characteristics play an important role in this regard (Dinis et al., 201). Consequently, it substantiates that IEO training improved the post-test IEO learning, behavior, and entrepreneurial intention in undergraduate business students.

On a similar notion, it was postulated in H22 that the pre-test and post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will remain the same in the control group (would-be entrepreneurs). The results supported H22a and H22 b such that there was no significant difference in the pre-test and post-test learning and display of IEO behavior in the undergraduate business students who were not trained. The business education in Pakistan is usually based on theoretical knowledge (Farukh, Lee, Sajid, & Waheed, 2019), thus, as per the learning pyramid, the learning gained by reading, observation, or repetitive aimless task performance does not increase the level of knowledge and is difficult to retain (Fernando & Nishant, 2019). The participants in the control group had obtained IEO knowledge from their curriculum, personal reading, observation, or doing routine assignments and projects. These modes of learning do not incrementally enhance knowledge. So, the level of IEO learning was almost the same for the undergraduate business students who did not participate in the action-based IEO intervention.

Moreover, the constant IEO behavior can also be explained in connection to the stagnant IEO knowledge. Learning is an important part of behavioral improvement (Lans et al., 2011), as the students' level of learning remained unchanged therefore they had no significant change in their IEO behavior. However, the results could not support H22c, such that the entrepreneurial intention decreased in the control group over the period. In general, the research in the field of action-based psychological interventions insinuates that the participants in the control group find it difficult to cope with the changes in the external environment. Such that they are less likely to exploit the opportunities and more affected by the socio-economical threats (Glaub et al., 2014). Although, the ease of doing business rank of Pakistan improved in 2019 (136) from 2018 (147)

yet it was quite less than the regional counterparts i.e., India (77), Bhutan (81), and Sri Lanka (100) (World Bank, 2019).

In addition, the lack of appropriate social connections (Usman & Ahmed, 2018), family vacation, financial issues, fear of failure, law and order situation were among the major barriers for the entrepreneurial intention for students in Punjab (Janjua & Farooq, 2019). The low level of innovative capacity, risk-aversion, and reactive behavior of participants in the control group reduced their entrepreneurial intention. The lack of action-oriented educational programs is also linked to the declining entrepreneurial intention among youth (Farrukh et al., 2019). Thus the student that did not participate in the IEO intervention were more affected by the barriers to business start-up and lost their interest in being self-employed.

It was posited in H23 that the post-test (a) IEO learning, (b) IEO behavior, and (c) entrepreneurial intention will be improved in the operational SMEs' owners' training group as compared to the control group. The findings offered support to this proclamation, ensuring that the IEO learning, behavior, and entrepreneurial intention was higher in the training group in comparison to the control group. This is because training in general (Bell, 2019) and action-oriented interventions, in particular, are found to improve behavior in the trained participants (Campos et al, 2019; Glaub et al., 2014; Frese et al., 2016; Mensmann, 2017). The foundation of this type of training lies in the theory of action regulation (Frese, 2007) and the principles of evidence-based management (Pfeffer & Sutton, 2006). The pairing of theoretical concepts empirical evidence results in operationalized action principles (Glaub, 2009). The students were trained for all dimensions of IEO by the principles of goal setting, information seeking, planning, and feedback (Glaub et al., 2014; Zacher & Frese, 2018).

Recent evidence has suggested that individual personality traits, skills, habits, mental models, and actions play a deciding role in their behavioral alteration (Walton, 2014). Thus, wise-psychological interventions that aim to focus on building the mental capabilities of individuals improve their behavior in the intended domain. The participants of such interventions are equipped with a psychological mindset to overcome the hurdles and be more successful than others (Walton & Wilson, 2018). Therefore the undergraduate students who received theoretically grounded

action-based IEO training gained practical knowledge of formulating goals that are innovative, proactive, and contain calculated risks. Additionally, they practiced seeking information, planning, and attaining feedback on the attainment of these goals based on case study material and their project examples.

This rigorous combination of theory and action-oriented approach generated improved IEO knowledge (Frese et al., 2012; 2014) and accordingly the link IEO between behaviors and entrepreneurial is apparent (Bolton & Lane, 2012). Those students who did not join the IEO training intervention had lower IEO knowledge and behavior, whilst their entrepreneurial intention declined. The psychological mindset makes the difference in people's ability to consider their environmental factors as a threat or opportunity and impacts their behaviors and intentions (Walton & Wilson, 2018). The wise psychological (Walton, 2014) and action-based (Glaub, 2019) training programs for business students impart them the entrepreneurial mindset and helps in improving entrepreneurial behaviors and outcomes (Frese et al., 2016; Melendez, Gamez, & Gomez, 2014; Nabi et al., 2017). Therefore, the participants in the control group underscored in the training outcomes as compared to their trained counterparts. This affirms that students who did not receive the action-based business education have a lower level of entrepreneurial knowledge, behavior, and intention of being a job creator (Farrukh et al., 2019).

To explain and substantiate the experimental findings, the training and control group participants were subsequently interviewed. The supplementary qualitative insights help in further explanation and validation of experimental findings (Azorin et al., 2012; Glaub, 2009; Kraus et al., 2016). In this study, a more exhaustive stance was adopted as opposed to the criteria of evaluation opted by prior psychological interventions that only took qualitative insights about reaction measures and behavior of training group (Glaub, 2009; Glaub et al., 2014) or solely relied on quantitative evaluation (Frese et al., 2016). The post-test qualitative data were obtained from training as well as the control group for learning, behavior, and results, however, the opinions about reaction measures were only taken from the training group. This imparted more enriched insights regarding (Azorin et al., 2012) the impact of IEO training on undergraduate business students' learning, behavior, and entrepreneurial intention.

Moreover, it elaborated on the reasons for the underperformance of control group participants. The business students' psychological and behavioral factors play an important role in deciding their future vocational choice (Perez, Merino, Ariza, & Galicia, 2019). Therefore, the qualitative narratives of participants offer a deeper understanding of this phenomenon. The participants in the training group said that the training was worth their time and it was relevant to their educational field. They appreciated the practical cases and enjoyed the learning exercises by application of IEO constructs in their own life as well as in their proposed project. The students said that they are motivated to apply this content in their present life as well as for their future career planning. The students were able to describe all the trained constructs quite well but those in the control group still held the same beliefs.

Moreover, the training group participants explained how they incorporated risk-taking, innovation orientation, and personal initiative in their daily routine as well as in their studies. It was reported that students stated now they are less afraid of taking risks because they are in a better position to calculate their intensity and develop the mitigation strategies. They depicted proactive behavior in designing their day to day activities, their university assignments, as well as looking for potential side business options. The participants were quite hopeful for the future choice of being self-employed, as they narrated some of the potential ideas they could realize, such as opening academy for short courses, utilizing the free home space like a hostel, and doing some side business of homemade food delivery. This shows that action-based psychological training interventions make a difference in students learning, behavior, and entrepreneurial intentions (Nabi et al., 2017).

Contrariwise, the control group students did not show much improvement in IEO behavior and remained less creative, risk-averse, and reactive. Although a few of them also had self-employment intentions, but they were financially sound and had a family business background. Both of these factors are linked to improved entrepreneurial intention regardless of entrepreneurial education or training (Janjua & Farooq, 2019; Palmer, Fasbender, Kraus, Birkner, & Kailer, 2019). Other students were more afraid of the political and economic landscape and said that in the future they do not see business initiation as being an easy or profitable option. This validates that lack of entrepreneurial training results in more influence of entrepreneurial barriers on intentions of

starting a new business (Frese et al., 2016; Farrukh et al., 2019). Lastly, the job-seeker students revealed they are more risk-averse, like to follow others and want a secure career. This also depicts a lower IEO that is linked with reduced IEO intentions (Bolton & Lane, 2012).

6.2 Implications of Research

In this section, the implications of this thesis from a theoretical, methodological, practical, and contextual perspective are elaborated.

6.2.1 Theoretical Significance

The theoretical significance of all studies is explained in each section.

6.2.1.1 Attention towards the Psychological Factors in Determining the Entrepreneurial Intention and Success

Theoretically, this research has contributed to the field of entrepreneurship by drawing attention towards the investigation of psychological entrepreneurial orientation in operational SMEs' owners and undergraduate business students. First, this research has extended the entrepreneurship literature by underlining the importance of psychological factors in deciding the success/failure of SMEs (Frese & Gielnik, 2014; Medina, Ortiz, Naumchik, & Pellejero, 2019) in addition to the previously examined external (i.e., government support, infrastructural issues, economic crisis), organizational (i.e., production methods, functional practices, employees' productivity) and personal factors (i.e., educational qualification, age, and ethnicity) of entrepreneurs (Bilal et al., 2016; Gupta & Mirchan, 2018; Heilmann, Astikainen, & Kultalahti, 2020; Lussier & Halabi, 2010; Onkelinx, Manolova, & Edelman, 2016; Soomro, Abdelwahed, & Shah, 2019; Petzold, Barbat, Pons, & Zins, 2019; SMEDA, 2019; Yadav, Jain, Mittal, Panwar, & Lyons, 2019).

Though, it has been recognized that certain psychological traits of business owners make them more successful than others (Acar & Goc, 2011; Baum et al., 2014; Palmer et al., 2019), specifically in case of SMEs (Isaga, 2018). Yet it is still to be probed how the SMEs owners develop those psychological traits and transform them into appropriate actions leading to successful business outcomes (Palmer et al., 2019). That is why, this research has opted for the agentic nature of the psychological factor of IEO concerning business outcomes based on the tenet of action regulation (Frese, 2007; 2009; Zacher & Frese, 2018) to advance the field of entrepreneurial psychology.

Secondly, the present research emphasizes that the psychological traits of potential entrepreneurs also play an important part in new business start-ups. Current investigation has stepped beyond the widely enquired role of business education (Nabi et al., 2017), gender, family background, personality traits (Farrukh, Khan, Khan, Ramzani, & Soladoye, 2017; Nowinski et al., 2019; VanGelder, et al., 2008; Yasir, Liren, Mehmood, & Arfat, 2019), behavior (Shah & Somro, 2017), cultural, regional, political, and economic conditions (Arranz, Arroyabe, & Arroyabe, 2019; Hayton & Cacciotti, 2014; Linan, & Fayolle, 2015) on the intention of being self-employed. Undergraduate business students constitute an impending population of future business owners. Recently, scholars have stressed the importance of psychological factors for developing entrepreneurial intention (Bell, 2019; Isiwu & Onwuka, 2017; Nasip, Amirul, Sondoh, & Tanakinjal, 2017; Shah & Soomro, 2017) but these studies failed to give an adequate explanation of how the psychological factors transform into the decision of being an entrepreneur. Individual thoughts and actions spur the willingness to set-up ones' own business (Frese, 2009; Fayolle & Linan, 2014; Linan, & Fayolle, 2015). Therefore, this research has highlighted how the IEO of undergraduate business students leads to higher intentions of being self-employed based on the emergent concept of action regulation (Zacher & Frese, 2018). Thereby, adding to the missing link between the psychological orientations and entrepreneurial intentions.

6.2.1.2 The individual-level Construct of Entrepreneurial Orientation

EO has long been recognized as a firm-level strategic construct (Covin & Lumpkin, 2011). In contrast to the plethora of research on its firm-level conceptualization (Arshad, 2018; Covin, & Wales, 2018; Karami & Tang, 2019; Palmer et al., 2019), this research has extended the literature on the individual-level construct of EO. The individual-focused EO research surged after the idea was put forth by Krauss et al. (2005) and further developed by Bolton and Lane (2012). It is more pertinent to the owners of SMEs or the potential entrepreneurs because the smaller scale business and pre-start-up stages involve more individualized concentration (Awang, Amran, Nor, Ibrahim, & Razali, 2016; Bolton & Lane, 2012; Popov, Varga, Jelic, & Dinic, 2019; Palmer et al., 2019).

In previous studies either the strategic EO variable is linked to SMEs success through organizational level mediators i.e., competitive advantage (Mahmood & Hanafi, 2013), market orientation (Amin, Thurasamy, Aldakhil, & Kaswuri, 2016), networking capability, experiential learning (Karami & Tang, 2019), export market orientation (Imran, Saleem, Iqbal, & Rafi, 2020) or the direct relationships of IEO and SMEs success (Krauss et al., 2005) is scantily focused. The same is the case with the examination of EO in relation to entrepreneurial intention, such as most of the research studies examined a direct IEO and entrepreneurial intention association (Bolton & Lane, 2012; Koe, 2016; Suartha & Suprpti, 2016; Sahoo & Panda, 2019). The EO research stream in general and in IEO in specific calls for clarifying the action-process that yields its outcomes (Neneh, 2019; Palmer et al., 2019). Thus, the present research has empirically demonstrated that EO can be conceptualized as a psychological attitude at pre-start-up (undergraduate business students) and post-start-up (SME owners) stages. Moreover, four studies across this dissertation have shown that IEO can be trained and results in action characteristics for SMEs owners (i.e., exploration activities response performance, access to finance, and active social networking) as well as undergraduate business students (i.e., alert scanning and search, alert association and connection, alert evaluation and judgment) that in turn leads to improved business outcomes and increased entrepreneurial intention. The study in hand not only demonstrated that IEO has positive outcomes, but it has also shown that IEO can be improved via action-based interventions. Thereby,

adding to the EO domain by offering the scantily researched action-based mediators and development perspective in potential and operational business owners.

6.2.1.3 Evidence-Based Management and Action-Oriented Training

This research has built on contemporary scientific developments and the latest knowledge in the field of entrepreneurial psychology by using the tenets of action regulation and evidence-based management (Barends & Rousseau, 2018; Briner, Denyer, & Rousseau, 2009; Frese & Gielnik, 2014). Frese et al. (2014) encouraged to incorporate the scientific evidence-based findings, facts, metrics, and systematic investigations in the field of entrepreneurship. They specifically highlighted the use of evidence-based management in the field of entrepreneurial education and training along with the traditional qualitative and quantitative methods. Till now only two theoretically grounded action-based entrepreneurial training programs have been designed and tested in developing countries. This research has made a major contribution by developing IEO training based on action principles and extended beyond the achievement motivation (Miron & McClelland, 1979) and personal initiative (Glaub, 2009) training and methodologically weak EO training (Al-Awlaqi et al., 2018) in developing nations. Thereby, current research has offered evidence that IEO is yet another holistic trainable psychological concept that is linked to entrepreneurial success (Krauss et al., 2005) as well as entrepreneurial intention (Bolton & Lane, 2012). It has been empirically proved that IEO can be trained through action-oriented and theoretically grounded training intervention (Frese & Zapf, 1994; Frese, 2007; Zacher & Frese, 2018) which is a proven method in improving the quality of entrepreneurship in developing nations (Campos et al., 2017; Glaub et al., 2014; Frese et al., 2016; Mensmann, 2017).

6.2.2 Methodological Significance

Kraus et al. (2016) argued that entrepreneurial research focuses on how and why some business owners exploit opportunities and others don't. Thus, the mere use of interviews and surveys do not offer a holistic answer to these questions in a methodologically sound manner (Lohrke, Holloway, & Woolley, 2010). Thus, a use of contemporary methods i.e., longitudinal

(Eller et al., 2020; Sahinidis et al., 2019), experimental (Gregoire, Binder, & Rauch, 2019; Vandro & Franke, 2016; Xiaoyu et al., 2019), and mixed-methods (Dy & Agwunob, 2019) is called for. Hence, this research has contributed to the methodological rigor in the area of IEO research by adopting contemporaneous methods in entrepreneurship research to reveal the temporal nature of variables, reduction of the common method bias, and to offer evidence-based insights supported with qualitative insights is answered. The collection of data at multiple points of time decreased the probability of common method bias (Podsakoff et al., 2003). In this research, we have developed a robust approach to measure training success, as we incorporated quantitative as well as qualitative insights.

The translation of the theoretical conceptions of EO into action principles added to the practicality of psychological constructs in entrepreneurial psychology that helped in bridging the “knowing-doing gap” (Frese et al., 2012; Siemon & Otter, 2007). To explain and substantiate the experimental findings, the training and control group participants were subsequently interviewed. The supplementary qualitative insights help in further explanation and validation of experimental findings (Azorin et al., 2012; Glaub, 2009; Kraus et al., 2016). A sound theoretical foundation coupled with the robust data analysis was used to yield practical positive outcomes of training not only on the learning and behaviors of business owners but also on the concrete business success indicators. The training spanned 24 hours by following the rules of ‘wise interventions’ (Walton, 2014); that is considered a shorter period as compared to the lengthy interventions, that reduced the cost and improved the feasibility for business owners to attend training out of their busy schedule. Hence, the meticulousness of research findings has been enhanced across four studies by using triangulation based on a time-lagged survey (study 1 and study 2) and embedded mixed method design (study 3 and study 4).

6.2.3 Contextual Significance

6.2.3.1 Focus on Small and Medium Scale Enterprise as Opposed to Corporations

Entrepreneurship is particularly relevant for the economic wellbeing in developing countries, yet there is limited academic research on the unique issues of entrepreneurship in this context (Sutter et al., 2019; Mensmann, 2017). Emerging economies have a higher share of the workforce employed in SMEs as compared to industrialized nations, and are more dependent on this sector making it an important area of investigation (McKenzie & Woodruff, 2016). Moreover, the size of the firm carries great importance in examining business dynamics as the role of business owners is different in smaller-scale business as compared to the large scale businesses. Also, the challenges faced by SMEs are different from large scale business (Karunagaran, Mathew, & Lehner, 2019). IEO of SME owners is of great interest because an entrepreneur is the one who develops strategies, makes decisions and takes actions in smaller-scale business (Bilal & Fatima, 2019; Krauss et al., 2005). Therefore, this research had added to the stream of the psychological perspective of entrepreneurship by examining EO as an individualized construct in SMEs.

6.2.3.2 Inclusion of Existing and Potential Entrepreneurs in the Sample

This research contributed to not only the psychological traits of operational entrepreneurs but also extended to the undergraduate business students that serve as potential entrepreneurs. In contrast to most of the EO research and entrepreneurial training programs that either focused on operational entrepreneurs (Glaub et al., 2014; Glaub, 2009; Karami & Tang, 2019; Krauss et al., 2005; Mensmann, 2017; Palmer et al., 2019) or students (Bolton & Lane, 2012; Frese et al., 2016; Koe, 2016; Melendez et al., 2016; Suartha & Suprapti, 2016; Sahoo & Panda, 2019), this dissertation expanded the applicability of IEO research to both populations. Thus, it offered evidence-based on multiple-participants' perspectives that IEO is a holistic psychological construct that is equally beneficial for the leading SME's success and development of entrepreneurial intention in undergraduate business students. Moreover, it has expanded the

applicability of IEO training in developing entrepreneurial intention as well as in the improvement of SMEs' success.

6.2.3.3 Context of Pakistan

Diverging from the examination of EO in western (Bolton & Lane, 2012; Karami & Tang, 2019; Strauss & Parker, 2018) and African contexts (Ekpe & Mat, 2012; Koloba, 2017; Westhuizen, 2017), this research has targeted Pakistan that is a developing nation and combating the dilemma of a struggling SMEs sector in terms of performance and new start-ups. Firm-level EO construct has been predominantly examined in Pakistan (Arshad, 2018; Aziz, Hasnain, Awais, Shahzadi, & Afza, 2017; Fayaz & Shah, 2017; Fayaz, Rahman, & Rauf, 2020; Imran et al., 2018; Imran et al., 2020), leaving the room of its micro-level applicability. Moreover, psychologically driven training have mostly focused on developing nations in African region (Campos et al., 2017; Frese & Gielnik, 2014; Glaub et al., 2014; Glaub, 2009; Mensmann, 2017) and testing this conception in Pakistan broaden their contextual applicability.

6.2.4 Practical Significance

In addition to academic contributions, this research has broader practical contributions.

6.2.4.1 Entrepreneurial Training Programs

The study in hand move beyond the theoretical linkage of psychological variables to organizational outcomes and measured the success of psychological training programs for small business owners as suggested by Campos et al. (2017). This research has proven that psychological training for individual entrepreneurial orientation can instill this mindset in SME owners and result in long-lasting business improvements. This study offers an action-oriented and theoretically grounded training program that allows the entrepreneurs in SMEs to increase their business

survival rate. Furthermore, the training is equally beneficial for the students to improve the level of entrepreneurial intention.

6.2.4.2 Operational Entrepreneurs (SME Owners)

This research is beneficial for SME owners to improve their IEO and take the actions of exploration, attaining financial resources, and developing active social networks to gain success. Furthermore, the training program is beneficial for operational SME owners, doing so they can contribute to the achievement of greater economic objectives of growth and business success. As opposed to the concept of taking help from outside this approach teaches the small and medium scale business owners to take responsibility for their survival and employment creation thus, making them self-sustaining that is more effective and offers enduring outcomes (Mensmann, 2017).

6.2.4.3 Aspiring Entrepreneurs (Undergraduate Business Students)

This research has shown that undergraduate business students can improve their IEO and become more alert in scanning and evaluating the potential business ideas so that they can become job creators rather being passively looking for jobs. The training program of IEO is beneficial for the students that aim to pursue their careers as entrepreneurs as it will equip them with the required mindset for business start-up. The students will be able to practically learn the psychological attitudes needed for becoming an entrepreneur along with the practical steps, so they will learn by doing that will increase their chances of success when they will start their business. Thus, we have offered a theoretically grounded training that is beneficial for making the youth job creator instead of job seeker as called for by Ahmad (2013).

6.2.4.4 Educational Institutions

The educational institutions can reap the advantage of this research, for teaching the courses of entrepreneurship; they can use the action-based teaching principles outlined in this study to enhance the entrepreneurial orientation and intention among the students. The short span IEO training with proven evaluation is well suited within time and cost constraints and enable them to play a part in fostering graduate entrepreneurship (Nabi & Linan, 2011; Nabi et al., 2017).

6.2.4.5 Government Authorities

The policy implications of this training would be useful for government authorities i.e., SMEDA, SME Banks, SBP, and respective Chamber of Commerce to focus on the IEO training program, or couple their business/finance training programs with psychological and action-based training components. Instead of only offering financial and administrative support for the SME sector, they can opt for a bottom-up approach to build the psychological mindset of the existing and potential entrepreneurs. In this way, it will disseminate benefits for enhancing the entrepreneurial activities and venture survival rate by developing the IEO and entrepreneurial mindset of SME owners. So, that instead of excessively looking up for government and external support SME owners and business students can also take some of the initiatives for their improvement. This will resultantly contribute toward bringing down the rate of poverty, unemployment and improving the socio-economic condition of Pakistan. These policy implications will contribute towards minimization of entrepreneurial failure ratio in Pakistan.

