A MEDIATING FRAMEWORK TO ASSESS TRAINING EFFECTIVENESS IN PUBLIC SECTOR OF PAKISTAN

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By

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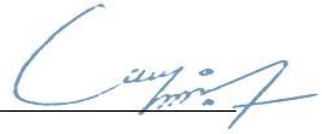
Signature: 

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Dedication

I dedicate this thesis to my loving parents by virtue of their primary input, I got light of knowledge kindled in my inner self (May Allah rest their souls in peace Ameen!). I owe greater tributes to late spiritual mentor Mr. Samin Shah Sb who professed me to become PhD. My special regards and appreciation to my loving wife and three sons those supported me through thick and thin of life. Their incessant encouragement enabled me to accomplish this task.

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Abstract

Because of local institutional convolution and volatility, the training effectiveness has been a blur idea in Pakistan which is failed to achieve fundamental objectives of the training programs. In spite of the fact that the considerable investment of public organizations while training evaluation is seldom conducted which hampers these organizations in determining the training efficacy to achieve their objectives. Raising investment in training without measuring its effectiveness is a major gap that necessitated to conduct empirical investigation. Besides, there is not much research available showing the outcome of training program characteristics on the effectiveness of training in local context to identify the potential issues of the training. Therefore, the major thrust of the research is to generalize the research results as the previous notable models presented by Kirkpatrick, Stufflebeam (CIPP), TVS and others focus on training outcomes exclusively, suffer from an acute weakness in form of ignoring critical evaluation related factors. Moreover, these models are unmatched with our conditions on peculiar situational and contextual aspects. Furthermore, in the quest to determine training effectiveness, the previous researches could unlock little information about the transfer of the learning factor.

Ignoring these factors means leaving weakness in evaluation thereby making weak recommendations; resultantly weak application on the job. This necessitates the need to adopt certain diagnostic tools to comprehend training effectiveness. The selection of LTSI was made as a diagnostic kit to guide evaluators and HRD practitioners to assess gaps in performance of training system in public sector to offer competent recommendations for bringing improvement in training as well as learner transfer. The extant study targets to extend the earlier research on accentuating the precursors of training effectiveness.

We take the stance that training is considered effective only if it is applied at the workplace. In order to fill the existing gap, this research aimed to test Learning Transfer System Inventory (LTSI) in context of public organizations in Pakistan.

As identified by Holton's Learning Transfer System Inventory (LTSI) that is a popularly utilized instrument to measure direct transfer of learning and so knowledge to support the existing professional competency. This study is focused to evaluate and improve LTSI theory by investigating how certain variables like training program characteristics and workplace environment characteristics impact training effectiveness in public organizations along with examining the role of learner readiness, training evaluation as well as return on investment as mediators on this relationship.

Positivism epistemological position helped to unveil new facets of knowledge through taking data from large sample size. Positivism works best when generalization is required and to align the characteristics. The role