6.2.4.6 Poverty Reduction and Economic Well-Being

This research is not limited to the field of business and economics at the micro-level, but it has larger societal implications for the developing nations to reduce the major issues of unemployment and poverty reduction. The findings of four studies in this dissertation have removed the much-held misconception that psychology is not a solution to grand issues and affirmed the recent conception of psychology as potent enough to resolve the large scale problems (Frese et al., 2016; Mensmann, 2017). The results showcased that individual entrepreneurial orientation training played an important role in increasing the growth rate of SMEs. SMEs are an important vehicle of poverty reduction, elimination of unemployment and stimulation of economic growth through innovation, provision of employment and creating economic well-being (Mensmann, 2017; Mbuyisa & Leonard, 2017; Waqas & Nawaz, 2019). Reducing the level of poverty and increasing the growth of economy are major aims of United Nations SDGs, specifically in developing nations (UN.org, 2015; Sarvajayakesavalu, 2015). For responding this challenge this research has offered an action oriented training to build high growth SMEs to unlock their potential for attainment of SDGs (Sutter et al., 2019). This research is useful for microfinance institutions, banks, small and medium enterprise authority and government to utilize this management intervention to fight poverty and move a step forward to meet SDGs and have sustained economic wellbeing.

6.3 Limitations and Future Research Avenues

This dissertation has certain limitations that open up new avenues for future researchers in the field of entrepreneurial psychology and designing entrepreneurial interventions. First, this research is based on an aggregated IEO construct based on seven dimensions for SME owners and 3 dimensions for undergraduate business students. Although considering seven or three faceted IEO as a consolidated construct is supported (Bolton & Lane, 2012; Krauss et al., 2005), yet the dimensionality can vary as per contexts. Such as, some dimensions of IEO exist in particular industrial sectors or national cultures and do not exist in others (Covin & Lumpkin, 2011; Lomberg, Urbig, Stockmann, Marino, & Dickson, 2017; Wales, 2016). Therefore the uni-

dimensionality of the construct is not unchallenged, also the core EO comprises the ‘family’ of concepts and their inclusion should be based on the unique circumstance of each investigation. Individual dimensions are useful in gleaming the lower-order conceptualization of IEO and may represent divergent results. Therefore, future researchers should use the combined as well as a disintegrated construct to gain comprehensive insights depending on the specific research questions and contexts into consideration (Wales, 2016; Kollmann & Stockmann, 2014).

Secondly, this research used action-based mediators for explaining IEO and its outcomes. For SMEs owners’ exploration activities response performance, access to finance, and active social networking were taken as mediators and for undergraduate business students the underlying mechanisms of alert scanning and search, alert association and connection, alert evaluation and judgment were examined. But these are not the only possible actionable factors that can serve as mediators in IEO and its outcomes. This research has opened up a way for investigating the agentic nature of IEO, and in future other actions could also be examined that could mediate the IEO-performance association (e.g. knowledge creation) (Li, Huang, & Tsai, 2009), action planning (Mansoori & Lackéus, 2019), bricolage (An, Zhao, Cao, Zhang, & Liu, 2018), better human capital management (Andersen, 2019), supply chain management (Bouncken, Plüschke, Pesch, & Kraus, 2016; Guo, Wang, & Chen, 2020), deliberate practice (Keith et al., 2016).

Besides, the insignificant mediating role of response performance between IEO and SMEs’ success should be further probed. This can be done by considering the firm age (Hughes et al., 2007; 2018) and the learning characteristics i.e., absorptive capacity, improvisation of SME owners (Wales, 2016). For students’ samples, other mediators could be active vision development (Frese & Gielnik, 2014), active planning (Liang, Chia, & Liang, 2015), and social networking (Alayis, Abdelwahed, & Atteya, 2018). In addition, imminent research should examine the underlying reasons for the insignificant mediating role of alert association and connection between IEO and entrepreneurial intention. For this purpose, the conditional indirect impact of cognitive abilities can be probed (Patel, 2019; Simsek & Heavey, 2011) and segregated use of entrepreneurial alertness should be emphasized (Tang et al., 2012). Moreover, for the experimental studies, IEO behavior was considered as the only potential mediator, but the partial mediation support signals other prospective mechanisms like entrepreneurial self-efficacy, error-competence,

entrepreneurial passion (Mensmann, 2017; Turner & Gianiodis, 2018), and action planning (Gielnik et al., 2015).

The successful outcomes can be alternatively explained through measuring business innovation index, access to finance, improved capital inputs, diversified product lines, opportunity identification, entrepreneurial action, and improved business practices, etc. as other potential mediators (Campos et al., 2017; Gielink et al., 2015). Moreover, the impact of IEO can be extended beyond SMEs' success, i.e., personal and professional well-being (Mensmann & Frese, 2019). Due to the limitations of resources and time, only the entrepreneurial intention of undergraduate business students was measured that could be extended to entrepreneurial action and start-up (Gielnik et al., 2015; Mamun, Nawi, Mohiuddin, Shamsudin, & Fazal, 2017).

All the studies in this dissertation were initially based on the mediation models and their rigor can be improved by considering the conditional impacts on indirect linkages. Such as, for IEO/IEO training and SMEs success/entrepreneurial intention the individual personality traits (Isaga, 2018; Liang et al., 2015; Sahin, Karadag, & Tuncer, 2019), deliberate practice (Keith et al., 2016), emotional and cognitive abilities (Perez, Merino, Ariza, & Galicia, 2019; Sassetti, Cavaliere, & Lombardi, 2019), and external factors i.e., perceived government support, family background, and social support (Anwar, Tajeddini, & Ullah, 2020; Shiri, Mohammadi, & Hosseini, 2012; Muhamad, Rashid, Hussain, Akhir, & Ahmat, 2020) can be examined. Moreover, the institutional factors i.e., economic indicators, government policies, laws, and infrastructural facilities can also be considered in future examinations. They can be tested as potential moderators and control variables in examining the impact of IEO on SMEs success and entrepreneurial intention, as well as, in testing the outcomes of IEO training. This will help in enhancing the rigor of findings in the presence of institutional factors and shed light on their amplifying and dampening impact on the IEO and IEO training outcomes.

From a methodological perspective, study 1 and study 2 were time-lagged investigations and in the future, the impact of IEO on performance could be examined by true longitudinal designs that could be used to access the impact over the period (McGee & Peterson, 2017). In study 3 and study 4, the limitations of quasi-experimental design are acknowledged and it is

suggested that pure experimental designs can be used to enhance the rigor of findings. As the training was in its seminal stage so it was based on a smaller sample size that is acceptable at this stage (Glaub, 2009) but to further generalize the training outcomes larger sample size is suggested (Campos et al., 2017). Recent evidence has suggested that the impact of psychological training programs declines over time (Mensmann & Frese, 2019). In this research the evaluation was done only up to 6 months after training given the time and cost constraints, it will be fruitful to examine the longer-run impacts of IEO training.

Moreover, the personality traits, actions, and support measures that help in retaining the training impacts offer a valuable impending research direction. This IEO training can be compared with traditional business training (Campos et al., 2017), along with consideration of gender and sector differences (Mensmann, 2017). This study did not segregate the small and medium-size business as well as their sectors. Moreover, it was only confined to the undergraduate business students and the comparative impacts of public and private sectors were not computed. To enhance the applicability and comparative understanding of training effectiveness, it can be compared in different SME sectors and bifurcated based on small and medium scale business. Besides, this students from public and private universities can also be compared in terms of IEO training impacts. To extend the utilization of IEO training, the family business owners, hybrid entrepreneurs, unemployed graduates, and students from non-business backgrounds can serve as the potential population (Koe, 2019; Maresch, Harms, Kailer, & Wurm, 2016; Porfirio, Felicio, & Carrilho, 2019) for future studies.

The training was carried out in Pakistan that already ranks low on the GEDI index indicating the low level of entrepreneurial mind-set (GEDI, 2018). Will the training intervention yield similar outcomes in countries that have a high rate of entrepreneurial activities? Though all training interventions are carried out in specific contexts yet the case for generalizability is built on the widespread evidence of success linked to agentic nature of entrepreneurship (Frese, 2009) and the reported evidence of entrepreneurial orientation as a precursor of business success in developing nations through a survey study (Krauss et al., 2005) and meta-analytic evidence (Frese & Gielnik, 2014). Still, it will be of great importance to replicate the training intervention in multiple national contexts by adapting the contents. All these future avenues will be fruitful for

the IEO research to realize its full potential. On the whole, this study opens up the doors for future researchers to probe into the dynamics of evidence-based management and action-oriented training interventions.

6.4 Conclusion

This research offered evidence that the psychological mind-set of entrepreneurs is a precursor of successful small and medium scale enterprises in developing nations based on the premise of the theory of action regulation. Across four studies, it was confirmed that IEO is not only linked to SMEs' success and entrepreneurial intention, but it can be trained to operational and potential entrepreneurs via detailed action-oriented training. In study 1, it was found that IEO links to SMEs' success through the mediating roles of exploration activities, access to finance, and active social networking strategies, however, the indirect impact of response performance could not hold. Study 2, demonstrated that IEO links to the entrepreneurial intention of undergraduate business students through the mediating roles of alert scanning and search and alert evaluation and judgment. Nonetheless, the indirect impact of alert evaluation and judgment was not proved. In study 3, the embedded mixed-method experiment proved that IEO can be taught to SME owners and improve their training satisfaction, IEO learning, behavior, and SMEs' success.

Moreover, the impact of IEO training on SMEs' success was partially mediated by IEO behavior. Contrary to the expectations, the IEO learning, behavior, and SMEs' success declined after training rather being constant. Lastly, study 4, substantiated that IEO can be trained to the undergraduate business students and yield training satisfaction, along with higher IEO learning, behavior, and entrepreneurial intention. The impact of IEO training on entrepreneurial intention was partially mediated by IEO behavior. As expected the IEO learning and behavior remained the same in the control group after training, but unexpectedly, their entrepreneurial intention reduced overtime. Thus, using triangulation across four studies, this research proved IEO to be equally useful for enhancing SMEs' owner's success and undergraduate business students' entrepreneurial intentions based on action characteristics. In this way, it bridged the knowing-doing gap in IEO

research and offered the substantiation of the successful implementation of evidence-based entrepreneurship.

6.5 Visual Summary

The visual summary of Chapter 6 is presented in Figure 6.1.

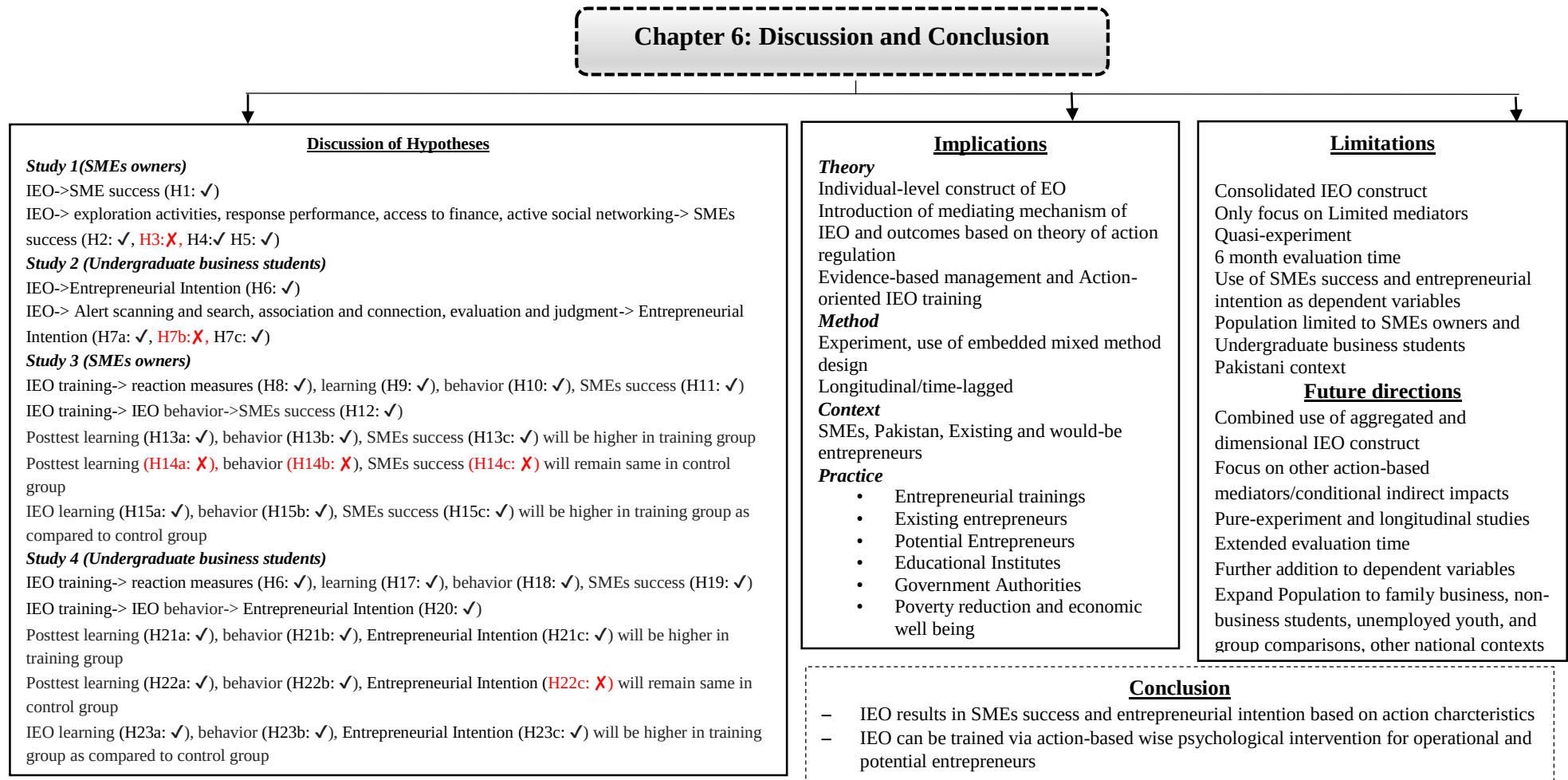


Figure 6.1: Visual summary of Chapter 6

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APPENDICES

Appendix I

Questionnaires

Study 1 (T1)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “**Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions**”. For this purpose, I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 26-30 years ☐ 31-35 years ☐ 36-40 years ☐ Above 40 years	Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters		
The relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical	Years of operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years		
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)	Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years		
Please mention: 4 Last digits of ID Card Number: Parents' Name: Favorite City:			

SECTION B

Individual Entrepreneurial Orientation (IEO)-T1

Sr. No.	Dimensions	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always

1	Learning Orientation				
LO1	Do you actively try to obtain business-related knowledge?				
LO2	Do you use market information for business improvement?				
LO3	Do you learn from the experiences in business and apply this learning in your business?				
LO4	Do you reflect on your learning goals attainment and seek feedback from others?				
2	Autonomy Orientation	1	2	3	4
		Never	Seldom	Sometimes	Often
	5	Always			
ATO1	Would you accept an offer of selling your business and accepting a managerial position for the same income?				
ATO2	Are you able to make decisions independently?				
ATO3	Are you self-directed in seeking information regarding the autonomous goals?				
ATO4	Do you actively plan for attaining the self-set vision?				
ATO5	Do you seek feedback on the attainment of self-set goals?				
3	Competitive Aggressiveness				
CA1	Do you set goals aimed at beating the competition?				
CA2	Do you actively make plans for dealing with competition?				
CA3	Do you monitor the competitive business position?				
CA4	How often do you seek information regarding market competition?				
4	Achievement Orientation				
ACO1	Are you self-motivated to set challenging goals aimed at improvement?				
ACO2	Do you seek information regarding challenging goals?				
ACO3	How often you strive for excellence in plans for business growth?				
ACO4	How much successful you have been in attaining the goals of business growth in past 6 months?				
5	Personal Initiative				
PI1	Do you develop goals for future opportunities?				
PI2	Do you Scan for the potential opportunities and threats?				
PI3	Do you use the opportunities and threats for action planning / contingency planning?				
PI4	How actively you overcome barriers in case if the active plans are not attained?				
6	Risk-Taking				
RT1	Do you set goals with calculated risks?				

RT2	Do you actively seek information for extensive risk assessment, evaluation, and mitigation?					
RT3	How frequently you plan for risk mitigation?					
RT4	Do you evaluate the risk management plan?					
7	Innovation Orientation					
IO1	Do you actively formulate the goals of innovative products, processes, and services?					
IO2	How many times you outperform the competitors on innovation?					

7	Innovation Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
IO3	Do you scan information about the new technologies and market potential for innovation?					
IO4	Do you put up plans for the development of new innovative ideas?					
IO5	Do you monitoring and seek feedback after the implementation of innovative ideas?					

Thank you for your valuable time and response!

Study 1 (T2)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “**Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions**”. For this purpose, I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female

Business category: ☐ Manufacturing ☐ Trading ☐ Services

Age:

- ☐ 20-25 years ☐ 25-30 years ☐ 30-35 years
☐ 35-45 years ☐ Above 45 years

Educational level:

- ☐ Below matriculation ☐ Matriculation ☐ Intermediate
☐ Bachelors ☐ Masters ☐ Above Masters

The relevance of education with business:

- ☐ Yes
☐ No

Field of Education:

- ☐ Business ☐ General ☐ Technical

Years of Operations (Current Business):

- ☐ Less than 1 year ☐ 1-5 years
☐ 6-10 years ☐ 11-15 years
☐ Above 15 years

Size:

- ☐ Small (*Employees 1-50, annual turnover up to 400 million PKR*)
☐ Medium
(*Employees 50-250, annual turnover up to 800 million PKR*)

Personal Business Experience:

- ☐ Less than 1 year ☐ 1-5 years
☐ 6-10 years ☐ 11-15 years
☐ Above 15 years

Please mention:

4 Last digits of ID Card Number:

Parents' Name:

Favorite City:

Exploration activities (EA)-T2

Sr. No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
EA1	I spend a great deal of time searching for new possibilities in our product/ services and processes					
EA2	I spend a great deal of time evaluating diverse option for our products/ services, and processes					

EA3	I have a strong emphasis on learning new skills and techniques in our business					

Response performance (RP)-T2

Sr. No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
RP1	Adapt my business adequately to changes in the business environment					
RP2	I react to market and environmental changes in a quick and satisfactory way					
RP3	I respond promptly to new market opportunities					

Access to finance (AF)-T2

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
AF1	Do you have adequate prerequisites (collateral, business records, etc.) to ease access to debt finance					
AF2	Did you have difficulties obtaining this finance from the other sources					

Social networking (SN)-T2

Sr. No.	Items	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	I actively make friends with people working in the government.					
2	In many situations, I initiate talks with strangers to expand my social circle.					
3	I try my best to associate with successful people.					
4	I actively improve my interpersonal skills.					
5	In order to deal with others well, I intentionally collect information on their personal interests, hobbies, personalities and so on					
6	I make intelligent use of giving gifts to build up social ties.					
7	Before I approach any important persons, I carefully pre-plan my words and what I want to do.					
8	Whenever I encounter difficulties, I can find the right people to solve them.					
9	I spend a lot of time and money building up broad social networks for future use.					
10	I skillfully use intermediaries to introduce me to those people with whom I really want to associate.					

Thank you for your valuable time and response!

Study 1 (T3)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “**Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions**”. For this purpose, I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 25-30 years ☐ 30-35 years ☐ 35-45 years ☐ Above 45 years	Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters		
The relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical	Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years		
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)	Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years		
Please mention: 4 Last digits of ID Card Number: Parents' Name: Favorite City:			

Success (S)-T3

Sr. No.	Items	1	2	3	4	5
		Not at all	To a small extent	To a moderate extent	To a fairly great extent	To a great extent
S1	Quality of your products and services has been improved.					

S2	Development and innovation in products and services are major activities in your company.					
S3	Under actively deployed customer-relationship management policy, the satisfaction of customers is your company's preferred concern.					
S4	Management and employees are having a trustful relationship with each other.					
S5	Your company has a better standing in the market penetration now as compared to last quarter.					
S6	Use of efficient financial management in all financial decision making is positively contributed to your business growth.					
S7	During the last quarter, productivity of your company has been increased.					
S8	During the last quarter, profitability of your company has been increased.					
S9	During the last quarter, market share of your company has been increased.					



Dear Participant!

By keeping in view your business background, we invite you to be a part of short training intervention involving practical exercises for enhancing your entrepreneurial skills. This short intervention will allow you to equip you with

Please indicate your willingness to participate in the training program

☐ No

☐ Yes (In case of choosing this option please fill this additional information)

Name:	
Contact No:	

Email Address:

Signature:

Thank you for your valuable time and response!

(T1) مطالعہ نمبر۔ ۱

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

کاروباری حیثیت: ☐ صنعت ☐ تجارت عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ تعلیم کی کاروبار سے مطابقت: ☐ ہاں ☐ نہیں تعلیم کی نوعیت: ☐ عام ☐ کاروباری ☐ تکنیکی برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____ والد کا نام: _____ پسندیدہ شہر: _____	جنس: ☐ مرد ☐ عورت تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم۔ اے سے زیادہ کاروباری تجربہ (موجودہ کاروبار): ایک سال سے کم ☐ 5 ☐ 1- سال 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ ذاتی کاروباری تجربہ: ایک سال سے کم ☐ 5 ☐ 1- سال 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ کاروباری حجم: چھوٹا ☐ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک درمیانہ ☐ (ملازمین کی تعداد 50-250) سالانہ آمدن 400 ملین سے 800 ملین تک

نمبر شمار	انفرادی کاروباری رجحان	۱	۲	۳	۴	۵
	سکینے کا رجحان	کبھی نہیں	بہت کم	کبھی کبھار	اکثر	ہمیشہ
1	کیا آپ تہذیبی سے کاروباری معلومات حاصل کرنے کی کوشش کرتے ہیں؟					
2	کیا آپ مارکیٹ کی معلومات کو کاروبار کی بہتری کے لیے استعمال کرتے ہیں؟					

3	کیا آپ اپنے کاروباری تجربات سے سیکھتے ہیں اور اسے اپنے کاروبار میں استعمال کرتے ہیں؟				
4	کیا آپ اپنے سیکھنے کے عمل پر سوچ بچار کرتے ہیں اور دوسروں سے رائے لیتے ہیں؟				
		۱	۲	۳	۴
	خود بخبری کار جان	بہت کم	بہت کم	بہت کم	بہت کم
1	کیا آپ اپنے کاروبار کو فروخت کرنے کی پیشکش قبول کر کے اتنی ہی آمدنی کا انتظامی عہدہ قبول کریں گے؟				
2	کیا آپ آزادانہ فیصلہ کرنے کی صلاحیت رکھتے ہیں؟				
3	کیا آپ اپنے اہداف کے بارے میں تبدیلی سے معلومات حاصل کرتے ہیں تاکہ ان کو حاصل کر سکیں۔				
4	کیا آپ تبدیلی سے اپنے مقرر کردہ اہداف حاصل کرنے کی منصوبہ بندی کرتے ہیں؟				
5	کیا آپ اپنے مقرر کردہ اہداف کو حاصل کرنے کے بعد ان کے نتائج پر دوسروں کی رائے لیتے ہیں؟				
		۱	۲	۳	۴
	مسابقتی جارحیت (Competition)	بہت کم	بہت کم	بہت کم	بہت کم
1	کیا آپ اپنے کاروباری حریفوں کو ناکام کرنے کے لیے اہداف کا تعین کرتے ہیں؟				
2	کیا آپ تبدیلی سے اپنے کاروباری حریفوں سے مقابلہ بازی کرنے کے لیے منصوبہ بندی کرتے ہیں؟				
3	کیا آپ اپنے کاروباری حریف کے اقدام پر نظر رکھتے ہیں؟				
4	کیا آپ اپنے کاروباری حریفوں کے بارے میں تبدیلی سے معلومات حاصل کرتے ہیں؟				
		۱	۲	۳	۴
	کامیابی کار جان	بہت کم	بہت کم	بہت کم	بہت کم
1	کیا آپ کاروبار میں بہتری لانے کے لیے چیلنجنگ اہداف کا تعین کرنے میں متحرک ہیں؟				
2	کیا آپ چیلنجنگ اہداف کا حصول کے لیے تبدیلی سے معلومات حاصل کرتے ہیں؟				
3	کیا آپ کاروبار کو بہترین بنانے کے لیے تبدیلی سے منصوبہ بندی کرتے ہیں؟				
4	پچھلے چھ ماہ میں کامیابی اہداف کے حصول میں آپ کتنی کامیابی حاصل کی؟				
		۱	۲	۳	۴
	ذاتی اقدام	بہت کم	بہت کم	بہت کم	بہت کم
1	کیا آپ مستقبل کے مواقع حاصل کرنے کے لیے اہداف مقرر کرتے ہیں؟				
2	کیا آپ مستقبل کے ممکنہ خطرات / مواقع کا جائزہ لیتے ہیں؟				
3	کیا آپ مستقبل کے ممکنہ خطرات اور مواقعوں کی معلومات کو منصوبہ بندی کرتے ہوئے مد نظر رکھتے ہیں؟				
4	آپ کے منصوبوں کی تکمیل میں آنے والی رکاوٹوں پر کتنی تبدیلی سے قابو پانے کی صلاحیت رکھتے ہیں؟				
5	کیا آپ کاروباری اہداف کے تعین اور ان کی تکمیل کے لیے خود سے پہلے اقدامات لیتے ہیں یا اس بات کا انتظار کرتے ہیں کہ پہلے کوئی حریف ایسے ہدف کا تعین کرے؟				
		۱	۲	۳	۴
	رہس (خطرات) لینے کار جان	بہت کم	بہت کم	بہت کم	بہت کم
1	کیا آپ اپنے کاروباری اہداف کا تعین کرتے وقت کاروباری خطرات (Risk) کا حساب کتاب کرتے ہیں calculated (risk)۔				
2	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کے لیے منصوبہ بندی کرتے ہیں؟				
3	کیا آپ تبدیلی سے کاروباری (Risks) کے اور اک، جائزے اور روک تھام کے لیے معلومات کا حصول کرتے ہیں؟				

4	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کی منصوبہ بندی کا جائزہ لیتے ہیں؟				
	جدت پسندی کا رجحان	بیشہ	اکثر	کبھی کبھار	بہت کم
1	کیا آپ منفرد اور جدید مصنوعات بنانے، کاروباری طریقہ کار اپنانے اور خدمات انجام دینے کے لیے اہداف کا تعین کرتے ہیں؟				
2	آپ کتنی دفعہ اپنے کاروباری مد مقابل سے انفرادیت اور جدت پسندی میں بازی لے جاتے ہیں؟				
3	کیا آپ نئی ٹیکنالوجی اور کاروبار میں انفرادیت پیدا کرنے کے مواقعوں کے بارے میں تندرہی سے معلومات حاصل کرتے ہیں؟				
4	کیا آپ جدت پسندت / انفرادیت پر مبنی کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتے ہیں؟				
5	کیا آپ اپنے جدت پسندی / انفرادیت سے متعلق اہداف کی تکمیل کے بعد ان کے بارے میں دوسروں سے رائے لیتے ہیں اور ان کی کامیابی کا تعین کرتے ہیں؟				

(T2)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس: ☐ مرد ☐ عورت تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم۔ اے سے زیادہ کاروباری تجربہ (موجودہ کاروبار): ☐ ایک سال سے کم ☐ 1-5 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ذاتی کاروباری تجربہ: ☐ ایک سال سے کم ☐ 1-5 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ کاروباری حجم: ☐ چھوٹا ☐ (ملازمین کی تعداد 50-1) سالانہ آمدن 100 ملین تک	کاروباری حیثیت: ☐ صنعت ☐ تجارت عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ تعلیم کی کاروبار سے مطابقت: ☐ ہاں ☐ نہیں تعلیم کی نوعیت: ☐ عام ☐ کاروباری ☐ تکنیکی برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____

درمیانہ □ (ملازمین کی تعداد 250-50) سالانہ آمدن 400 ملین سے 800

والد کا نام:

ملین تک

پسندیدہ شہر:

نمبر شمار	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
3					
	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
3					
	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
3					
	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
	1	2	3	4	5
	مکمل اختلاف	اختلاف	نہ اختلاف نہ اتفاق	اتفاق	مکمل اتفاق
1					
2					
3					
4					
5					
6					
7					
8					
9					

1	آپ کے کاروبار کی مصنوعات اور خدمات کے معیار میں بہتری آئی ہے۔				
2	آپ کے کاروبار کی مصنوعات اور خدمات کو بڑھانا اور ان میں جدت پیدا کرنا آپ کے لیے اہم ہے۔				
3	اپنے صارفین کا اطمینان آپ کے کاروبار کے لیے اہم ہے۔				
4	انتظامیہ اور ملازمین کے درمیان بھروسے کا تعلق ہے؟				
5	پچھلے چار ماہ کی نسبت اب آپ کے کاروبار کے بڑھاؤ میں مزید بہتری آئی ہے۔				
6	کیا آپ اپنے کاروبار میں پیسوں کے انتظام اور استعمال کو اچھی طرح بروئے کار لاتے ہیں اور آپ کے مالیاتی فیصلے آپ کے کاروبار کو بڑھانے میں مثبت کردار ادا کرتے ہیں۔				
7	کیا آپ کے کاروبار کی پیداواری صلاحیت پچھلے چار ماہ میں بڑھی ہے؟				
8	کیا آپ کے کاروبار کے منافع میں پچھلے چار ماہ میں بہتری آئی ہے؟				
9	آپ کے کاروبار کا حصہ مارکیٹ market میں پچھلے چار ماہ میں بہتر ہوا ہے؟				

آپ کے قیمتی وقت اور جواب کا شکریہ !

عزیز محترم / محترمہ!

آپ کے کاروباری پس منظر کو مد نظر رکھتے ہوئے، ہم آپ کو اپنی کاروباری صلاحیتوں کو بڑھانے کے لیے عملی مشقوں میں شامل مختصر تربیتی پروگرام کا حصہ بننے کی دعوت دیتے ہیں۔ یہ مختصر پروگرام آپ کو مارکیٹ میں ایک کامیاب کاروباری شخصیت بننے کے لئے درکار ذہنیت سے آراستہ کرے گا اور آپ کی فروخت کو ہانے میں مدد کرے گا۔

برائے کرم تربیتی پروگرام میں حصہ لینے کے لیے اپنی رضامندی کی نشاندہی کریں

□ نہیں

□ ہاں (اس اختیار کو منتخب کرنے کی صورت میں براہ کرم یہ اضافی معلومات پُر کریں)

نام:

رابطے کا نمبر:

ای میل ایڈریس:

دستخط:

Study 2 (T1)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “**Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions**”. For this purpose I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female	Semester:	Roll Number:
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years	University ☐ Public ☐ Private	

SECTION B

Individual Entrepreneurial Orientation (IEO)

Sr. No.	Items	1 Never	2 Seldom	3 Sometimes	4 Often	5 Always
1	Risk Taking					
RT1	I like to take bold action by venturing into the unknown					
RT2	I am willing to invest a lot of time and/or money on something that might yield a high Return					
RT3	I tend to act “boldly” in situations where risk is involved					
2	Innovation Orientation					
IO1.	I often like to try new and unusual activities that are not typical but not necessarily risky					
IO2	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before					
IO3	I prefer to try my own unique way when learning new things rather than doing it like everyone else does					
IO4	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems					
3	Proactivity					
P1	I usually act in anticipation of future problems, needs or changes					
P2	I tend to plan ahead on projects					

P3	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it					

Thank you for your valuable time and response!

Study 2 (T2)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions”. For this purpose I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female	Semester:	Roll Number:
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years	University ☐ Public ☐ Private	

SECTION B

Entrepreneurial Alertness (EA)

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Scanning and Search					
AS1	I have frequent interactions with others to acquire new information.					
AS2	I always keep an eye out for new business ideas when looking for information.					
AS3	I read news, magazines, or trade publications regularly to acquire new information.					
AS4	I browse the Internet every day					
AS5	I am always actively looking for new information					
AS6	I am an avid information seeker.					
2	Association and Connection					
AA1	I see links between seemingly unrelated pieces of information. .					
AA2	I am good at “connecting dots.”					
AA3	I often see connections between previously unconnected domains of information					
3	Evaluation and judgment					
AE1	I have a gut feeling for potential opportunities.					

AE2	I can distinguish between profitable opportunities and not-so-profitable opportunities.					
AE3	I have a knack for telling high-value opportunities apart from low-value opportunities.					
AE4	When facing multiple opportunities, I am able to select the good ones.					

Thank you for your valuable time and response!

Study 2 (T3)

Dear Participant,

I am a Ph.D. scholar at Superior University, Lahore. As a part of my doctoral dissertation, I am conducting research on the topic of “**Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions**”. For this purpose I need your valuable time and cooperation for giving response to this questionnaire. Anonymity will be kept intact, the data will be used for research propose only. Your participation is highly valued!

SECTION A Demographic profile

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female	Semester:	Roll Number:
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years	University: ☐ Public ☐ Private	

SECTION B

Entrepreneurial Intention (EI)

Sr. No.	Items	1	2	3	4	5
		Would prefer to be employed by someone (Very Unlikely to be Entrepreneur)	(Somewhat Unlikely to be Entrepreneur)	Undecided	(Somewhat likely to be Entrepreneur)	Would prefer to be self-employed (Very Likely to be Entrepreneur)
1	If you were to choose between running your own business and being employed by someone, what would you prefer?					
		1	2	3	4	5
		Very Unlikely	Somewhat unlikely	Undecided	Somewhat Likely	Very Likely
2	How likely is it that you will pursue a career as self-employed?					
3	How likely is it that you will pursue a career as employed in an organization? (R)					



Dear Participant!

By keeping in view your study background in business education, we invite you to be a part of short training intervention involving practical exercises for enhancing your entrepreneurial skills. This short intervention will allow you

Please indicate your willingness to participate in the training program

☐ No

☐ Yes (In case of choosing this option please fill this additional information)

Name:	
Contact No:	
Email Address:	

Signature:

Thank you for your valuable time and response!

Study 3 (T1/TG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 26-30 years ☐ 31-35 years ☐ 36-40 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			
Business Address:			

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Intelligence Test

Digit Span Test (Wechsler)

“We would just like to do a little memory quiz: **I will tell you a line of numbers and you just repeat the numbers that I now read to you.**”

task no.	1. trial	Correct?	2. trial	Correct?
1.	5-8-2		6-9-4	
2.	6-4-3-9		7-2-8-6	
3.	4-2-7-3-1		7-5-8-3-6	
4.	6-1-9-4-7-3		3-9-2-4-8-7	
5.	5-9-1-7-4-2-8		4-1-7-9-3-8-6	
6.	5-8-1-9-2-6-4-7		3-8-2-9-5-1-7-4	
7.	2-7-5-8-6-2-5-8-4		7-1-3-9-4-2-5-6-8	

“**Now you should reverse it. For example when I say 7-1-9, you say ...9-1-7**” ... If the subject couldn’t complete the example, correct him/her and give another example (3-4-8). Then start with the first trial of the first task.

task no.	1. trial	Correct?	2. trial	Correct?
1.	2-4		5-8	
2.	6-2-9		4-1-5	
3.	3-2-7-9		4-9-6-8	
4.	1-5-2-8-6		6-1-8-4-3	
5.	5-3-9-4-1-8		7-2-4-8-5-6	
6.	8-1-2-9-3-6-5		4-7-3-9-1-2-8	
7.	9-4-3-7-6-2-5-8		7-2-8-1-9-6-5-3	

General Self-Efficacy Scale (GSE)

With the following questionnaire we want to get to know a little bit about you and the way you do your business. Please answer all questions. Read them carefully and tick the answer that best applies to you. If you do not understand a question, please ask the researcher.

Items	1	2	3	4
	Not at all true	Hardly true	Moderately true	Exactly true
I can always manage to solve difficult problems if I try hard enough				
If someone opposes me, I can find the means and ways to get what I want				
It is easy for me to stick to my aims and accomplish my goals				
I am confident that I could deal efficiently with unexpected events.				
Thanks to my resourcefulness, I know how to handle unforeseen situations.				
I can solve most problems if I invest the necessary effort.				
I can remain calm when facing difficulties because I can rely on my coping abilities.				

When I am confronted with a problem, I can usually find several solutions.				
If I am in trouble, I can usually think of a solution				
I can usually handle whatever comes my way.				

Individual Entrepreneurial Orientation (IEO) Learning-T1

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more learning oriented. He will...	a. Actively try to obtain business related knowledge b. Actively plan to learn from mistakes c. Both A & B	a. Be passive in information seeking b. Rely on already available information c. Actively seek the ways to obtain business related knowledge	a. Use the market information for business improvement b. Do not apply learning in business activities c. Passively keep the obtained information	a. Avoid feedback on implementation of learning b. Reflect on learning c. Ask others for feedback on implementation of learned outcomes d. B and c
2. Mr. A is more achievement oriented. He will...	a. Set goals that are aimed at routine activities b. Set goals that are challenging c. Do not desire achievement	a. Seek information about routine market activities b. Seek information about market growth c. Is not interested in obtaining information about new customers	a. Do not plan for business expansions b. Have no clear policy for attracting new customers c. Actively plan for business growth and increase in customer base	a. Do not reflect on his own goal attainment b. Do not seek the feedbacks of others c. Actively ask concerned people and customers for the evaluation of challenging goal attainment and practice self-reflection
3. Mr. A is more autonomy oriented. He will...	a. Seek help of others in developing goals b. Avoid initiative in development of vision c. Develop vision independently	a. Reactive in information seeking b. Not take responsibility to obtain information about pursuit of business vision c. Independent in obtaining information to pursue autonomous vision	a. Not feel responsible to develop challenging plan to realize business vision b. Have intrinsic motivation for development of plan to realize challenging vision c. Reactive in business plan development to realize vision	a. Takes self-initiative to seek feedback b. Self-reflection on attainment of autonomous vision c. Both A & B

4. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
5. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B
6. Mr. A is more competitive aggressive. He will...	a. Develop goals to beat competition b. Develop goals to have market survival c. Develop goals to sustain market share	a. No competitive intelligence b. Obtain competitors' information passively c. Actively seek competitors' information	a. Develop plans that are not competitive b. Develop plans that react to competitors' strategies c. Develop plans that actively aim to beat competition	a. Not keep track of competitive position b. No monitoring of competitive situation c. Effective monitoring and feedback on competitive situation
7. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Individual Entrepreneurial Orientation (IEO) Behavior-T1

Sr. No.	Dimensions	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Learning Orientation					
LO1	Do you actively try to obtain business related knowledge?					
LO2	Do you use the market information for business improvement?					
LO3	Do you learn from the experiences in business and apply this learning in your business?					
	Learning Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
LO4	Do you reflect on your learning goals attainment and seek feedback from others?					
2	Autonomy Orientation					
ATO1	Would you accept an offer of selling your business and accepting a managerial position for same income?					
ATO2	Are you able to take decisions independently?					
ATO3	Are you self-directed in seeking information regarding the autonomous goals?					
ATO4	Do you actively plan for attaining the self-set vision?					
ATO5	Do you seek feedback on the attainment of self-set goals?					
3	Competitive Aggressiveness					
CA1	Do you set goals aimed at beating competition?					
CA2	Do you actively make plans for dealing with competition?					
CA3	Do you monitoring the competitive business position?					
CA4	How often do you seek information regarding market competition?					
4	Achievement Orientation					
ACO1	Do you set actively challenging goals aimed at improvement?					
ACO2	Do you seek information regarding challenging goals?					
ACO3	How often the plans for business growth are actively developed?					
ACO4	How much successful you have been in attaining the goals of business growth in past 6 months?					
5	Personal Initiative					
PI1	Do you develop goals for future opportunities?					
PI2	Do you Scan for the potential opportunities and threats?					
PI3	Do you use the opportunities and threats for action planning / contingency planning?					

PI4	How actively you overcome barriers in case if the active plans are not attained?					
6	Risk Taking					
RT1	Do you set goals with calculated risks?					
RT2	Do you actively seek information for extensive risk assessment, evaluation and mitigation?					
RT3	How frequently you plan for risk mitigation?					
RT4	Do you evaluate risk management plan?					

7	Innovation Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
IO1	Do you actively formulate the goals of innovative products, processes and services?					
IO2	How many times you outperform the competitors on innovation?					
IO3	Do you scan information about the new technologies and market potential for innovation?					
IO4	Do you put up plans for development of new innovative ideas?					
IO5	Do you monitoring and seek feedback after the implementation of innovative ideas?					

Success-T1

Did the **sales** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **profit** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **expenses** (including supplies, wages, rental...) within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **customers** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **employees** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Now please return back the questionnaire!

Thank you very much for your participation!

Study 3 (T2/TG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 25-30 years ☐ 30-35 years ☐ 35-45 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			
Business Address:			

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Satisfaction with Training-T2

Choose the option that most closely matches your response!

How satisfied were you with the content of the training?



Extremely satisfied Extremely dissatisfied

😊 😊 😐 😞 😡

Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How satisfied were you with the delivery of the training?



Extremely satisfied Extremely dissatisfied

😊 😊 😐 😞 😡

Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How satisfied were you with the exercises during the training?



Extremely satisfied Extremely dissatisfied

😊 😊 😐 😞 😡

Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How overall satisfied were you with the training?



Extremely satisfied Extremely dissatisfied

😊 😊 😐 😞 😡

Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

Do you think that concept of "IEO" is useful for your business?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part goal setting is useful for your business?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part seeking information is useful for your business?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part making a plan is useful in your business?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part feedback is useful for your business?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you will take more calculated risks than you did before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more learning oriented than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more action oriented than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more autonomous than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more achievement oriented than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more innovative than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you will take more initiatives and act proactively than you did before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Would you recommend this training to your colleagues?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Individual Entrepreneurial Orientation (IEO) Learning-T2

After the training, what do you know about Individual Entrepreneurial Orientation (IEO)?

Please answer every question.

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more learning oriented. He will...	a. Actively try to obtain business related knowledge b. Actively plan to learn from mistakes c. Both A & B	a. Be passive in information seeking b. Rely on already available information c. Actively seek the ways to obtain business related knowledge	a. Use the market information for business improvement b. Do not apply learning in business activities c. Passively keep the obtained information	a. Avoid feedback on implementation of learning b. Reflect on learning c. Ask others for feedback on implementation of learned outcomes d. B and c
2. Mr. A is more achievement	a. Set goals that are aimed at routine activities	a. Seek information about routine	a. Do not plan for business expansions	a. Do not reflect on his own goal attainment

oriented. He will...	b. Set goals that are challenging c. Do not desire achievement	b. Seek information about market growth c. Is not interested in obtaining information about new customers	b. Have no clear policy for attracting new customers c. Actively plan for business growth and increase in customer base	b. Do not seek the feed backs of others c. Actively ask concerned people and customers for the evaluation of challenging goal attainment and practice self-reflection
3. Mr. A is more autonomy oriented. He will...	a. Seek help of others in developing goals b. Avoid initiative in development of vision c. Develop vision independently	a. Reactive in information seeking b. Not take responsibility to obtain information about pursuit of business vision c. Independent in obtaining information to pursue autonomous vision	a. Not feel responsible to develop challenging plan to realize business vision b. Have intrinsic motivation for development of plan to realize challenging vision c. Reactive in business plan development to realize vision	a. Takes self-initiative to seek feed back b. Self-reflection on attainment of autonomous vision c. Both A & B
4. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
5. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B

		c. Seek information to analyze and evaluate calculated risks	mitigation plan	
6. Mr. A is more competitive aggressive. He will...	a. Develop goals to beat competition b. Develop goals to have market survival c. Develop goals to sustain market share	a. No competitive intelligence b. Obtain competitors' information passively c. Actively seek competitors' information	a. Develop plans that are not competitive b. Develop plans that react to competitors' strategies c. Develop plans that actively aim to beat competition	a. Not keep track of competitive position b. No monitoring of competitive situation c. Effective monitoring and feedback on competitive situation
7. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Study 3 (T3/TG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 25-30 years ☐ 30-35 years ☐ 35-45 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium <i>(Employees 50-250, annual turnover up to 800 million PKR)</i>		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 5-10 years ☐ 10-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			
Business Address:			

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Individual Entrepreneurial Orientation (IEO) Behavior-T3

Sr. No.	Dimensions	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Learning Orientation					

LO1	Do you actively try to obtain business related knowledge?					
LO2	Do you use the market information for business improvement?					
LO3	Do you learn from the experiences in business and apply this learning in your business?					
	Learning Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
LO4	Do you reflect on your learning goals attainment and seek feedback from others?					
2	Autonomy Orientation					
ATO 1	Would you accept an offer of selling your business and accepting a managerial position for same income?					
ATO 2	Are you able to take decisions independently?					
ATO 3	Are you self-directed in seeking information regarding the autonomous goals?					
ATO 4	Do you actively plan for attaining the self-set vision?					
ATO 5	Do you seek feedback on the attainment of self-set goals?					
3	Competitive Aggressiveness					
CA1	Do you set goals aimed at beating competition?					
CA2	Do you actively make plans for dealing with competition?					
CA3	Do you monitoring the competitive business position?					
CA4	How often do you seek information regarding market competition?					
4	Achievement Orientation					
ACO 1	Do you set actively challenging goals aimed at improvement?					
ACO 2	Do you seek information regarding challenging goals?					
ACO 3	How often the plans for business growth are actively developed?					
ACO 4	How much successful you have been in attaining the goals of business growth in past 6 months?					
5	Personal Initiative					
PI1	Do you develop goals for future opportunities?					
PI2	Do you Scan for the potential opportunities and threats?					
PI3	Do you use the opportunities and threats for action planning / contingency planning?					
PI4	How actively you overcome barriers in case if the active plans are not attained?					
6	Risk Taking					
RT1	Do you set goals with calculated risks?					
RT2	Do you actively seek information for extensive risk assessment, evaluation and mitigation?					
RT3	How frequently you plan for risk mitigation?					
RT4	Do you evaluate risk management plan?					
	Innovation Orientation					

IO1	Do you actively formulate the goals of innovative products, processes and services?					
IO2	How many times you outperform the competitors on innovation?					

7	Innovation Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
IO3	Do you scan information about the new technologies and market potential for innovation?					
IO4	Do you put up plans for development of new innovative ideas?					
IO5	Do you monitoring and seek feedback after the implementation of innovative ideas?					

Success (S)-T3

Let's talk about your business "NAME"

I have the following address: IS THIS STILL CORRECT

I have the following telephone numbers:

ARE THEY STILL CORRECT

Did the **sales** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **profit** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **expenses** (including supplies, wages, rental...) within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **customers** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **employees** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Now please return back the questionnaire!

Thank you very much for your participation!

مطالعہ نمبر- ۳

Study 3(T1/TG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس:	مرد ☐ عورت ☐
کاروباری حیثیت:	صنعت ☐ تجارت ☐
تعلیم:	میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐
عمر:	20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ ☐
کاروباری تجربہ (موجودہ کاروبار):	ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐
تعلیم کی نوعیت:	ہاں ☐ نہیں ☐
ذاتی کاروباری تجربہ:	ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐
تعلیم کی نوعیت:	عام ☐ کاروباری ☐ تکنیکی ☐
کاروباری حجم:	چھوٹا ☐ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک
برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے:	برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے:
شناختی کارڈ کے آخری چار نمبر:	شناختی کارڈ کے آخری چار نمبر:

والد کا نام:

پسندیدہ شہر:

درمیانہ ☐ (ملازمین کی تعداد 250-50) سالانہ آمدن 400 ملین سے 800 ملین تک

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں
1- کیا آپ چیمبر آف کامرس کے محرک رکن ہیں؟		
2- کیا آپ ٹیکس ادا کرتے ہیں؟		
3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمروں / شورومز) کی تعداد۔		
4- آپ کے ملازمین کی تعداد کتنی ہے۔		
5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔		
6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟		
7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟		
8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟		

ذہانت کا امتحان

یہ آپ کی یادداشت کا امتحان ہے۔ آپ کو اعداد پر مشتمل ایک لائن بتائی جائے گی جسے آپ نے دہرا نہ ہے۔ درست جواب کی صورت میں ✓ کا نشان لگائیں اور غلط جواب کی صورت میں × کا نشان لگائیں:

نمبر شمار	درست؟	آزمائش	درست؟	آزمائش
1		6-9-4		5-8-2
2		7-2-8-6		6-4-3-9
3		7-5-8-3-6		4-2-7-3-1
4		3-9-2-4-8-7		6-1-9-4-7-3
5		4-1-7-9-3-8-6		5-9-1-7-4-2-8
6		3-8-2-9-5-1-7-4		5-8-1-9-2-6-1-7
7		7-1-3-9-4-2-5-6-8		2-7-5-8-6-2-5-8-4

اب اعداد کی لائن کو الٹ دہرائے اور درست جواب کی صورت میں ✓ کا نشان لگائیں اور غلط جواب کی صورت میں × کا نشان لگائیں:

نمبر شمار	آزمائش	درست؟	آزمائش	درست؟
1	2-4		5-8	
2	6-2-9		4-1-5	
3	3-2-7-9		4-9-6-8	
4	1-5-2-8-6		6-1-8-4-3	

	7-2-4-8-5-6		5-3-9-4-1-8	5
	4-7-3-9-1-2-8		8-1-2-9-3-6-5	6
	7-2-8-1-9-6-5-3		9-4-3-7-6-2-5-8	7

Generalized Self Efficacy

خود افادیت

برائے مہربانی مندرجہ ذیل سوالوں کے جواب دیں:

نمبر شمار		1- بالکل بھی درست نہیں	2- بہ شکل درست	3- کافی حد تک درست	4- بالکل درست
1	اگر میں کوشش کروں تو مشکلات کا حل نکال لیتا ہوں۔				
2	اگر کوئی میری مخالفت کرتے تو میں اپنے ذرائع کا استعمال کر کے اپنا مقصد حاصل کر لیتا ہوں۔				
3	میں اپنے مقاصد کو حاصل کرنے پر قائم رہتا ہوں اور ان کو حاصل کر لیتا ہوں۔				
4	مجھے اپنے اوپر اعتماد ہے کہ میں غیر متوقع صورت حال کا سامنا کر سکتا ہوں اور ان سے نمٹ سکتا ہوں۔				
5	میں اپنے ذرائع کا استعمال کر کے غیر متوقع صورت حال سے نمٹ سکتا ہوں۔				
6	اگر میں کوشش کروں تو میں مشکلات کا حل نکال سکتا ہوں۔				
7	میں مشکلات میں پرسکون رہتا ہوں کیوں کہ مجھے اپنے مقابلہ کرنے کی صلاحیتوں پر اعتماد ہے۔				
8	اگر مجھے کوئی مسئلہ درپیش ہوتا ہے تو میرے پاس اس کے حل موجود ہوتے ہیں۔				
9	جب میں مشکل میں ہوتا ہوں تو میرے ذہن میں اس کا کوئی حل ہوتا ہے۔				
10	میں ہر طرح کے حالات کو سنبھال سکتا ہوں۔				

انفرادی کاروباری رجحان (علم) T1

برائے مہربانی درست آپشن پر ✓ کا نشان لگائیں:

1۔ مسٹر اے سیکھنے کا رجحان رکھتا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری حاصل کردہ معلومات کے نتائج پر لوگوں سے رائے لینے سے گریز کرے گا۔	a۔ کاروبار کی معلومات اور غلطیوں سے حاصل کئے گئے سبق کو منصوبہ بندی میں استعمال کرے گا تاکہ اس کا کاروبار بہتر ہو سکے۔	a۔ معلومات حاصل کرنے میں سستی کرے گا۔	a۔ تندی سے کاروباری معلومات حاصل کرنے کی کوشش کرے گا۔
b۔ حاصل کردہ کاروباری معلومات کے نتائج پر خود جائزہ لے گا۔	b۔ کاروبار کی منصوبہ بندی کے لیے پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ اپنی غلطیوں سے سیکھنے کی کوشش کرے گا۔
c۔ حاصل کردہ کاروباری معلومات سے استعمال کرنے کے نتائج پر دوسروں سے رائے لے گا۔	c۔ پہلے کی گئی غلطیوں سے حاصل کئے گئے سبق کو کاروبار کی منصوبہ بندی میں استعمال نہیں کرے گا۔	a + b c۔	a + b .c
d۔ دونوں			

2۔ مسٹر اے اپنے اہداف کو حاصل کرنے اور کامیاب ہونے کا رجحان رکھتا ہے۔

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروبار کو کامیاب کرنے اور بڑھانے کے اہداف کے نتائج پر سوچ بچار نہیں کرتا۔	a۔ کاروبار کو کامیاب کرنے اور آگے بڑھانے کی منصوبہ بندی نہیں کرتا۔	a۔ معمول کے مطابق کاروباری معلومات کے حصول کی کوشش کرتا ہے۔	a۔ معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔

b- چیلنجنگ کاروباری اہداف کا تعین کرتا ہے۔	b- آگے پڑھنے کے لیے کاروباری معلومات حاصل کرنے کی کوشش کرتا ہے۔	b- نئے صارفین کے حصول کے لیے کو واضح منصوبہ بندی نہیں کرتا۔	b- کاروبار کو کامیاب کرنے اور آگے بڑھانے کے اہداف کے نتائج پر دوسروں سے رائے نہیں لیتا۔
c- آگے بڑھنا اور کامیاب ہونا نہیں چاہتا۔	c- نئے صارفین کو حاصل کرنے کے بارے میں معلومات کا حصول نہیں کرتا۔	c- اپنے کاروبار کو بڑھانے اور نئے صارفین کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c- تندی سے چیلنجنگ اہداف کے نتائج پر متعلقہ لوگوں اور صارفین سے رائے طلب کرتا ہے۔

3- مسٹر اے خود مختاری اور خود انحصاری پسند کرتا ہے وہ۔۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- اپنے اہداف کا تعین کرنے کے لیے دوسروں کی مدد لیتے ہیں۔	a- اپنے کاروبار کے لیے معلومات حاصل کرنے کے لیے دوسروں پر انحصار کرتا ہے۔	a- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری نہیں لیتا۔	a- خود اپنے کاروبار کی کارکردگی کے بارے میں لوگوں کی رائے لیتا ہے۔
b- اپنے کاروبار کے وژن کو بنانے کے لیے خود سے ذمہ داری نہیں لیتا۔	b- اپنے کاروبار سے متعلقہ معلومات لینے کے لیے ذمہ داری قبول نہیں کرتا۔	b- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری خود لیتا ہے۔	b- اپنے متعین کردہ اہداف کی تکمیل پر خود سے ان کا جائزہ لیتا ہے۔
c- اپنے کاروبار کے وژن کا خود تعین کرتا ہے۔	c- اپنے کاروبار کے لیے خود تعین کئے گئے اہداف / وژن کو حاصل کرنے کے لیے خود معلومات حاصل کرنے کی ذمہ داری لیتا ہے۔	c- اپنے کاروبار کی منصوبہ بندی کے لیے دوسروں پر انحصار کرتا ہے۔	c- دونوں a + b

4- مسٹر اے انفرادیت اور جدت پسند ہے وہ۔۔۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔	a- اپنے منفرد اور جدت پسند اہداف کے حصول کے لیے معلومات حاصل کرتا ہے۔	a- نئے اور منفرد مصنوعات اور خدمات متعارف کروانے کے لیے منصوبہ بندی کرتا ہے۔	a- اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کا جائزہ لیتا ہے۔

b۔ اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کے بارے میں لوگوں کی رائے نہیں لیتا۔	b۔ اپنے کاروباری حریفوں کی مصنوعات اور خدمات کی نقل کرنے کی منصوبہ بندی کرتا ہے۔	b۔ اپنے کاروباری حریفوں کی نقل کرنے سے متعلق معومات کا حصول کرتا ہے۔	b۔ ایسے کاروباری اہداف کا تعین کرتا ہے جن میں جدت پسندی اور انفرادیت ہو۔
c۔ نئی مصنوعات اور خدمات کے اجزاء کے لیے صارفین کی رائے کو مد نظر نہیں رکھتا۔	c۔ معمول کے مطابق کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c۔ روزمرہ کے معمول کے مطابق اپنے کاروبار کے لیے معلومات کا حصول کرتا ہے۔	c۔ دوسرے کاروباری حریفوں کے اہداف کی نقل کرتا ہے۔

5۔ مسٹر اے خطرات مول لینے والا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری خطرات کا تہہ ہی سے جائزہ لیتا ہے۔	a۔ خطرات کی نشاندہی اور ان کو کم کرنے کے لیے منصوبہ بندی نہیں کرتا۔	a۔ خطرات سے بچنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل نہیں کرتا۔	a۔ ایسے اہداف کا تعین کرتا ہے جو کہ بہت زیادہ پرخطر ہوں۔
b۔ کاروباری خطرات کی منصوبہ بندی کے عمل کا جائزہ لیتا ہے۔	b۔ خطرات سے بچنے کے لیے منصوبہ بندی کرتا ہے۔	b۔ ایسے options کے بارے میں معلومات پاسکیں جن میں risk کم ہوں۔	b۔ ایسے اہداف کا تعین کرتا ہے جو خطرات سے پاک ہو۔
c۔ دونوں a + b	c۔ کاروبار خطرات کی نشاندہی، جائزے اور ان کو کم کرنے کے لیے منصوبہ بندی کرتا ہے۔	c۔ کاروباری خطرات risks کی نشاندہی اور ان کو کم کرنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل کرتا ہے۔	c۔ ایسے اہداف کا تعین کرنا ہے جس میں مناسب (Calculated) خطرات ہوں۔

6۔ مسٹر اے کاروباری حریفوں کا مقابلہ کرنے والا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری مسابقت کا ریکارڈ نہیں رکھتا۔	a۔ اپنے کاروبار کی منصوبہ بندی میں مقابلے کو مد نظر نہیں رکھتا۔	a۔ اپنے کاروباری حریفوں کی حرکات و سکنات کے بارے میں معلومات حاصل نہیں۔	a۔ اپنے کاروباری حریفوں کو مات دینے کے لیے اہداف کا تعین کرتا ہے۔
b۔ مقابلہ کی صورت حال کی نگرانی کرتا اور جائزہ نہیں لیتا۔	b۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام کا جواب دیا جائے۔	b۔ تہہ ہی کے ساتھ کاروباری حریفوں کے متعلق معلومات حاصل نہیں کرتا۔	b۔ صرف ایسے اہداف کا تعین کرتا ہے جن سے کاروبار کی بقا قائم رہ سکے۔

c۔ ایسے اہداف کا تعین کرتا ہے جن سے مارکیٹ میں اس کا حصہ قائم رہ سکے۔	c۔ تندہی سے کاروباری حریفوں کے بارے میں معلومات حاصل کرتا ہے۔	c۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام سے پہلے ہی ان کو مات دینے کی تیاری کی جائے۔	c۔ کاروباری مسابقت کے نتائج کی موثر نگرانی کر کے اس پر رائے طلب کرتا ہے/خود جائزہ لیتا ہے۔

نمبر شمار	انفرادی کاروباری رجحان (روییہ)	۵	۴	۳	۲	۱
	سیکھنے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ تندہی سے کاروباری معلومات حاصل کرنے کی کوشش کرتے ہیں؟					
2	کیا آپ مارکیٹ کی معلومات کو کاروبار کی بہتری کے لیے استعمال کرتے ہیں؟					
3	کیا آپ اپنے کاروباری تجربات سے سیکھتے ہیں اور اسے اپنے کاروبار میں استعمال کرتے ہیں؟					
4	کیا آپ اپنے سیکھنے کے عمل پر سوچ بچار کرتے ہیں اور دوسروں سے رائے لیتے ہیں؟					
	خود مختاری کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروبار کو فروخت کرنے کی پیشکش قبول کر کے اتنی ہی آمدنی کا انتظامی عہدہ قبول کریں گے؟					
2	کیا آپ آزادانہ فیصلہ کرنے کی صلاحیت رکھتے ہیں؟					
3	کیا آپ اپنے اہداف کے بارے میں تندہی سے معلومات حاصل کرتے ہیں تاکہ ان کو حاصل کر سکیں۔					
4	کیا آپ تندہی سے اپنے مقرر کردہ اہداف حاصل کرنے کی منصوبہ بندی کرتے ہیں؟					
5	کیا آپ اپنے مقرر کردہ اہداف کو حاصل کرنے کے بعد ان کے نتائج پر دوسروں کی رائے لیتے ہیں؟					
	مسابقتی جارحیت (Competition)	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروباری حریفوں کو ناکام کرنے کے لیے اہداف کا تعین کرتے ہیں؟					
2	کیا آپ تندہی سے اپنے کاروباری حریفوں سے مقابلہ بازی کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3	کیا آپ اپنے کاروباری حریف کے اقدام پر نظر رکھتے ہیں؟					
4	کیا آپ اپنے کاروباری حریفوں کے بارے میں تندہی سے معلومات حاصل کرتے ہیں؟					
	کامیابی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ کاروبار میں بہتری لانے کے لیے چیلنجنگ اہداف کا تعین کرنے میں متحرک ہیں؟					
2	کیا آپ چیلنجنگ اہداف کا حصول کے لیے تندہی سے معلومات حاصل کرتے ہیں؟					
3	کیا آپ کاروبار کو بہترین بنانے کے لیے تندہی سے منصوبہ بندی کرتے ہیں؟					
4	پچھلے چھ ماہ میں کامیابی اہداف کے حصول میں آپ کتنی کامیابی حاصل کی؟					
		1	۲	۳	۴	۱

ذاتی اقدام	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ مستقبل کے مواقع حاصل کرنے کے لیے اہداف مقرر کرتے ہیں؟					
2 کیا آپ مستقبل کے ممکنہ خطرات/مواقع کا جائزہ لیتے ہیں؟					
3 کیا آپ مستقبل کے ممکنہ خطرات اور مواقع کی معلومات کو منصوبہ بندی کرتے ہوئے مد نظر رکھتے ہیں؟					
4 آپ کے منصوبوں کی تکمیل میں آنے والی رکاوٹوں پر کتنی تندہی سے قابو پانے کی صلاحیت رکھتے ہیں؟					
5 کیا آپ کاروباری اہداف کے تعین اور ان کی تکمیل کے لیے خود سے پہل کر کے اقدامات لیتے ہیں یا اس بات کا انتظار کرتے ہیں کہ پہلے کوئی حریف ایسے ہدف کا تعین کرے؟					
	۵	۴	۳	۲	۱
رиск (خطرات) لینے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ اپنے کاروباری اہداف کا تعین کرتے وقت کاروباری خطرات (Risk) کا حساب کتاب کرتے ہیں (calculated risk)۔					
2 کیا آپ کاروباری خطرات (Risks) کو کم کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3 کیا آپ تندہی سے کاروباری خطرات (Risks) کے ادراک، جائزے اور روک تھام کے لیے معلومات کا حصول کرتے ہیں؟					
4 کیا آپ کاروباری خطرات (Risks) کو کم کرنے کی منصوبہ بندی کا جائزہ لیتے ہیں؟					
	۵	۴	۳	۲	۱
جدت پسندی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ منفرد اور جدید مصنوعات بنانے، کاروباری طریقہ کار اپنانے اور خدمات انجام دینے کے لیے اہداف کا تعین کرتے ہیں؟					
2 آپ کتنی دفعہ اپنے کاروباری مد مقابل سے انفرادیت اور جدت پسندی میں بازی لے جاتے ہیں؟					
3 کیا آپ نئی ٹیکنالوجی اور کاروبار میں انفرادیت پیدا کرنے کے مواقعوں کے بارے میں تندہی سے معلومات حاصل کرتے ہیں؟					
4 کیا آپ جدت پسندت / انفرادیت پر مبنی کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتے ہیں؟					
5 کیا آپ اپنے جدت پسندی / انفرادیت سے متعلق اہداف کی تکمیل کے بعد ان کے بارے میں دوسروں سے رائے لیتے ہیں اور ان کی کامیابی کا تعین کرتے ہیں؟					

کاروباری کارکردگی

1۔ پچھلی سہ ماہی (تین ماہ) میں فروخت میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑا	تھوڑا سا کمی ہوئی	کافی حد تک کمی ہوئی

2۔ پچھلی سہ ماہی (تین ماہ) میں منافع میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

3۔ پچھلی سہ ماہی (تین ماہ) میں صارفین میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

4۔ پچھلی سہ ماہی (تین ماہ) میں اخراجات میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

5۔ پچھلی سہ ماہی (تین ماہ) میں ملازمین کی کارکردگی میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

مطالعہ نمبر ۳۔

Study 3(T2/TG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس: ☐ مرد ☐ عورت کاروباری حیثیت: ☐ صنعت ☐ تجارت عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ	تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم۔ اے سے زیادہ

تعلیم کی کاروبار سے مطابقت: ☐ ہاں ☐ نہیں	کاروباری تجربہ (موجودہ کاروبار): ایک سال سے کم ☐ 5 - 1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐
تعلیم کی نوعیت: عام ☐ کاروباری ☐ تکنیکی ☐	ذاتی کاروباری تجربہ: ایک سال سے کم ☐ 5 - 1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐
برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____ والد کا نام: _____ پسندیدہ شہر: _____	کاروباری حجم: چھوٹا ☐ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک درمیانہ ☐ (ملازمین کی تعداد 50-250) سالانہ آمدن 400 ملین سے 800 ملین تک

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں
1- کیا آپ چیمبر آف کامرس کے محرک رکن ہیں؟		
2- کیا آپ ٹیکس ادا کرتے ہیں؟		
3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمرے / شورومز) کی تعداد۔		
4- آپ کے ملازمین کی تعداد کتنی ہے۔		
5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔		
6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟		
7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟		
8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟		

ذہانت کا امتحان

ٹریننگ سے اطمینان T2

نمبر شمار	اپنے خیالات سے قریب تر option کو منتخب کریں۔	1- انتہائی غیر مطمئن	2- غیر مطمئن	3- نہ مطمئن نہ غیر مطمئن	4- مطمئن	5- انتہائی مطمئن
1	آپ ٹریننگ (training) کے مواد سے کتنے مطمئن ہیں؟					
2	آپ ٹریننگ (training) کے طریقہ سے کتنے مطمئن ہیں؟					
3	آپ ٹریننگ (training) کے دوران استعمال کی جانے والی مشقوں سے کتنے مطمئن ہیں؟					
4	مجموعی طور پر آپ ٹریننگ (training) سے کتنے مطمئن ہیں؟					

کیا آپ کو لگتا ہے کہ "انفرادی کاروباری رجحان" کا تصور آپ کے کاروبار کے لئے مفید ہے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

کیا آپ کے خیال میں اہداف کے تعین کی ترتیب آپ کے کاروبار کیلئے مفید ہے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

کیا آپ کو لگتا ہے کہ معلومات کے حصول کی ترتیب کا حصہ آپ کے کاروبار کے لئے مفید ہے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

کیا آپ کو لگتا ہے کہ منصوبہ بنانے کی ترتیب والا حصہ آپ کے کاروبار کے لیے مفید ہے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

کیا آپ کو لگتا ہے کہ جائزہ لینے اور رائے حاصل کرنے کی ترتیب آپ کے کاروبار کیلئے مفید ہے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے سے کہیں زیادہ حساب کتاب لگاتے ہوئے خطرات مول لیں گے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے کی نسبت زیادہ سیکھنے کا رجحان رکھتے ہیں؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ پہلے کی نسبت زیادہ کاروباری کامیابی کے لیے کوشاں ہیں؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے سے کہیں زیادہ خود مختاری کا رجحان رکھتے ہیں؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے سے کہیں زیادہ کامیابی کا رجحان رکھتے ہیں؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے سے کہیں زیادہ جدت پسند ہیں؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

آپ کس حد تک سوچتے ہیں کہ اس تربیتی پروگرام کے بعد آپ اپنے کاروبار میں پہلے سے کہیں زیادہ اقدامات کریں گے اور عملی طور پر

کام کریں گے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

کیا آپ اپنے ساتھیوں کو اس تربیتی پروگرام میں شمولیت کی تجویز دیں گے؟

۱۔ بالکل بھی نہیں ۲۔ کسی حد تک ۳۔ اعتدال پسندی کی حد تک ۴۔ کافی حد تک ۵۔ بہت زیادہ حد تک

انفرادی کاروباری رجحان (علم) T2

برائے مہربانی درست آپشن پر ✓ کا نشان لگائیں:

1۔ مسٹر اے سیکھنے کا رجحان رکھتا ہے وہ

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری حاصل کردہ معلومات کے نتائج پر لوگوں سے رائے لینے سے گریز کرے گا۔	a۔ کاروبار کی معلومات اور غلطیوں سے حاصل کئے گئے سبق کو منصوبہ بندی میں استعمال کرے گا تاکہ اس کا کاروبار بہتر ہو سکے۔	a۔ معلومات حاصل کرنے میں سستی کرے گا۔	a۔ تندی سے کاروباری معلومات حاصل کرنے کی کوشش کرے گا۔
b۔ حاصل کردہ کاروباری معلومات کے نتائج پر خود جائزہ لے گا۔	b۔ کاروبار کی منصوبہ بندی کے لیے پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ اپنی غلطیوں سے سیکھنے کی کوشش کرے گا۔
c۔ حاصل کردہ کاروباری معلومات سے استعمال کرنے کے نتائج پر دوسروں سے رائے لے گا۔	c۔ پہلے کی گئی غلطیوں سے حاصل کئے گئے سبق کو کاروبار کی منصوبہ بندی میں استعمال نہیں کرے گا۔	a + b c۔	a + b .c
d۔ دونوں			

2۔ مسٹر اے اپنے اہداف کو حاصل کرنے اور کامیاب ہونے کا رجحان رکھتا ہے۔

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروبار کو کامیاب کرنے اور بڑھانے کے اہداف کے نتائج پر سوچ بچار نہیں کرتا۔	a۔ کاروبار کو کامیاب کرنے اور آگے بڑھانے کی منصوبہ بندی نہیں کرتا۔	a۔ معمول کے مطابق کاروباری معلومات کے حصول کی کوشش کرتا ہے۔	a۔ معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔

b- چیلنجنگ کاروباری اہداف کا تعین کرتا ہے۔	b- آگے پڑھنے کے لیے کاروباری معلومات حاصل کرنے کی کوشش کرتا ہے۔	b- نئے صارفین کے حصول کے لیے کو واضح منصوبہ بندی نہیں کرتا۔	b- کاروبار کو کامیاب کرنے اور آگے بڑھانے کے اہداف کے نتائج پر دوسروں سے رائے نہیں لیتا۔
c- آگے بڑھنا اور کامیاب ہونا نہیں چاہتا۔	c- نئے صارفین کو حاصل کرنے کے بارے میں معلومات کا حصول نہیں کرتا۔	c- اپنے کاروبار کو بڑھانے اور نئے صارفین کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c- تندی سے چیلنجنگ اہداف کے نتائج پر متعلقہ لوگوں اور صارفین سے رائے طلب کرتا ہے۔

3- مسٹر اے خود مختاری اور خود انحصاری پسند کرتا ہے وہ۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- اپنے اہداف کا تعین کرنے کے لیے دوسروں کی مدد لیتے ہیں۔	a- اپنے کاروبار کے لیے معلومات حاصل کرنے کے لیے دوسروں پر انحصار کرتا ہے۔	a- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری نہیں لیتا۔	a- خود اپنے کاروبار کی کارکردگی کے بارے میں لوگوں کی رائے لیتا ہے۔
b- اپنے کاروبار کے وژن کو بنانے کے لیے خود سے ذمہ داری نہیں لیتا۔	b- اپنے کاروبار سے متعلقہ معلومات لینے کے لیے ذمہ داری قبول نہیں کرتا۔	b- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری خود لیتا ہے۔	b- اپنے متعین کردہ اہداف کی تکمیل پر خود سے ان کا جائزہ لیتا ہے۔
c- اپنے کاروبار کے وژن کا خود تعین کرتا ہے۔	c- اپنے کاروبار کے لیے خود تعین کئے گئے اہداف / وژن کو حاصل کرنے کے لیے خود معلومات حاصل کرنے کی ذمہ داری لیتا ہے۔	c- اپنے کاروبار کی منصوبہ بندی کے لیے دوسروں پر انحصار کرتا ہے۔	c- دونوں a + b

4- مسٹر اے انفرادیت اور جدت پسند ہے وہ۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔	a- اپنے منفرد اور جدت پسند اہداف کے حصول کے لیے معلومات حاصل کرتا ہے۔	a- نئے اور منفرد مصنوعات اور خدمات متعارف کروانے کے لیے منصوبہ بندی کرتا ہے۔	a- اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کا جائزہ لیتا ہے۔

b۔ اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کے بارے میں لوگوں کی رائے نہیں لیتا۔	b۔ اپنے کاروباری حریفوں کی مصنوعات اور خدمات کی نقل کرنے کی منصوبہ بندی کرتا ہے۔	b۔ اپنے کاروباری حریفوں کی نقل کرنے سے متعلق معومات کا حصول کرتا ہے۔	b۔ ایسے کاروباری اہداف کا تعین کرتا ہے جن میں جدت پسندی اور انفرادیت ہو۔
c۔ نئی مصنوعات اور خدمات کے اجزاء کے لیے صارفین کی رائے کو مد نظر نہیں رکھتا۔	c۔ معمول کے مطابق کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c۔ روزمرہ کے معمول کے مطابق اپنے کاروبار کے لیے معلومات کا حصول کرتا ہے۔	c۔ دوسرے کاروباری حریفوں کے اہداف کی نقل کرتا ہے۔

5۔ مسٹر اے خطرات مول لینے والا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری خطرات کا تہہ ہی سے جائزہ لیتا ہے۔	a۔ خطرات کی نشاندہی اور ان کو کم کرنے کے لیے منصوبہ بندی نہیں کرتا۔	a۔ خطرات سے بچنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل نہیں کرتا۔	a۔ ایسے اہداف کا تعین کرتا ہے جو کہ بہت زیادہ پرخطر ہوں۔
b۔ کاروباری خطرات کی منصوبہ بندی کے عمل کا جائزہ لیتا ہے۔	b۔ خطرات سے بچنے کے لیے منصوبہ بندی کرتا ہے۔	b۔ ایسے options کے بارے میں معلومات پاسکیں جن میں risk کم ہوں۔	b۔ ایسے اہداف کا تعین کرتا ہے جو خطرات سے پاک ہو۔
c۔ دونوں a + b	c۔ کاروبار خطرات کی نشاندہی، جائزے اور ان کو کم کرنے کے لیے منصوبہ بندی کرتا ہے۔	c۔ کاروباری خطرات risks کی نشاندہی اور ان کو کم کرنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل کرتا ہے۔	c۔ ایسے اہداف کا تعین کرنا ہے جس میں مناسب (Calculated) خطرات ہوں۔

6۔ مسٹر اے کاروباری حریفوں کا مقابلہ کرنے والا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری مسابقت کا ریکارڈ نہیں رکھتا۔	a۔ اپنے کاروبار کی منصوبہ بندی میں مقابلے کو مد نظر نہیں رکھتا۔	a۔ اپنے کاروباری حریفوں کی حرکات و سکنات کے بارے میں معلومات حاصل نہیں۔	a۔ اپنے کاروباری حریفوں کو مات دینے کے لیے اہداف کا تعین کرتا ہے۔
b۔ مقابلہ کی صورت حال کی نگرانی کرتا اور جائزہ نہیں لیتا۔	b۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام کا جواب دیا جائے۔	b۔ تہہ ہی کے ساتھ کاروباری حریفوں کے متعلق معلومات حاصل نہیں کرتا۔	b۔ صرف ایسے اہداف کا تعین کرتا ہے جن سے کاروبار کی بقا قائم رہ سکے۔

c- ایسے اہداف کا تعین کرتا ہے جن سے مارکیٹ میں اس کا حصہ قائم رہ سکے۔	c- تندرہی سے کاروباری حریفوں کے بارے میں معلومات حاصل کرتا ہے۔	c- ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام سے پہلے ہی ان کو مات دینے کی تیاری کی جائے۔	c- کاروباری مسابقت کے نتائج کی موثر نگرانی کر کے اس پر رائے طلب کرتا ہے/خود جائزہ لیتا ہے۔

7- مسٹر اے دور اندیش/ہے وہ

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- قلیل مدت کے لیے اہداف کا تعین کرتا ہے۔	a- مستقبل کے مواقعوں کو حاصل کرنے کے لیے اور خطرات سے بچنے کے لیے حالات کی جانچ نہیں کرتا۔	a- اپنے کاروبار کی منصوبہ بندی میں مستقبل کے خطرات سے بچنے اور مواقع حاصل کرنے کو مد نظر رکھتا ہے۔	a- خود سے معارف کی رائے طلب کرتا ہے۔
b- مستقبل کے مواقعوں کا فائدہ اٹھانے کے لیے خود سے اہداف کا تعین کرتا ہے۔	b- تندرہی سے مستقبل کے مواقع حاصل کرنے اور خطرات سے بچنے کے لیے معلومات حاصل کرتا ہے۔	b- منصوبہ بندی میں دور اندیشی کا استعمال نہیں کرتا۔	b- خود سے صارفین کی تجویز کر دہ اصلاحات تبدیلیاں نافذ کرنے کی کوشش کرتا ہے۔
c- حالات کے رد عمل میں اہداف کا تعین کرتا ہے۔	c- مستقبل کے مواقع حاصل کرنے اور خطرات سے بچنے کے لیے صرف رد عمل میں معلومات حاصل کرتا ہے۔	c- کاروباری معاملات میں مقابلہ منصوبہ بندی نہیں کرتا۔	c- دونوں a + b

مطالعہ نمبر- ۳

Study 3(T3/TG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

کاروباری حیثیت:

☐ صنعت

☐ تجارت

جنس:

☐ مرد ☐ عورت

تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ سے زیادہ کاروباری تجربہ (موجودہ کاروبار): ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ ذاتی کاروباری تجربہ: ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ کاروباری حجم: چھوٹا ☐ (ملازمین کی تعداد 50-1) سالانہ آمدن 100 ملین تک درمیانہ ☐ (ملازمین کی تعداد 250-50) سالانہ آمدن 400 ملین سے 800 ملین تک	عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ ☐ تعلیم کی کاروبار سے مطابقت: ہاں ☐ نہیں ☐ تعلیم کی نوعیت: عام ☐ کاروباری ☐ تکنیکی ☐ برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____ والد کا نام: _____ پسندیدہ شہر: _____

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں
1- کیا آپ جیمبر آف کامرس کے محرک رکن ہیں؟		
2- کیا آپ ٹیکس ادا کرتے ہیں؟		
3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمروں/شورومز) کی تعداد۔		
4- آپ کے ملازمین کی تعداد کتنی ہے۔		
5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔		
6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟		
7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟		
8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟		

نمبر شمار	انفرادی کاروباری رجحان	۵	۴	۳	۲	۱
	سیکھنے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ تندرہی سے کاروباری معلومات حاصل کرنے کی کوشش کرتے ہیں؟					
2	کیا آپ مارکیٹ کی معلومات کو کاروبار کی بہتری کے لیے استعمال کرتے ہیں؟					
3	کیا آپ اپنے کاروباری تجربات سے سیکھتے ہیں اور اسے اپنے کاروبار میں استعمال کرتے ہیں؟					
4	کیا آپ اپنے سیکھنے کے عمل پر سوچ بچار کرتے ہیں اور دوسروں سے رائے لیتے ہیں؟					
	خود مختاری کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروبار کو فروخت کرنے کی پیشکش قبول کر کے اتنی ہی آمدنی کا انتظامی عہدہ قبول کریں گے؟					
2	کیا آپ آزادانہ فیصلہ کرنے کی صلاحیت رکھتے ہیں؟					
3	کیا آپ اپنے اہداف کے بارے میں تندرہی سے معلومات حاصل کرتے ہیں تاکہ ان کو حاصل کر سکیں۔					
4	کیا آپ تندرہی سے اپنے مقرر کردہ اہداف حاصل کرنے کی منصوبہ بندی کرتے ہیں؟					
5	کیا آپ اپنے مقرر کردہ اہداف کو حاصل کرنے کے بعد ان کے نتائج پر دوسروں کی رائے لیتے ہیں؟					
	مسابقتی جارحیت (Competition)	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروباری حریفوں کو ناکام کرنے کے لیے اہداف کا تعین کرتے ہیں؟					
2	کیا آپ تندرہی سے اپنے کاروباری حریفوں سے مقابلہ بازی کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3	کیا آپ اپنے کاروباری حریف کے اقدام پر نظر رکھتے ہیں؟					
4	کیا آپ اپنے کاروباری حریفوں کے بارے میں تندرہی سے معلومات حاصل کرتے ہیں؟					
	کامیابی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ کاروبار میں بہتری لانے کے لیے چیلنجنگ اہداف کا تعین کرنے میں متحرک ہیں؟					
2	کیا آپ چیلنجنگ اہداف کا حصول کے لیے تندرہی سے معلومات حاصل کرتے ہیں؟					
3	کیا آپ کاروبار کو بہترین بنانے کے لیے تندرہی سے منصوبہ بندی کرتے ہیں؟					
4	پچھلے چھ ماہ میں کامیابی اہداف کے حصول میں آپ کتنی کامیابی حاصل کی؟					
	ذاتی اقدام	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ مستقبل کے مواقع حاصل کرنے کے لیے اہداف مقرر کرتے ہیں؟					
2	کیا آپ مستقبل کے ممکنہ خطرات/مواقع کا جائزہ لیتے ہیں؟					
3	کیا آپ مستقبل کے ممکنہ خطرات اور مواقعوں کی معلومات کو منصوبہ بندی کرتے ہوئے مد نظر رکھتے ہیں؟					

4	آپ کے منصوبوں کی تکمیل میں آنے والی رکاوٹوں پر کتنی تندی سے قابو پانے کی صلاحیت رکھتے ہیں؟				
5	کیا آپ کاروباری اہداف کے تعین اور ان کی تکمیل کے لیے خود سے پہلے کر کے اقدامات لیتے ہیں یا اس بات کا انتظار کرتے ہیں کہ پہلے کوئی حریف ایسے ہدف کا تعین کرے؟				
		۵	۴	۳	۲
	رиск (خطرات) لینے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم
1	کیا آپ اپنے کاروباری اہداف کا تعین کرتے وقت کاروباری خطرات (Risk) کا حساب کتاب کرتے ہیں (calculated risk)۔				
2	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کے لیے منصوبہ بندی کرتے ہیں؟				
3	کیا آپ تندی سے کاروباری خطرات (Risks) کے ادراک، جائزے اور روک تھام کے لیے معلومات کا حصول کرتے ہیں؟				
4	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کی منصوبہ بندی کا جائزہ لیتے ہیں؟				
		۵	۴	۳	۲
	جدت پسندی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم
1	کیا آپ منفرد اور جدید مصنوعات بنانے، کاروباری طریقہ کار اپنانے اور خدمات انجام دینے کے لیے اہداف کا تعین کرتے ہیں؟				
2	آپ کتنی دفعہ اپنے کاروباری مد مقابل سے انفرادیت اور جدت پسندی میں بازی لے جاتے ہیں؟				
3	کیا آپ نئی ٹیکنالوجی اور کاروبار میں انفرادیت پیدا کرنے کے مواقعوں کے بارے میں تندی سے معلومات حاصل کرتے ہیں؟				
4	کیا آپ جدت پسندت / انفرادیت پر مبنی کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتے ہیں؟				
5	کیا آپ اپنے جدت پسندی / انفرادیت سے متعلق اہداف کی تکمیل کے بعد ان کے بارے میں دوسروں سے رائے لیتے ہیں اور ان کی کامیابی کا تعین کرتے ہیں؟				

کاروباری کارکردگی

1۔ پچھلی سہ ماہی (تین ماہ) میں فروخت میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑا	تھوڑا سا کمی ہوئی	کافی حد تک کمی ہوئی

2۔ پچھلی سہ ماہی (تین ماہ) میں منافع میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑا	تھوڑا سا کمی ہوئی	کافی حد تک کمی ہوئی

3۔ پچھلی سہ ماہی (تین ماہ) میں صارفین میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

4۔ پچھلی سہ ماہی (تین ماہ) میں اخراجات میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

5۔ پچھلی سہ ماہی (تین ماہ) میں ملازمین کی کارکردگی میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

آپ کے قیمتی وقت اور جواب کا شکریہ !

Study 3 (T1/CG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 26-30 years ☐ 31-35 years ☐ 36-40 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			
Business Address:			

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Intelligence Test

Digit Span Test (Wechsler)

“We would just like to do a little memory quiz: **I will tell you a line of numbers and you just repeat the numbers that I now read to you.**”

task no.	1. trial	Correct?	2. trial	Correct?
1.	5-8-2		6-9-4	
2.	6-4-3-9		7-2-8-6	
3.	4-2-7-3-1		7-5-8-3-6	
4.	6-1-9-4-7-3		3-9-2-4-8-7	
5.	5-9-1-7-4-2-8		4-1-7-9-3-8-6	
6.	5-8-1-9-2-6-4-7		3-8-2-9-5-1-7-4	
7.	2-7-5-8-6-2-5-8-4		7-1-3-9-4-2-5-6-8	

“**Now you should reverse it. For example when I say 7-1-9, you say ...9-1-7**” ... If the subject couldn’t complete the example, correct him/her and give another example (3-4-8). Then start with the first trial of the first task.

task no.	1. trial	Correct?	2. trial	Correct?
1.	2-4		5-8	
2.	6-2-9		4-1-5	
3.	3-2-7-9		4-9-6-8	
4.	1-5-2-8-6		6-1-8-4-3	
5.	5-3-9-4-1-8		7-2-4-8-5-6	
6.	8-1-2-9-3-6-5		4-7-3-9-1-2-8	
7.	9-4-3-7-6-2-5-8		7-2-8-1-9-6-5-3	

General Self-Efficacy Scale (GSE)

With the following questionnaire we want to get to know a little bit about you and the way you do your business. Please answer all questions. Read them carefully and tick the answer that best applies to you. If you do not understand a question, please ask the researcher.

Items	1	2	3	4
	Not at all true	Hardly true	Moderately true	Exactly true
1. I can always manage to solve difficult problems if I try hard enough				
2. If someone opposes me, I can find the means and ways to get what I want				
3. It is easy for me to stick to my aims and accomplish my goals				
4. I am confident that I could deal efficiently with unexpected events.				
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.				
6. I can solve most problems if I invest the necessary effort.				
7. I can remain calm when facing difficulties because I can rely on my coping abilities.				
8. When I am confronted with a problem, I can usually find several solutions.				
9. If I am in trouble, I can usually think of a solution				

. I can usually handle whatever comes my way.				

Individual Entrepreneurial Orientation (IEO) Learning-T1

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more learning oriented. He will...	a. Actively try to obtain business related knowledge b. Actively plan to learn from mistakes c. Both A & B	a. Be passive in information seeking b. Rely on already available information c. Actively seek the ways to obtain business related knowledge	a. Use the market information for business improvement b. Do not apply learning in business activities c. Passively keep the obtained information	a. Avoid feedback on implementation of learning b. Reflect on learning c. Ask others for feedback on implementation of learned outcomes d. B and c
2. Mr. A is more achievement oriented. He will...	a. Set goals that are aimed at routine activities b. Set goals that are challenging c. Do not desire achievement	a. Seek information about routine market activities b. Seek information about market growth c. Is not interested in obtaining information about new customers	a. Do not plan for business expansions b. Have no clear policy for attracting new customers c. Actively plan for business growth and increase in customer base	a. Do not reflect on his own goal attainment b. Do not seek the feed backs of others c. Actively ask concerned people and customers for the evaluation of challenging goal attainment and practice self-reflection
3. Mr. A is more autonomy oriented. He will...	a. Seek help of others in developing goals b. Avoid initiative in development of vision c. Develop vision independently	a. Reactive in information seeking b. Not take responsibility to obtain information about pursuit of business vision c. Independent in obtaining information to pursue autonomous vision	a. Not feel responsible to develop challenging plan to realize business vision b. Have intrinsic motivation for development of plan to realize challenging vision c. Reactive in business plan	a. Takes self-initiative to seek feed back b. Self-reflection on attainment of autonomous vision c. Both A & B

			development to realize vision	
4. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
5. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B
6. Mr. A is more competitive aggressive. He will...	a. Develop goals to beat competition b. Develop goals to have market survival c. Develop goals to sustain market share	a. No competitive intelligence b. Obtain competitors' information passively c. Actively seek competitors' information	a. Develop plans that are not competitive b. Develop plans that react to competitors' strategies c. Develop plans that actively aim to beat competition	a. Not keep track of competitive position b. No monitoring of competitive situation c. Effective monitoring and feedback on competitive situation

7. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Individual Entrepreneurial Orientation (IEO) Behavior-T1

Sr. No.	Dimensions	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Learning Orientation					
LO1	Do you actively try to obtain business related knowledge?					
LO2	Do you use the market information for business improvement?					
LO3	Do you learn from the experiences in business and apply this learning in your business?					
	Learning Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
LO4	Do you reflect on your learning goals attainment and seek feedback from others?					
2	Autonomy Orientation					
ATO1	Would you accept an offer of selling your business and accepting a managerial position for same income?					
ATO2	Are you able to take decisions independently?					
ATO3	Are you self-directed in seeking information regarding the autonomous goals?					
ATO4	Do you actively plan for attaining the self-set vision?					
ATO5	Do you seek feedback on the attainment of self-set goals?					
3	Competitive Aggressiveness					
CA1	Do you set goals aimed at beating competition?					
CA2	Do you actively make plans for dealing with competition?					

CA3	Do you monitoring the competitive business position?					
CA4	How often do you seek information regarding market competition?					
4	Achievement Orientation					
ACO1	Do you set actively challenging goals aimed at improvement?					
ACO2	Do you seek information regarding challenging goals?					
ACO3	How often the plans for business growth are actively developed?					
ACO4	How much successful you have been in attaining the goals of business growth in past 6 months?					
5	Personal Initiative					
PI1	Do you develop goals for future opportunities?					
PI2	Do you Scan for the potential opportunities and threats?					
PI3	Do you use the opportunities and threats for action planning / contingency planning?					
PI4	How actively you overcome barriers in case if the active plans are not attained?					
6	Risk Taking					
RT1	Do you set goals with calculated risks?					
RT2	Do you actively seek information for extensive risk assessment, evaluation and mitigation?					
RT3	How frequently you plan for risk mitigation?					
RT4	Do you evaluate risk management plan?					

7	Innovation Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
IO1	Do you actively formulate the goals of innovative products, processes and services?					
IO2	How many times you outperform the competitors on innovation?					
IO3	Do you scan information about the new technologies and market potential for innovation?					
IO4	Do you put up plans for development of new innovative ideas?					
IO5	Do you monitoring and seek feedback after the implementation of innovative ideas?					

Success-T1

Did the **sales** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **profit** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **expenses** (including supplies, wages, rental...) within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **customers** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **employees** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Now please return back the questionnaire!

Thank you very much for your participation!

Study 3 (T2/CG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 26-30 years ☐ 31-35 years ☐ 35-40 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			
Business Address:			

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Individual Entrepreneurial Orientation (IEO) Learning-T2

After the training, what do you know about Individual Entrepreneurial Orientation (IEO)?

Please answer every question.

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more learning oriented. He will...	a. Actively try to obtain business related knowledge b. Actively plan to learn from mistakes c. Both A & B	a. Be passive in information seeking b. Rely on already available information c. Actively seek the ways to obtain business related knowledge	a. Use the market information for business improvement b. Do not apply learning in business activities c. Passively keep the obtained information	a. Avoid feedback on implementation of learning b. Reflect on learning c. Ask others for feedback on implementation of learned outcomes d. B and c
2. Mr. A is more achievement oriented. He will...	a. Set goals that are aimed at routine activities b. Set goals that are challenging c. Do not desire achievement	a. Seek information about routine market activities b. Seek information about market growth c. Is not interested in obtaining information about new customers	a. Do not plan for business expansions b. Have no clear policy for attracting new customers c. Actively plan for business growth and increase in customer base	a. Do not reflect on his own goal attainment b. Do not seek the feedbacks of others c. Actively ask concerned people and customers for the evaluation of challenging goal attainment and practice self-reflection
3. Mr. A is more autonomy oriented. He will...	a. Seek help of others in developing goals b. Avoid initiative in development of vision	a. Reactive in information seeking b. Not take responsibility to obtain information about pursuit	a. Not feel responsible to develop challenging plan to realize business vision b. Have intrinsic motivation	a. Takes self-initiative to seek feedback b. Self-reflection on attainment of autonomous vision c. Both A & B

	c. Develop vision independently	of business vision c. Independent in obtaining information to pursue autonomous vision	for development of plan to realize challenging vision c. Reactive in business plan development to realize vision	
4. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
5. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B
6. Mr. A is more competitive aggressive. He will...	a. Develop goals to beat competition b. Develop goals to have market survival c. Develop goals to sustain market share	a. No competitive intelligence b. Obtain competitors' information passively c. Actively seek competitors' information	a. Develop plans that are not competitive b. Develop plans that react to competitors' strategies c. Develop plans that actively aim	a. Not keep track of competitive position b. No monitoring of competitive situation c. Effective monitoring and feedback on competitive situation

			to beat competition	
7. Mr. A is more proactive. He will...	d. Develop goals for short term e. Develop self-starting goals to capture future opportunities f. Develop reactive goals	d. Do not scan for the potential opportunities and threats e. Actively seek information to capture market opportunities and avoiding threats f. Reactive in seeking information about opportunities and threats	d. Plan taking into account the opportunities and threats e. Fail to incorporate personal initiative in planning f. No contingency plan	d. Initiate customer feedback in case of failure e. Be self-starting in implement changes as suggested by consumer feedback f. Both A & B

Study 3 (T3/CG)

Background Measures

Kindly mark the most appropriate option:

Gender: ☐ Male ☐ Female		Business category: ☐ Manufacturing ☐ Trading ☐ Services	
Age: ☐ 20-25 years ☐ 26-30 years ☐ 31-35 years ☐ 35-40 years ☐ Above 40 years		Educational level: ☐ Below matriculation ☐ Matriculation ☐ Intermediate ☐ Bachelors ☐ Masters ☐ Above Masters	
Relevance of education with business: ☐ Yes ☐ No Field of Education: ☐ Business ☐ General ☐ Technical		Years of Operations (Current Business): ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Size: ☐ Small (<i>Employees 1-50, annual turnover up to 400 million PKR</i>) ☐ Medium (<i>Employees 50-250, annual turnover up to 800 million PKR</i>)		Personal Business Experience: ☐ Less than 1 year ☐ 1-5 years ☐ 6-10 years ☐ 11-15 years ☐ Above 15 years	
Please mention: Name Business Name: Email ID: Contact Number:			

Business Address:

	Sector Formality (Mention Yes or No)	Yes	No
1	Are you a member of the chamber of commerce?		
2	Do you pay Tax		
	Mention Exact Number		
3	How many rooms/how much space do you use for your business?		
4	How many employees do you have?		
5	How many of these are full-time employees? How many of these are part time employees? How many days per week do your part-time employees work?		
6	How many days a week are you in business?		

Individual Entrepreneurial Orientation (IEO) Behavior-T3

Sr. No.	Dimensions	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Learning Orientation					
LO1	Do you actively try to obtain business related knowledge?					
LO2	Do you use the market information for business improvement?					
LO3	Do you learn from the experiences in business and apply this learning in your business?					
	Learning Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
LO4	Do you reflect on your learning goals attainment and seek feedback from others?					
2	Autonomy Orientation					
ATO 1	Would you accept an offer of selling your business and accepting a managerial position for same income?					
ATO 2	Are you able to take decisions independently?					
ATO 3	Are you self-directed in seeking information regarding the autonomous goals?					
ATO 4	Do you actively plan for attaining the self-set vision?					
ATO 5	Do you seek feedback on the attainment of self-set goals?					
3	Competitive Aggressiveness					
CA1	Do you set goals aimed at beating competition?					
CA2	Do you actively make plans for dealing with competition?					
CA3	Do you monitoring the competitive business position?					
CA4	How often do you seek information regarding market competition?					
4	Achievement Orientation					
ACO 1	Do you set actively challenging goals aimed at improvement?					
ACO 2	Do you seek information regarding challenging goals?					

ACO 3	How often the plans for business growth are actively developed?					
ACO 4	How much successful you have been in attaining the goals of business growth in past 6 months?					
5	Personal Initiative					
PI1	Do you develop goals for future opportunities?					
PI2	Do you Scan for the potential opportunities and threats?					
PI3	Do you use the opportunities and threats for action planning / contingency planning?					
PI4	How actively you overcome barriers in case if the active plans are not attained?					
6	Risk Taking					
RT1	Do you set goals with calculated risks?					
RT2	Do you actively seek information for extensive risk assessment, evaluation and mitigation?					
RT3	How frequently you plan for risk mitigation?					
RT4	Do you evaluate risk management plan?					
	Innovation Orientation					
IO1	Do you actively formulate the goals of innovative products, processes and services?					
IO2	How many times you outperform the competitors on innovation?					

7	Innovation Orientation	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
IO3	Do you scan information about the new technologies and market potential for innovation?					
IO4	Do you put up plans for development of new innovative ideas?					
IO5	Do you monitoring and seek feedback after the implementation of innovative ideas?					

Success (S)-T3

Let's talk about your business "NAME"

I have the following address: IS THIS STILL CORRECT

I have the following telephone numbers:

ARE THEY STILL CORRECT

Did the **sales** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **profit** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **expenses** (including supplies, wages, rental...) within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **customers** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Did the **employees** within the **last quarter**

(1) Considerably decreased (2) Slightly decreased (3) stay same (4) Slightly increase (5) considerably increased

Now please return back the questionnaire!

Thank you very much for your participation

مطالعہ نمبر۔ ۳

Study 3(T1/CG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس: ☐ مرد ☐ عورت تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم اے سے زیادہ کاروباری تجربہ (موجودہ کاروبار): ☐ ایک سال سے کم ☐ 1-5 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ذاتی کاروباری تجربہ: ☐ ایک سال سے کم ☐ 1-5 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ	کاروباری حیثیت: ☐ صنعت ☐ تجارت عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ تعلیم کی کاروبار سے مطابقت: ☐ ہاں ☐ نہیں تعلیم کی نوعیت: ☐ عام ☐ کاروباری ☐ تکنیکی

کاروباری حجم:

چھوٹا □ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک

برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے:

شناختی کارڈ کے آخری چار نمبر: _____

درمیانہ □ (ملازمین کی تعداد 50-250) سالانہ آمدن 400 ملین سے 800

ملین تک

والد کا نام: _____

پسندیدہ شہر: _____

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں
1- کیا آپ چیئر آف کامرس کے محرک رکن ہیں؟		
2- کیا آپ ٹیکس ادا کرتے ہیں؟		
3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمروں / شورومز) کی تعداد۔		
4- آپ کے ملازمین کی تعداد کتنی ہے۔		
5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔		
6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟		
7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟		
8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟		

ذہانت کا امتحان

یہ آپ کی یادداشت کا امتحان ہے۔ آپ کو اعداد پر مشتمل ایک لائن بتائی جائے گی جسے آپ نے دہرا نہ ہے۔ درست جواب کی صورت میں ✓ کا نشان لگائیں اور غلط جواب کی صورت میں × کا نشان لگائیں:

نمبر شمار	درست؟	آزمائش	درست؟	آزمائش
1		6-9-4		5-8-2
2		7-2-8-6		6-4-3-9
3		7-5-8-3-6		4-2-7-3-1
4		3-9-2-4-8-7		6-1-9-4-7-3
5		4-1-7-9-3-8-6		5-9-1-7-4-2-8
6		3-8-2-9-5-1-7-4		5-8-1-9-2-6-1-7
7		7-1-3-9-4-2-5-6-8		2-7-5-8-6-2-5-8-4

اب اعداد کی لائن کوالٹ دہرائے اور درست جواب کی صورت میں ✓ کا نشان لگائیں اور غلط جواب کی صورت میں × کا نشان لگائیں:

نمبر شمار	آزمائش	درست؟	آزمائش	درست؟
1	2-4		5-8	
2	6-2-9		4-1-5	
3	3-2-7-9		4-9-6-8	
4	1-5-2-8-6		6-1-8-4-3	
5	5-3-9-4-1-8		7-2-4-8-5-6	
6	8-1-2-9-3-6-5		4-7-3-9-1-2-8	
7	9-4-3-7-6-2-5-8		7-2-8-1-9-6-5-3	

Generalized Self Efficacy

خود افادیت

برائے مہربانی مندرجہ ذیل سوالوں کے جواب دیں:

نمبر شمار	1- بالکل بھی درست نہیں	2- بشکل درست	3- کافی حد تک درست	4- بالکل درست
1				اگر میں کوشش کروں تو مشکلات کا حل نکال لیتا ہوں۔
2				اگر کوئی میری مخالفت کرتے تو میں اپنے ذرائع کا استعمال کر کے اپنا مقصد حاصل کر لیتا ہوں۔
3				میں اپنے مقاصد کو حاصل کرنے پر قائم رہتا ہوں اور ان کو حاصل کر لیتا ہوں۔
4				مجھے اپنے اوپر اعتماد ہے کہ میں غیر متوقع صورت حال کا سامنا کر سکتا ہوں اور ان سے نمٹ سکتا ہوں۔
5				میں اپنے ذرائع کا استعمال کر کے غیر متوقع صورت حال سے نمٹ سکتا ہوں۔
6				اگر میں کوشش کروں تو میں مشکلات کا حل نکال سکتا ہوں۔
7				میں مشکلات میں پر سکون رہتا ہوں کیوں کہ مجھے اپنے مقابلہ کرنے کی صلاحیتوں پر اعتماد ہے۔

				اگر مجھے کوئی مسئلہ درپیش ہوتا ہے تو میرے پاس اس کے حل موجود ہوتے ہیں۔	8
				جب میں مشکل میں ہوتا ہوں تو میرے ذہن میں اسکا کوئی حل ہوتا ہے۔	9
				میں ہر طرح کے حالات کو سنبھال سکتا ہوں۔	10

انفرادی کاروباری رجحان (علم) T1

برائے مہربانی درست آپشن پر ✓ کا نشان لگائیں:

1۔ مسٹر اے سیکھنے کا رجحان رکھتا ہے وہ _____

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری حاصل کردہ معلومات کے نتائج پر لوگوں سے رائے لینے سے گریز کرے گا۔	a۔ کاروبار کی معلومات اور غلطیوں سے حاصل کئے گئے سبق کو منصوبہ بندی میں استعمال کرے گا تاکہ اس کا کاروبار بہتر ہو سکے۔	a۔ معلومات حاصل کرنے میں سستی کرے گا۔	a۔ تندی سے کاروباری معلومات حاصل کرنے کی کوشش کرے گا۔
b۔ حاصل کردہ کاروباری معلومات کے نتائج پر خود جائزہ لے گا۔	b۔ کاروبار کی منصوبہ بندی کے لیے پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b۔ اپنی غلطیوں سے سیکھنے کی کوشش کرے گا۔
c۔ حاصل کردہ کاروباری معلومات سے استعمال کرنے کے نتائج پر دوسروں سے رائے لے گا۔	c۔ پہلے کی گئی غلطیوں سے حاصل کئے گئے سبق کو کاروبار کی منصوبہ بندی میں استعمال نہیں کرے گا۔	a + b c۔	a + b .c
d۔ دونوں			

2۔ مسٹر اے اپنے اہداف کو حاصل کرنے اور کامیاب ہونے کا رجحان رکھتا ہے۔

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروبار کو کامیاب کرنے اور بڑھانے کے اہداف کے نتائج پر سوچ بچار نہیں کرتا۔	a۔ کاروبار کو کامیاب کرنے اور آگے بڑھانے کی منصوبہ بندی نہیں کرتا۔	a۔ معمول کے مطابق کاروباری معلومات کے حصول کی کوشش کرتا ہے۔	a۔ معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔

b- چیلنجنگ کاروباری اہداف کا تعین کرتا ہے۔	b- آگے پڑھنے کے لیے کاروباری معلومات حاصل کرنے کی کوشش کرتا ہے۔	b- نئے صارفین کے حصول کے لیے کو واضح منصوبہ بندی نہیں کرتا۔	b- کاروبار کو کامیاب کرنے اور آگے بڑھانے کے اہداف کے نتائج پر دوسروں سے رائے نہیں لیتا۔
c- آگے بڑھنا اور کامیاب ہونا نہیں چاہتا۔	c- نئے صارفین کو حاصل کرنے کے بارے میں معلومات کا حصول نہیں کرتا۔	c- اپنے کاروبار کو بڑھانے اور نئے صارفین کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c- تندی سے چیلنجنگ اہداف کے نتائج پر متعلقہ لوگوں اور صارفین سے رائے طلب کرتا ہے۔

3- مسٹر اے خود مختاری اور خود انحصاری پسند کرتا ہے وہ۔۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- اپنے اہداف کا تعین کرنے کے لیے دوسروں کی مدد لیتے ہیں۔	a- اپنے کاروبار کے لیے معلومات حاصل کرنے کے لیے دوسروں پر انحصار کرتا ہے۔	a- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری نہیں لیتا۔	a- خود اپنے کاروبار کی کارکردگی کے بارے میں لوگوں کی رائے لیتا ہے۔
b- اپنے کاروبار کے وژن کو بنانے کے لیے خود سے ذمہ داری نہیں لیتا۔	b- اپنے کاروبار سے متعلقہ معلومات لینے کے لیے ذمہ داری قبول نہیں کرتا۔	b- اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری خود لیتا ہے۔	b- اپنے متعین کردہ اہداف کی تکمیل پر خود سے ان کا جائزہ لیتا ہے۔
c- اپنے کاروبار کے وژن کا خود تعین کرتا ہے۔	c- اپنے کاروبار کے لیے خود تعین کئے گئے اہداف / وژن کو حاصل کرنے کے لیے خود معلومات حاصل کرنے کی ذمہ داری لیتا ہے۔	c- اپنے کاروبار کی منصوبہ بندی کے لیے دوسروں پر انحصار کرتا ہے۔	c- دونوں a + b

4- مسٹر اے انفرادیت اور جدت پسند ہے وہ۔۔۔۔۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a- معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔	a- اپنے منفرد اور جدت پسند اہداف کے حصول کے لیے معلومات حاصل کرتا ہے۔	a- نئے اور منفرد مصنوعات اور خدمات متعارف کروانے کے لیے منصوبہ بندی کرتا ہے۔	a- اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کا جائزہ لیتا ہے۔

b۔ اپنے کاروباری حریفوں کی نقل کرنے سے متعلق معومات کا حصول کرتا ہے۔	b۔ اپنے کاروباری حریفوں کی مصنوعات اور خدمات کی نقل کرنے کی منصوبہ بندی کرتا ہے۔	b۔ اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کے بارے میں لوگوں کی رائے نہیں لیتا۔
c۔ دوسرے کاروباری حریفوں کے اہداف کی نقل کرتا ہے۔	c۔ روزمرہ کے معمول کے مطابق اپنے کاروبار کے لیے معلومات کا حصول کرتا ہے۔	c۔ نئی مصنوعات اور خدمات کے اجزاء کے لیے صارفین کی رائے کو مد نظر نہیں رکھتا۔

5۔ مسٹر اے خطرات مول لینے والا ہے وہ _____

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a۔ ایسے اہداف کا تعین کرتا ہے جو کہ بہت زیادہ پر خطر ہوں۔	a۔ خطرات سے بچنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل نہیں کرتا۔	a۔ خطرات کی نشاندہی اور ان کو کم کرنے کے لیے منصوبہ بندی نہیں کرتا۔	a۔ کاروباری خطرات کا تہہ ہی سے جائزہ لیتا ہے۔
b۔ ایسے اہداف کا تعین کرتا ہے جو خطرات سے پاک ہو۔	b۔ ایسے options کے بارے میں معلومات پاسکیں جن میں risk کم ہوں۔	b۔ خطرات سے بچنے کے لیے منصوبہ بندی کرتا ہے۔	b۔ کاروباری خطرات کی منصوبہ بندی کے عمل کا جائزہ لیتا ہے۔
c۔ ایسے اہداف کا تعین کرتا ہے جس میں مناسب (Calculated) خطرات ہوں۔	c۔ کاروباری خطرات risks کی نشاندہی اور ان کو کم کرنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل کرتا ہے۔	c۔ کاروبار خطرات کی نشاندہی، جائزے اور ان کو کم کرنے کے لیے منصوبہ بندی کرتا ہے۔	c۔ دونوں a + b

6۔ مسٹر اے کاروباری حریفوں کا مقابلہ کرنے والا ہے وہ _____

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a۔ اپنے کاروباری حریفوں کو مات دینے کے لیے اہداف کا تعین کرتا ہے۔	a۔ اپنے کاروباری حریفوں کی حرکات و سکنات کے بارے میں معلومات حاصل نہیں۔	a۔ اپنے کاروبار کی منصوبہ بندی میں مقابلے کو مد نظر نہیں رکھتا۔	a۔ کاروباری مسابقت کا ریکارڈ نہیں رکھتا۔
b۔ صرف ایسے اہداف کا تعین کرتا ہے جن سے کاروبار کی بقا قائم رہ سکے۔	b۔ تہہ ہی کے ساتھ کاروباری حریفوں کے متعلق معلومات حاصل نہیں کرتا۔	b۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام کا جواب دیا جائے۔	b۔ مقابلہ کی صورت حال کی نگرانی کرتا اور جائزہ نہیں لیتا۔

c۔ ایسے اہداف کا تعین کرتا ہے جن سے مارکیٹ میں اس کا حصہ قائم رہ سکے۔	c۔ تندہی سے کاروباری حریفوں کے بارے میں معلومات حاصل کرتا ہے۔	c۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام سے پہلے ہی ان کو مات دینے کی تیاری کی جائے۔	c۔ کاروباری مسابقت کے نتائج کی موثر نگرانی کر کے اس پر رائے طلب کرتا ہے/خود جائزہ لیتا ہے۔

نمبر شمار	انفرادی کاروباری رجحان (روییہ)	۵	۴	۳	۲	۱
	سیکھنے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ تندہی سے کاروباری معلومات حاصل کرنے کی کوشش کرتے ہیں؟					
2	کیا آپ مارکیٹ کی معلومات کو کاروبار کی بہتری کے لیے استعمال کرتے ہیں؟					
3	کیا آپ اپنے کاروباری تجربات سے سیکھتے ہیں اور اسے اپنے کاروبار میں استعمال کرتے ہیں؟					
4	کیا آپ اپنے سیکھنے کے عمل پر سوچ بچار کرتے ہیں اور دوسروں سے رائے لیتے ہیں؟					
	خود مختاری کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروبار کو فروخت کرنے کی پیشکش قبول کر کے اتنی ہی آمدنی کا انتظامی عہدہ قبول کریں گے؟					
2	کیا آپ آزادانہ فیصلہ کرنے کی صلاحیت رکھتے ہیں؟					
3	کیا آپ اپنے اہداف کے بارے میں تندہی سے معلومات حاصل کرتے ہیں تاکہ ان کو حاصل کر سکیں۔					
4	کیا آپ تندہی سے اپنے مقرر کردہ اہداف حاصل کرنے کی منصوبہ بندی کرتے ہیں؟					
5	کیا آپ اپنے مقرر کردہ اہداف کو حاصل کرنے کے بعد ان کے نتائج پر دوسروں کی رائے لیتے ہیں؟					
	مسابقتی جارحیت (Competition)	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروباری حریفوں کو ناکام کرنے کے لیے اہداف کا تعین کرتے ہیں؟					
2	کیا آپ تندہی سے اپنے کاروباری حریفوں سے مقابلہ بازی کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3	کیا آپ اپنے کاروباری حریف کے اقدام پر نظر رکھتے ہیں؟					
4	کیا آپ اپنے کاروباری حریفوں کے بارے میں تندہی سے معلومات حاصل کرتے ہیں؟					
	کامیابی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ کاروبار میں بہتری لانے کے لیے چیلنجنگ اہداف کا تعین کرنے میں متحرک ہیں؟					
2	کیا آپ چیلنجنگ اہداف کا حصول کے لیے تندہی سے معلومات حاصل کرتے ہیں؟					
3	کیا آپ کاروبار کو بہترین بنانے کے لیے تندہی سے منصوبہ بندی کرتے ہیں؟					
4	پچھلے چھ ماہ میں کامیابی اہداف کے حصول میں آپ کتنی کامیابی حاصل کی؟					
		1	۲	۳	۴	۱

ذاتی اقدام	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ مستقبل کے مواقع حاصل کرنے کے لیے اہداف مقرر کرتے ہیں؟					
2 کیا آپ مستقبل کے ممکنہ خطرات/مواقع کا جائزہ لیتے ہیں؟					
3 کیا آپ مستقبل کے ممکنہ خطرات اور مواقعوں کی معلومات کو منصوبہ بندی کرتے ہوئے مد نظر رکھتے ہیں؟					
4 آپ کے منصوبوں کی تکمیل میں آنے والی رکاوٹوں پر کتنی تندی سے قابو پانے کی صلاحیت رکھتے ہیں؟					
5 کیا آپ کاروباری اہداف کے تعین اور ان کی تکمیل کے لیے خود سے پہل کر کے اقدامات لیتے ہیں یا اس بات کا انتظار کرتے ہیں کہ پہلے کوئی حریف ایسے ہدف کا تعین کرے؟					
	۵	۴	۳	۲	۱
رиск (خطرات) لینے کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ اپنے کاروباری اہداف کا تعین کرتے وقت کاروباری خطرات (Risk) کا حساب کتاب کرتے ہیں (calculated risk)۔					
2 کیا آپ کاروباری خطرات (Risks) کو کم کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3 کیا آپ تندی سے کاروباری خطرات (Risks) کے ادراک، جائزے اور روک تھام کے لیے معلومات کا حصول کرتے ہیں؟					
4 کیا آپ کاروباری خطرات (Risks) کو کم کرنے کی منصوبہ بندی کا جائزہ لیتے ہیں؟					
	۵	۴	۳	۲	۱
جدت پسندی کا رجحان	ہمیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1 کیا آپ منفرد اور جدید مصنوعات بنانے، کاروباری طریقہ کار اپنانے اور خدمات انجام دینے کے لیے اہداف کا تعین کرتے ہیں؟					
2 آپ کتنی دفعہ اپنے کاروباری مد مقابل سے انفرادیت اور جدت پسندی میں بازی لے جاتے ہیں؟					
3 کیا آپ نئی ٹیکنالوجی اور کاروبار میں انفرادیت پیدا کرنے کے مواقعوں کے بارے میں تندی سے معلومات حاصل کرتے ہیں؟					
4 کیا آپ جدت پسندت / انفرادیت پر مبنی کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتے ہیں؟					
5 کیا آپ اپنے جدت پسندی / انفرادیت سے متعلق اہداف کی تکمیل کے بعد ان کے بارے میں دوسروں سے رائے لیتے ہیں اور ان کی کامیابی کا تعین کرتے ہیں؟					

کاروباری کارکردگی

1۔ پچھلی سہ ماہی (تین ماہ) میں فروخت میں۔

کافی حد تک کمی ہوئی	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑا	تھوڑا سا اضافہ ہوا	کافی حد تک اضافہ ہوا

2۔ پچھلی سہ ماہی (تین ماہ) میں منافع میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

3۔ پچھلی سہ ماہی (تین ماہ) میں صارفین میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

4۔ پچھلی سہ ماہی (تین ماہ) میں اخراجات میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

5۔ پچھلی سہ ماہی (تین ماہ) میں ملازمین کی کارکردگی میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

مطالعہ نمبر ۳۔

Study 3(T2/CG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس: مرد ☐ عورت ☐ کاروباری حیثیت: صنعت ☐ تجارت ☐ عمر: 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ ☐ تعلیم کی کاروبار سے مطابقت:	تعلیم: میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم۔ اے سے زیادہ ☐ کاروباری تجربہ (موجودہ کاروبار):

ہاں ☐ نہیں ☐ تعلیم کی نوعیت: عام ☐ کاروباری ☐ تکنیکی ☐ برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____ والد کا نام: _____ پسندیدہ شہر: _____	ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ ذاتی کاروباری تجربہ: ایک سال سے کم ☐ 5-1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ کاروباری حجم: چھوٹا ☐ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک درمیانہ ☐ (ملازمین کی تعداد 50-250) سالانہ آمدن 400 ملین سے 800 ملین تک

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں
1- کیا آپ چیمبر آف کامرس کے محرک رکن ہیں؟		
2- کیا آپ ٹیکس ادا کرتے ہیں؟		
3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمروں / شورومز) کی تعداد۔		
4- آپ کے ملازمین کی تعداد کتنی ہے۔		
5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔		
6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟		
7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟		
8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟		

انفرادی کاروباری رجحان (علم) T2

برائے مہربانی درست آپشن پر ✓ کا نشان لگائیں:

1- مسٹر اے سیکھے کار حجان رکھتا ہے وہ _____

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا

a - تندہی سے کاروباری معلومات حاصل کرنے کی کوشش کرے گا۔	a - معلومات حاصل کرنے میں سستی کرے گا۔	a - کاروبار کی معلومات اور غلطیوں سے حاصل کئے گئے سبق کو منصوبہ بندی میں استعمال کرے گا تاکہ اس کا کاروبار بہتر ہو سکے۔	a - کاروباری حاصل کردہ معلومات کے نتائج پر لوگوں سے رائے لینے سے گریز کرے گا۔
b - اپنی غلطیوں سے سیکھنے کی کوشش کرے گا۔	b - پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b - کاروبار کی منصوبہ بندی کے لیے پہلے سے موجودہ معلومات پر انحصار کرے گا۔	b - حاصل کردہ کاروباری معلومات کے نتائج پر خود جائزہ لے گا۔
c . a + b	a + b -c	c - پہلے کی گئی غلطیوں سے حاصل کئے گئے سبق کو کاروبار کی منصوبہ بندی میں استعمال نہیں کرے گا۔	c - حاصل کردہ کاروباری معلومات سے استعمال کرنے کے نتائج پر دوسروں سے رائے لے گا۔
			d - دونوں b + c

2۔ مسٹر اے اپنے اہداف کو حاصل کرنے اور کامیاب ہونے کا رجحان رکھتا ہے۔

اہداف کا تعین	معلومات کا حصول	منصوبہ بندی	جائزہ لینا اور رائے طلب کرنا
a - معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔	a - معمول کے مطابق کاروباری معلومات کے حصول کی کوشش کرتا ہے۔	a - کاروبار کو کامیاب کرنے اور آگے بڑھانے کی منصوبہ بندی نہیں کرتا۔	a - کاروبار کو کامیاب کرنے اور بڑھانے کے اہداف کے نتائج پر سوچ بچار نہیں کرتا۔
b - چیلنجنگ کاروباری اہداف کا تعین کرتا ہے۔	b - آگے پڑھنے کے لیے کاروباری معلومات حاصل کرنے کی کوشش کرتا ہے۔	b - نئے صارفین کے حصول کے لیے کو واضح منصوبہ بندی نہیں کرتا۔	b - کاروبار کو کامیاب کرنے اور آگے بڑھانے کے اہداف کے نتائج پر دوسروں سے رائے نہیں لیتا۔
c - آگے بڑھنا اور کامیاب ہونا نہیں چاہتا۔	c - نئے صارفین کو حاصل کرنے کے بارے میں معلومات کا حصول نہیں کرتا۔	c - اپنے کاروبار کو بڑھانے اور نئے صارفین کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c - تندہی سے چیلنجنگ اہداف کے نتائج پر متعلقہ لوگوں اور صارفین سے رائے طلب کرتا ہے۔

3۔ مسٹر اے خود مختاری اور خود انحصاری پسند کرتا ہے وہ۔۔۔

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ خود اپنے کاروبار کی کارکردگی کے بارے میں لوگوں کی رائے لیتا ہے۔	a۔ اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری نہیں لیتا۔	a۔ اپنے کاروبار کے لیے معلومات حاصل کرنے کے لیے دوسروں پر انحصار کرتا ہے۔	a۔ اپنے اہداف کا تعین کرنے کے لیے دوسروں کی مدد لیتے ہیں۔
b۔ اپنے متعین کردہ اہداف کی تکمیل پر خود سے ان کا جائزہ لیتا ہے۔	b۔ اپنے کاروبار کو بڑھانے کے لیے منصوبہ بندی کی ذمہ داری خود لیتا ہے۔	b۔ اپنے کاروبار سے متعلق معلومات لینے کے لیے ذمہ داری قبول نہیں کرتا۔	b۔ اپنے کاروبار کے وژن کو بنانے کے لیے خود سے ذمہ داری نہیں لیتا۔
c۔ دونوں a + b	c۔ اپنے کاروبار کی منصوبہ بندی کے لیے دوسروں پر انحصار کرتا ہے۔	c۔ اپنے کاروبار کے لیے خود تعین کئے گئے اہداف / وژن کو حاصل کرنے کے لیے خود معلومات حاصل کرنے کی ذمہ داری لیتا ہے۔	c۔ اپنے کاروبار کے وژن کا خود تعین کرتا ہے۔

4۔ مسٹر اے انفرادیت اور جدت پسند ہے وہ۔۔۔

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کا جائزہ لیتا ہے۔	a۔ نئے اور منفرد مصنوعات اور خدمات متعارف کروانے کے لیے منصوبہ بندی کرتا ہے۔	a۔ اپنے منفرد اور جدت پسند اہداف کے حصول کے لیے معلومات حاصل کرتا ہے۔	a۔ معمول کے مطابق کاروباری اہداف کا تعین کرتا ہے۔
b۔ اپنے منفرد خیالات کو عملی جامہ پہنا کر ان کے بارے میں لوگوں کی رائے نہیں لیتا۔	b۔ اپنے کاروباری حریفوں کی مصنوعات اور خدمات کی نقل کرنے کی منصوبہ بندی کرتا ہے۔	b۔ اپنے کاروباری حریفوں کی نقل کرنے سے متعلق معلومات کا حصول کرتا ہے۔	b۔ ایسے کاروباری اہداف کا تعین کرتا ہے جن میں جدت پسندی اور انفرادیت ہو۔
c۔ نئی مصنوعات اور خدمات کے اجزاء کے لیے صارفین کی رائے کو مد نظر نہیں رکھتا۔	c۔ معمول کے مطابق کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتا ہے۔	c۔ روزمرہ کے معمول کے مطابق اپنے کاروبار کے لیے معلومات کا حصول کرتا ہے۔	c۔ دوسرے کاروباری حریفوں کے اہداف کی نقل کرتا ہے۔

5۔ مسٹر اے خطرات مول لینے والا ہے وہ

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری خطرات کا تندہی سے جائزہ لیتا ہے۔	a۔ خطرات کی نشاندہی اور ان کو کم کرنے کے لیے منصوبہ بندی نہیں کرتا۔	a۔ خطرات سے بچنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل نہیں کرتا۔	a۔ ایسے اہداف کا تعین کرتا ہے جو کہ بہت زیادہ پر خطر ہوں۔
b۔ کاروباری خطرات کی منصوبہ بندی کے عمل کا جائزہ لیتا ہے۔	b۔ خطرات سے بچنے کے لیے منصوبہ بندی کرتا ہے۔	b۔ ایسے options کے بارے میں معلومات پاسکیں جن میں risk کم ہوں۔	b۔ ایسے اہداف کا تعین کرتا ہے جو خطرات سے پاک ہو۔
c۔ دونوں a + b	c۔ کاروبار خطرات کی نشاندہی، جائزے اور ان کو کم کرنے کے لیے منصوبہ بندی کرتا ہے۔	c۔ کاروباری خطرات risks کی نشاندہی اور ان کو کم کرنے کی منصوبہ بندی کرنے کے لیے معلومات حاصل کرتا ہے۔	c۔ ایسے اہداف کا تعین کرنا ہے جس میں مناسب (Calculated) خطرات ہوں۔

6۔ مسٹر اے کاروباری حریفوں کا مقابلہ کرنے والا ہے وہ

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین
a۔ کاروباری مسابقت کا ریکارڈ نہیں رکھتا۔	a۔ اپنے کاروبار کی منصوبہ بندی میں مقابلے کو مد نظر نہیں رکھتا۔	a۔ اپنے کاروباری حریفوں کی حرکات و سکنات کے بارے میں معلومات حاصل نہیں۔	a۔ اپنے کاروباری حریفوں کو مات دینے کے لیے اہداف کا تعین کرتا ہے۔
b۔ مقابلہ کی صورت حال کی نگرانی کرتا اور جائزہ نہیں لیتا۔	b۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام کا جواب دیا جائے۔	b۔ تندہی کے ساتھ کاروباری حریفوں کے متعلق معلومات حاصل نہیں کرتا۔	b۔ صرف ایسے اہداف کا تعین کرتا ہے جن سے کاروبار کی بقا قائم رہ سکے۔
c۔ کاروباری مسابقت کے نتائج کی موثر نگرانی کر کے اس پر رائے طلب کرتا ہے / خود جائزہ لیتا ہے۔	c۔ ایسی منصوبہ بندی کرتا ہے جس میں کاروباری حریفوں کے اقدام سے پہلے ہی ان کو مات دینے کی تیاری کی جائے۔	c۔ تندہی سے کاروباری حریفوں کے بارے میں معلومات حاصل کرتا ہے۔	c۔ ایسے اہداف کا تعین کرتا ہے جن سے مارکیٹ میں اس کا حصہ قائم رہ سکے۔

7۔ مسٹر اے دور اندیش / ہے وہ

جائزہ لینا اور رائے طلب کرنا	منصوبہ بندی	معلومات کا حصول	اہداف کا تعین

a- قلیل مدت کے لیے اہداف کا تعین کرتا ہے۔	a- مستقبل کے مواقعوں کو حاصل کرنے کے لیے اور خطرات سے بچنے کے لیے حالات کی جانچ نہیں کرتا۔	a- اپنے کاروبار کی منصوبہ بندی میں مستقبل کے خطرات سے بچنے اور مواقع حاصل کرنے کو مد نظر رکھتا ہے۔	a- خود سے معارف کی رائے طلب کرتا ہے۔
b- مستقبل کے مواقعوں کا فائدہ اٹھانے کے لیے خود سے اہداف کا تعین کرتا ہے۔	b- تندرہی سے مستقبل کے مواقع حاصل کرنے اور خطرات سے بچنے کے لیے معلومات حاصل کرتا ہے۔	b- منصوبہ بندی میں دوراندیشی کا استعمال نہیں کرتا۔	b- خود سے صارفین کی تجویز کردہ اصلاحات تبدیلیاں نافذ کرنے کی کوشش کرتا ہے۔
c- حالات کے رد عمل میں اہداف کا تعین کرتا ہے۔	c- مستقبل کے مواقع حاصل کرنے اور خطرات سے بچنے کے لیے صرف رد عمل میں معلومات حاصل کرتا ہے۔	c- کاروباری معاملات میں مقابل منصوبہ بندی نہیں کرتا۔	c- دونوں a + b

مطالعہ نمبر - ۳

Study 3(T3/TG)

برائے مہربانی متعلقہ آپشن کا انتخاب کریں:

جنس: ☐ مرد ☐ عورت تعلیم: ☐ میٹرک سے کم ☐ میٹرک ☐ ایف اے ☐ بی اے ☐ ایم اے ☐ ایم اے سے زیادہ کاروباری تجربہ (موجودہ کاروبار):	کاروباری حیثیت: ☐ صنعت ☐ تجارت عمر: ☐ 20-25 سال ☐ 26-30 سال ☐ 31-35 سال ☐ 36-40 سال ☐ 40 سال سے زیادہ تعلیم کی کاروبار سے مطابقت:

ہاں ☐ نہیں ☐ تعلیم کی نوعیت: عام ☐ کاروباری ☐ تکنیکی ☐ برائے مہربانی مندرجہ ذیل معلومات فراہم کیجئے: شناختی کارڈ کے آخری چار نمبر: _____ والد کا نام: _____ پسندیدہ شہر: _____	ایک سال سے کم ☐ 5 - 1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ ذاتی کاروباری تجربہ: ایک سال سے کم ☐ 5 - 1 سال ☐ 6-10 سال ☐ 11-15 سال ☐ 15 سال سے زیادہ ☐ کاروباری حجم: چھوٹا ☐ (ملازمین کی تعداد 1-50) سالانہ آمدن 100 ملین تک درمیانہ ☐ (ملازمین کی تعداد 50-250) سالانہ آمدن 400 ملین سے 800 ملین تک

ہاں یا ناں میں جواب دیں۔	ہاں	نہیں	
			1- کیا آپ چیئرمین آف کامرس کے محرک رکن ہیں؟
			2- کیا آپ ٹیکس ادا کرتے ہیں؟
			3- آپ اپنے کاروبار کے لیے کتنی جگہ کا استعمال کرتے ہیں (کمروں / شورومز) کی تعداد۔
			4- آپ کے ملازمین کی تعداد کتنی ہے۔
			5- آپ کے ملازمین میں سے کتنے کل وقتی (full time) ہیں۔
			6- آپ کے ملازمین میں سے کتنے جزوقتی (part time) ہیں؟
			7- آپ کے جزوقتی ملازمین ہفتے میں کتنے دن کام کرتے ہیں؟
			8- آپ ہفتے میں کتنے دن کاروبار کرتے ہیں؟

نمبر شمار	انفرادی کاروباری رجحان	۵	۴	۳	۲	۱
	سیکھنے کا رجحان	بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ تدریسی سے کاروباری معلومات حاصل کرنے کی کوشش کرتے ہیں؟					
2	کیا آپ مارکیٹ کی معلومات کو کاروبار کی بہتری کے لیے استعمال کرتے ہیں؟					
3	کیا آپ اپنے کاروباری تجربات سے سیکھتے ہیں اور اسے اپنے کاروبار میں استعمال کرتے ہیں؟					

4	کیا آپ اپنے سیکھنے کے عمل پر سوچ بچار کرتے ہیں اور دوسروں سے رائے لیتے ہیں؟	۵	۴	۳	۲	۱
		بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
1	کیا آپ اپنے کاروبار کو فروخت کرنے کی پیشکش قبول کر کے اتنی ہی آمدنی کا انتظامی عہدہ قبول کریں گے؟					
2	کیا آپ آزادانہ فیصلہ کرنے کی صلاحیت رکھتے ہیں؟					
3	کیا آپ اپنے اہداف کے بارے میں تندہی سے معلومات حاصل کرتے ہیں تاکہ ان کو حاصل کر سکیں۔					
4	کیا آپ تندہی سے اپنے مقرر کردہ اہداف حاصل کرنے کی منصوبہ بندی کرتے ہیں؟					
5	کیا آپ اپنے مقرر کردہ اہداف کو حاصل کرنے کے بعد ان کے نتائج پر دوسروں کی رائے لیتے ہیں؟					
		۵	۴	۳	۲	۱
		بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
	مسابقتی جارحیت (Competition)					
1	کیا آپ اپنے کاروباری حریفوں کو ناکام کرنے کے لیے اہداف کا تعین کرتے ہیں؟					
2	کیا آپ تندہی سے اپنے کاروباری حریفوں سے مقابلہ بازی کرنے کے لیے منصوبہ بندی کرتے ہیں؟					
3	کیا آپ اپنے کاروباری حریف کے اقدام پر نظر رکھتے ہیں؟					
4	کیا آپ اپنے کاروباری حریفوں کے بارے میں تندہی سے معلومات حاصل کرتے ہیں؟					
		۵	۴	۳	۲	۱
		بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
	کامیابی کا رجحان					
1	کیا آپ کاروبار میں بہتری لانے کے لیے چیلنجنگ اہداف کا تعین کرنے میں متحرک ہیں؟					
2	کیا آپ چیلنجنگ اہداف کا حصول کے لیے تندہی سے معلومات حاصل کرتے ہیں؟					
3	کیا آپ کاروبار کو بہترین بنانے کے لیے تندہی سے منصوبہ بندی کرتے ہیں؟					
4	پچھلے چھ ماہ میں کامیابی اہداف کے حصول میں آپ کتنی کامیابی حاصل کی؟					
		۵	۴	۳	۲	۱
		بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
	ذاتی اقدام					
1	کیا آپ مستقبل کے مواقع حاصل کرنے کے لیے اہداف مقرر کرتے ہیں؟					
2	کیا آپ مستقبل کے ممکنہ خطرات / مواقع کا جائزہ لیتے ہیں؟					
3	کیا آپ مستقبل کے ممکنہ خطرات اور مواقعوں کی معلومات کو منصوبہ بندی کرتے ہوئے مد نظر رکھتے ہیں؟					
4	آپ کے منصوبوں کی تکمیل میں آنے والی رکاوٹوں پر کتنی تندہی سے قابو پانے کی صلاحیت رکھتے ہیں؟					
5	کیا آپ کاروباری اہداف کے تعین اور ان کی تکمیل کے لیے خود سے پہل کر کے اقدامات لیتے ہیں یا اس بات کا انتظار کرتے ہیں کہ پہلے کوئی حریف ایسے ہدف کا تعین کرے؟					
		۵	۴	۳	۲	۱
		بیشہ	اکثر	کبھی کبھار	بہت کم	کبھی نہیں
	رиск (خطرات) لینے کا رجحان					

1	کیا آپ اپنے کاروباری اہداف کا تعین کرتے وقت کاروباری خطرات (Risk) کا حساب کتاب کرتے ہیں (calculated risk)۔				
2	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کے لیے منصوبہ بندی کرتے ہیں؟				
3	کیا آپ تندرستی سے کاروباری خطرات (Risks) کے ادراک، جائزے اور روک تھام کے لیے معلومات کا حصول کرتے ہیں؟				
4	کیا آپ کاروباری خطرات (Risks) کو کم کرنے کی منصوبہ بندی کا جائزہ لیتے ہیں؟				
		۵	۴	۳	۲
		ہمیشہ	اکثر	کبھی کبھار	بہت کم
					کبھی نہیں
1	کیا آپ منفرد اور جدید مصنوعات بنانے، کاروباری طریقہ کار اپنانے اور خدمات انجام دینے کے لیے اہداف کا تعین کرتے ہیں؟				
2	آپ کتنی دفعہ اپنے کاروباری مد مقابل سے انفرادیت اور جدت پسندی میں بازی لے جاتے ہیں؟				
3	کیا آپ نئی ٹیکنالوجی اور کاروبار میں انفرادیت پیدا کرنے کے مواقعوں کے بارے میں تندرستی سے معلومات حاصل کرتے ہیں؟				
4	کیا آپ جدت پسند / انفرادیت پر مبنی کاروباری اہداف کے حصول کے لیے منصوبہ بندی کرتے ہیں؟				
5	کیا آپ اپنے جدت پسندی / انفرادیت سے متعلق اہداف کی تکمیل کے بعد ان کے بارے میں دوسروں سے رائے لیتے ہیں اور ان کی کامیابی کا تعین کرتے ہیں؟				

کاروباری کارکردگی

1۔ پچھلی سہ ماہی (تین ماہ) میں فروخت میں۔

کافی حد تک کی ہوئی	تھوڑا سی کی ہوئی	کوئی فرق نہیں پڑ	تھوڑا سا اضافہ ہوا	کافی حد تک اضافہ ہوا

2۔ پچھلی سہ ماہی (تین ماہ) میں منافع میں۔

کافی حد تک کی ہوئی	تھوڑا سی کی ہوئی	کوئی فرق نہیں پڑ	تھوڑا سا اضافہ ہوا	کافی حد تک اضافہ ہوا

3۔ پچھلی سہ ماہی (تین ماہ) میں صارفین میں۔

کافی حد تک کی ہوئی	تھوڑا سی کی ہوئی	کوئی فرق نہیں پڑ	تھوڑا سا اضافہ ہوا	کافی حد تک اضافہ ہوا

4۔ پچھلی سہ ماہی (تین ماہ) میں اخراجات میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

5۔ پچھلی سہ ماہی (تین ماہ) میں ملازمین کی کارکردگی میں۔

کافی حد تک اضافہ ہوا	تھوڑا سا اضافہ ہوا	کوئی فرق نہیں پڑ	تھوڑا سی کمی ہوئی	کافی حد تک کمی ہوئی

آپ کے وقت اور شرکت کے لئے شکریہ

Study 4 (T1/TG)

Demographic profile

Kindly mark the most appropriate option:

Name:	Semester:	Roll No:
Email ID:	Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years	University ☐ Public ☐ Private Gender: ☐ Male ☐ Female	

Intelligence Test

Digit Span Test (Wechsler)

“We would just like to do a little memory quiz: **I will tell you a line of numbers and you just repeat the numbers that I now read to you.**”

task no.	1. trial	Correct?	2. trial	Correct?
1.	5-8-2		6-9-4	
2.	6-4-3-9		7-2-8-6	
3.	4-2-7-3-1		7-5-8-3-6	
4.	6-1-9-4-7-3		3-9-2-4-8-7	
5.	5-9-1-7-4-2-8		4-1-7-9-3-8-6	
6.	5-8-1-9-2-6-4-7		3-8-2-9-5-1-7-4	
7.	2-7-5-8-6-2-5-8-4		7-1-3-9-4-2-5-6-8	

“**Now you should reverse it. For example when I say 7-1-9, you say ...9-1-7**” ... If the subject couldn't complete the example, correct him/her and give another example (3-4-8). Then start with the first trial of the first task.

task no.	1. trial	Correct?	2. trial	Correct?
1.	2-4		5-8	
2.	6-2-9		4-1-5	
3.	3-2-7-9		4-9-6-8	
4.	1-5-2-8-6		6-1-8-4-3	
5.	5-3-9-4-1-8		7-2-4-8-5-6	
6.	8-1-2-9-3-6-5		4-7-3-9-1-2-8	
7.	9-4-3-7-6-2-5-8		7-2-8-1-9-6-5-3	

General Self-Efficacy Scale (GSE)

With the following questionnaire we want to get to know a little bit about you and the way you carry out life activities. Please answer all questions. Read them carefully and tick the answer that best applies to you. If you do not understand a question, please ask the researcher.

Items	1	2	3	4
	Not at all true	Hardly true	Moderately true	Exactly true
1. I can always manage to solve difficult problems if I try hard enough				
2. If someone opposes me, I can find the means and ways to get what I want				
3. It is easy for me to stick to my aims and accomplish my goals				
4. I am confident that I could deal efficiently with unexpected events.				
5. Thanks to my resourcefulness, I know how to handle unforeseen situations.				
6. I can solve most problems if I invest the necessary effort.				
7. I can remain calm when facing difficulties because I can rely on my coping abilities.				
8. When I am confronted with a problem, I can usually find several solutions.				
9. If I am in trouble, I can usually think of a solution				
10. I can usually handle whatever comes my way.				

Individual Entrepreneurial Orientation (IEO) Learning-T1

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more innovation-oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on the implementation of innovative ideas c. No concern for customer feedback on the test launch of innovative products
2. Mr. A is a risk-taker. He will...	a. Develop goals that involve drastic risks b. Develop goals	a. No concern about information related to risk analysis	a. No risk planning b. Developing a risk-averse plan	a. Actively monitor risk b. Evaluate the implementation of the risk plan c. Both A & B

	avoiding risks c. Develop goals with calculated risks	b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	c. Develop risk identification, assessment and mitigation plan	
3. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting to implement changes as suggested by consumer feedback c. Both A & B

Individual Entrepreneurial Orientation Behavior (IEO)-T1

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Risk-Taking					
RT1	I like to take bold action by venturing into the unknown					
RT2	I am willing to invest a lot of time and/or money on something that might yield a high Return					
RT3	I tend to act "boldly" in situations where risk is involved					
2	Innovation Orientation					
IO1.	I often like to try new and unusual activities that are not typical but not necessarily risky					
IO2	In general, I prefer a strong emphasis on projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before					
IO3	I prefer to try my unique way when learning new things rather than doing it as everyone else does					
IO4	I favor experimentation and original approaches to problem-solving rather than using methods others generally use for solving their problems					
3	Proactivity					

P1	I usually act in anticipation of future problems, needs or changes					
P2	I tend to plan ahead on projects					
P3	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it					

Entrepreneurial Intention (EI)-T1

Sr. No.	Items	1	2	3	4	5
		Would prefer to be employed by someone (Very Unlikely to be Entrepreneur)	(Somewhat Unlikely to be Entrepreneur)	Undecided	(Somewhat likely to be Entrepreneur)	Would prefer to be self-employed (Very Likely to be Entrepreneur)
1	If you were to choose between running your own business and being employed by someone, what would you prefer?					
		1	2	3	4	5
		Very Unlikely	Somewhat unlikely	Undecided	Somewhat Likely	Very Likely
2	How likely is it that you will pursue a career as self-employed?					
3	How likely is it that you will pursue a career as employed in an organization? (R)					

Now please return back the questionnaire!

Thank you very much for your participation!

Study 4 (T2/TG)

Demographic profile

Kindly mark the most appropriate option:

Name:	Semester:	Roll No:
Email ID:	Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years		University ☐ Public ☐ Private Gender: ☐ Male ☐ Female

Satisfaction with Training-T2

Choose the option that most closely matches your response!

How satisfied were you with the content of the training?

Extremely satisfied ←————→ Extremely dissatisfied







Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How satisfied were you with the delivery of the training?

Extremely satisfied ←————→ Extremely dissatisfied







Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How satisfied were you with the exercises during the training?

Extremely satisfied ←————→ Extremely dissatisfied







Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

How overall satisfied were you with the training?

Extremely satisfied ←————→ Extremely dissatisfied







Extremely satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Extremely dissatisfied
5	4	3	2	1

Do you think that concept of "IEO" is useful for your future business start-up?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part goal setting is useful for your future business start-up?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part seeking information is useful for your future business start-up?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part of making a plan is useful in your future business start-up?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Do you think the part feedback is useful for your future business start-up?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you will take more calculated risks than you did before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you are more innovative than you were before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

To what extent do you think that after this training you will take more initiatives and act proactively than you did before?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Would you recommend this training to your fellows?

1-not at all	2-to some extent	3-to moderate extent	4- to great extent	5- very much

Individual Entrepreneurial Orientation (IEO) Learning-T2

After the training, what do you know about Individual Entrepreneurial Orientation (IEO)?

Please answer every question.

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
2. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B
3. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Now please return back the questionnaire!
Thank you for your valuable time and response!

Study 4 (T3/TG)

Demographic profile

Kindly mark the most appropriate option:

Name:	Semester:	Roll No:
Email ID:	Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years		University ☐ Public ☐ Private Gender: ☐ Male ☐ Female

Individual Entrepreneurial Orientation Behavior (IEO)-T3

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Risk Taking					
RT1	I like to take bold action by venturing into the unknown					
RT2	I am willing to invest a lot of time and/or money on something that might yield a high return					
RT3	I tend to act “boldly” in situations where risk is involved					
2	Innovation Orientation					
IO1.	I often like to try new and unusual activities that are not typical but not necessarily risky					
IO2	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before					
IO3	I prefer to try my own unique way when learning new things rather than doing it like everyone else does					
IO4	I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems					
3	Proactivity					
P1	I usually act in anticipation of future problems, needs or changes					
P2	I tend to plan ahead on projects					
P3	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it					

Thank you for your valuable time and response!

Entrepreneurial Intention (EI)-T3

Sr. No.	Items	1	2	3	4	5
		Would prefer to be employed by someone (Very Unlikely to be Entrepreneur)	(Somewhat Unlikely to be Entrepreneur)	Undecided	(Somewhat likely to be Entrepreneur)	Would prefer to be self-employed (Very Likely to be Entrepreneur)
1	If you were to choose between running your own business and being employed by someone, what would you prefer?					
		1	2	3	4	5
		Very Unlikely	Somewhat unlikely	Undecided	Somewhat Likely	Very Likely
2	How likely is it that you will pursue a career as self-employed?					
3	How likely is it that you will pursue a career as employed in an organization? (R)					

Now please return back the questionnaire!

Thank you very much for your participation!

Study 4 (T1/CG)

Demographic profile

Kindly mark the most appropriate option:

Name:	Semester:	Roll No:
Email ID:	Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years		University ☐ Public ☐ Private Gender: ☐ Male ☐ Female

Intelligence Test

Digit Span Test (Wechsler)

“We would just like to do a little memory quiz: **I will tell you a line of numbers and you just repeat the numbers that I now read to you.**”

task no.	1. trial	Correct?	2. trial	Correct?
1.	5-8-2		6-9-4	
2.	6-4-3-9		7-2-8-6	

3.	4-2-7-3-1		7-5-8-3-6	
4.	6-1-9-4-7-3		3-9-2-4-8-7	
5.	5-9-1-7-4-2-8		4-1-7-9-3-8-6	
6.	5-8-1-9-2-6-4-7		3-8-2-9-5-1-7-4	
7.	2-7-5-8-6-2-5-8-4		7-1-3-9-4-2-5-6-8	

“Now you should reverse it. For example when I say 7-1-9, you say ...9-1-7” ... If the subject couldn’t complete the example, correct him/her and give another example (3-4-8). Then start with the first trial of the first task.

task no.	1. trial	Correct?	2. trial	Correct?
1.	2-4		5-8	
2.	6-2-9		4-1-5	
3.	3-2-7-9		4-9-6-8	
4.	1-5-2-8-6		6-1-8-4-3	
5.	5-3-9-4-1-8		7-2-4-8-5-6	
6.	8-1-2-9-3-6-5		4-7-3-9-1-2-8	
7.	9-4-3-7-6-2-5-8		7-2-8-1-9-6-5-3	

General Self-Efficacy Scale (GSE)

With the following questionnaire we want to get to know a little bit about you and the way you carry out life activities. Please answer all questions. Read them carefully and tick the answer that best applies to you. If you do not understand a question, please ask the researcher.

Items	1	2	3	4
	Not at all true	Hardly true	Moderately true	Exactly true
e. I can always manage to solve difficult problems if I try hard enough				
f. If someone opposes me, I can find the means and ways to get what I want				
g. It is easy for me to stick to my aims and accomplish my goals				
h. I am confident that I could deal efficiently with unexpected events.				
i. Thanks to my resourcefulness, I know how to handle unforeseen situations.				
j. I can solve most problems if I invest the necessary effort.				
k. I can remain calm when facing difficulties because I can rely on my coping abilities.				
l. When I am confronted with a problem, I can usually find several solutions.				
m. If I am in trouble, I can usually think of a solution				
n. I can usually handle whatever comes my way.				

Individual Entrepreneurial Orientation (IEO) Learning-T1

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
2. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B
3. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Individual Entrepreneurial Orientation Behavior (IEO)-T1

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Risk Taking					
RT1	I like to take bold action by venturing into the unknown					
RT2	I am willing to invest a lot of time and/or money on something that might yield a high Return					
RT3	I tend to act “boldly” in situations where risk is involved					
2	Innovation Orientation					
IO1.	I often like to try new and unusual activities that are not typical but not necessarily risky					
IO2	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before					
IO3	I prefer to try my own unique way when learning new things rather than doing it like everyone else does					
IO4	I favor experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems					
3	Proactivity					
P1	I usually act in anticipation of future problems, needs or changes					
P2	I tend to plan ahead on projects					
P3	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it					

Entrepreneurial Intention (EI)-T1

Sr. No.	Items	1	2	3	4	5
		Would prefer to be employed by someone (Very Unlikely to be Entrepreneur)	(Somewhat Unlikely to be Entrepreneur)	Undecided	(Somewhat likely to be Entrepreneur)	Would prefer to be self-employed (Very Likely to be Entrepreneur)
1	If you were to choose between running your own business and being employed by someone, what would you prefer?					
		1	2	3	4	5
		Very Unlikely	Somewhat unlikely	Undecided	Somewhat Likely	Very Likely
2	How likely is it that you will pursue a career as self-employed?					

3	How likely is it that you will pursue a career as employed in an organization? (R)					

Now please return back the questionnaire!

Thank you very much for your participation!

Study 4 (T2/CG)

Demographic profile

Kindly mark the most appropriate option:

Name:		Semester:	Roll No:
Email ID:		Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years		University ☐ Public ☐ Private Gender: ☐ Male ☐ Female	

Individual Entrepreneurial Orientation (IEO) Learning-T2

After the training, what do you know about Individual Entrepreneurial Orientation (IEO)?

Please answer every question.

IEO facets	Goal Setting	Information Seeking	Planning	Monitoring and Feedback
1. Mr. A is more innovation oriented. He will...	a. Set routine business goals b. Develop goals that are aimed at new ideas c. Develop goals that imitate other business practices	a. Actively scan information about new innovations b. Seek information about copying existing practices c. Seek information about routine business activities	a. Make plans that involve new products and services b. Plan by copying ideas of others c. Plan for routine business operations	a. Self-reflect on innovative ideas implementation b. Don't seek feedback on implementation of innovative ideas c. No concern for customer feedback on test launch of innovative products
2. Mr. A is risk taker. He will...	a. Develop goals that involve drastic risks b. Develop goals avoiding risks c. Develop goals with calculated risks	a. No concern about information related to risk analysis b. Seek information about minimum risk options c. Seek information to analyze and evaluate calculated risks	a. No risk planning b. Developing risk averse plan c. Develop risk identification, assessment and mitigation plan	a. Actively monitor risk b. Evaluate the implementation of risk plan c. Both A & B

3. Mr. A is more proactive. He will...	a. Develop goals for short term b. Develop self-starting goals to capture future opportunities c. Develop reactive goals	a. Do not scan for the potential opportunities and threats b. Actively seek information to capture market opportunities and avoiding threats c. Reactive in seeking information about opportunities and threats	a. Plan taking into account the opportunities and threats b. Fail to incorporate personal initiative in planning c. No contingency plan	a. Initiate customer feedback in case of failure b. Be self-starting in implement changes as suggested by consumer feedback c. Both A & B

Now please return back the questionnaire!

Thank you for your valuable time and response!

Study 4 (T3/CG)

Demographic profile

Kindly mark the most appropriate option:

Name:	Semester:	Roll No:
Email ID:	Contact No:	
Age: ☐ Below 20 years ☐ 20-22 years ☐ 23- 25 years ☐ Above 25 years	University ☐ Public ☐ Private Gender: ☐ Male ☐ Female	

Individual Entrepreneurial Orientation Behavior (IEO)-T3

Sr. No.	Items	1	2	3	4	5
		Never	Seldom	Sometimes	Often	Always
1	Risk Taking					
RT1	I like to take bold action by venturing into the unknown					
RT2	I am willing to invest a lot of time and/or money on something that might yield a high return					
RT3	I tend to act “boldly” in situations where risk is involved					
2	Innovation Orientation					
IO1.	I often like to try new and unusual activities that are not typical but not necessarily risky					
IO2	In general, I prefer a strong emphasis in projects on unique, one-of-a-kind approaches rather than revisiting tried and true approaches used before					
IO3	I prefer to try my own unique way when learning new things rather than doing it like everyone else does					
IO4	I favour experimentation and original approaches to problem solving rather than using methods others generally use for solving their problems					
3	Proactivity					
P1	I usually act in anticipation of future problems, needs or changes					
P2	I tend to plan ahead on projects					
P3	I prefer to “step-up” and get things going on projects rather than sit and wait for someone else to do it					

Thank you for your valuable time and response!

Entrepreneurial Intention (EI)-T3

Sr. No.	Items	1	2	3	4	5
		Would prefer to be employed by someone (Very Unlikely to be Entrepreneur)	(Somewhat Unlikely to be Entrepreneur)	Undecided	(Somewhat likely to be Entrepreneur)	Would prefer to be self-employed (Very Likely to be Entrepreneur)
1	If you were to choose between running your own business and being employed by someone, what would you prefer?					
		1	2	3	4	5
		Very Unlikely	Somewhat unlikely	Undecided	Somewhat Likely	Very Likely
2	How likely is it that you will pursue a career as self-employed?					
3	How likely is it that you will pursue a career as employed in an organization? (R)					

Now please return back the questionnaire!

Thank you very much for your participation!

Appendix II

(Urdu Interview protocol for SME Owners)

انٹرویو سوالنامہ برائے چھوٹے اور درمیانے درجے کے کاروباری مالکان

۱. کیا تربیتی پروگرام سے متعلق آپ کی توقعات پوری ہوئیں اور آپ کو یہ لگتا ہے کہ آپ اپنے وقت کے قابل ہوں گے؟

(اشارہ: مواد اور افادیت)*

۲۔ آپ کا مستقبل میں اس تعلیم کو استعمال کرنے کا کیا ارادہ ہے اور اس نے آپ کے طرز عمل کو کس طرح متاثر کیا؟

۳. کیا تربیت کا انداز آپ کے سیکھنے کے انداز سے مماثلت رکھتا ہے اور آپ کو پروگرام میں مشغولیت محسوس ہوتی ہے؟*

۴. تربیتی پروگرام میں سیکھنے کے سب سے اہم نکات کیا تھے؟

۵. کیا آپ خطرات مول لینے والے ہیں؟ تفصیل سے بیان کریں۔

۶. آپ کاروباری سرگرمیوں میں اپنے ذاتی اقدام کے روپے کو کس طرح بیان کریں گے؟

۷. آپ اپنے کاروبار میں جدت کو کس طرح شامل کرتے ہیں؟

۸. آپ اپنی ماضی کی غلطیوں سے کتنا سیکھتے ہیں اور مستقبل میں ان سے بچنے کی کوشش کرتے ہیں؟ کیا آپ کاروباری بہتری کے لیے فعال طور پر معلومات حاصل کرتے ہیں؟

۹. آپ اپنے کاروبار میں کس طرح کامیابی کا لگن شامل کرتے ہیں (اشارہ: چیلنج کرنے والے اہداف کا تعین کرتے ہیں اور ان کو حاصل کرنے کے لئے پوری کوشش کرتے ہیں)

۱۰۔ آپ اپنے کاروباری معاملات میں کتنا خود مختار اندر رو یہ اختیار کرتے ہیں؟ (اشارہ: خود ہی فیصلہ لیتے ہیں، اپنی کاروباری سرگرمیوں میں فعال طور پر حصہ لیتے ہیں، وژن کی تکمیل کے لیے اقدامات کرتے ہیں)

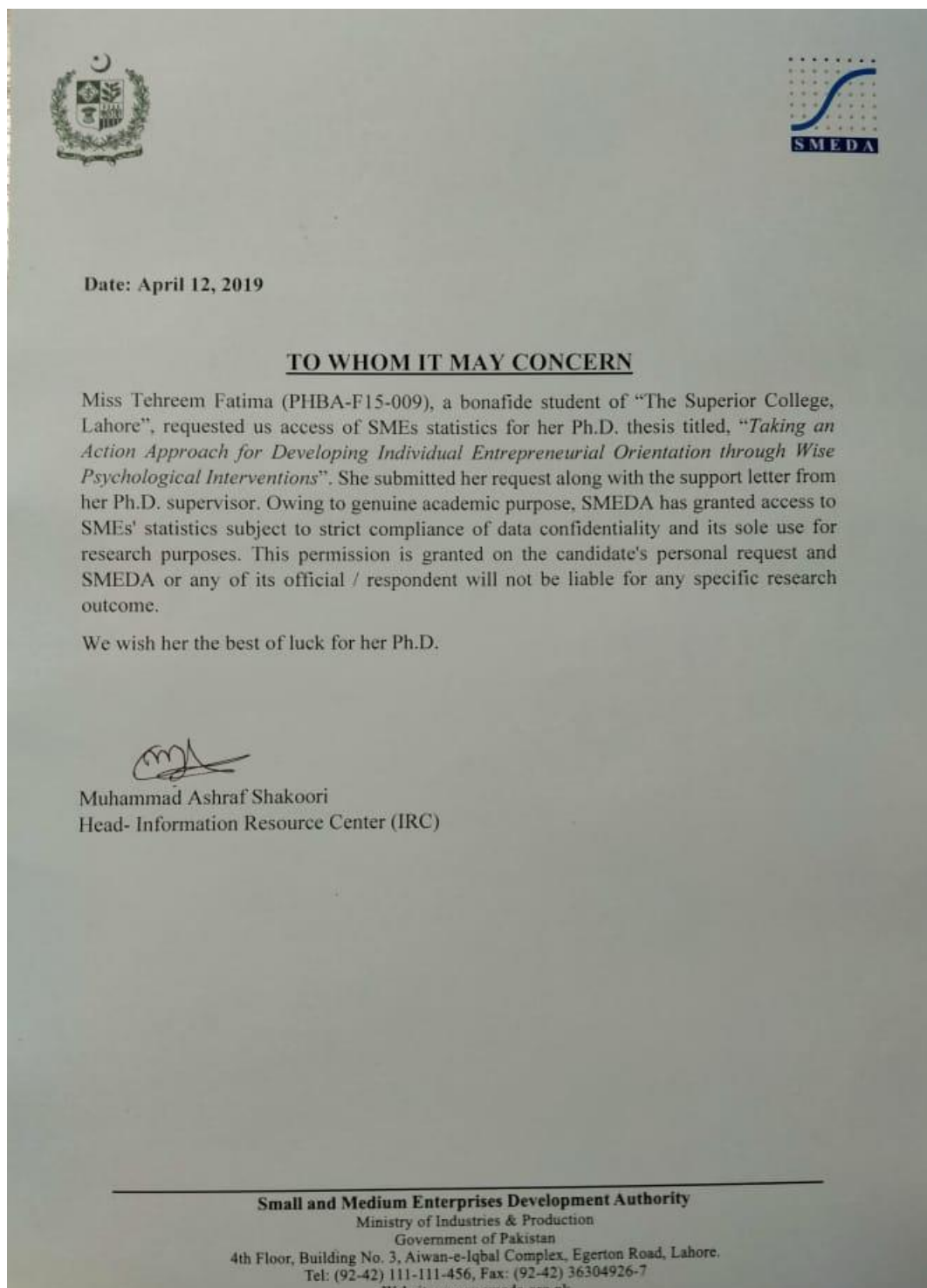
۱۱. اپنے مسابقتی طرز عمل کی وضاحت کریں؟

۱۲. کیا آپ اپنی کاروباری کامیابی سے مطمئن ہیں؟ (اشارہ: منافع، مارکیٹ شیئر، صارفین، ملازمین، مصنوعات، خدمات)

Appendix III

Permission Letters

Letter from SMEDA for statistical data provision



Letter from SMEDA for data collection and training administration



To Whom It May Concern:

Ms Tehreem Fatima (PHBA-F15-009), a bonafide student of "The Superior College", Lahore, approached us for facilitation in data collection for her Ph.D. thesis titled, "Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions".

She submitted her request along with the support letter from her Ph.D. supervisor. Owing to genuine academic purpose, NBDP SMEDA has facilitated her in data collection phases as well as in conducting training intervention for developing individual entrepreneurial orientation for small and medium scale business owners in May 2019.

This facilitation was given after assurance of strict compliance of data confidentiality, the anonymity of participants, and its sole use for research purposes. This permission is granted on the candidate's personal request and NBDP SMEDA or any of its official / respondent will not be liable for any specific research outcome.

We wish Tehreem Fatima the best of luck for her PhD.

Fahd Ghaffar
Manager (PMU)
NBDP SMEDA

National Business Development Program for SMEs (NBDP)

3rd Floor, Building No.3, Aiwan-e-Iqbal Complex
Egerton Road, Lahore 54000 Pakistan.
Ph: +92-42-111-111-456, Fax: +92-42-36304926-7

Letter form Institute of Business and Management (UET) for undergraduate business training intervention



University of Engineering & Technology Lahore
Institute of Business & Management



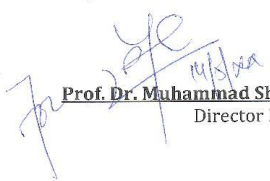
Dated: May 14, 2020

Ref: UNI/IB&M/DIR/2020/108

TO WHOM IT MAY CONCERN

Miss Tehreem Fatima (PHBA-F15-009); a student of "The Superior College", Lahore, approached us for data collection for her Ph.D. thesis titled, "Taking an Action Approach for Developing Individual Entrepreneurial Orientation through Wise Psychological Interventions". She submitted her request along with support letter from her PhD supervisor. Owing to genuine academic purpose, faculty management has allowed her to collect data from students subject to strict compliance of data confidentiality, anonymity, and its use for research purposes only. Institute of Business and Management (IB&M) facilitated her to conduct the intervention for developing individual entrepreneurial orientation in undergraduate business students. This permission was granted on the candidate's personal request and IB&M or any of its official/respondents will not be liable for any specific research outcome.

We wish her good luck with her Ph.D. and future endeavors.


Prof. Dr. Muhammad Shoaib
Director IB&M

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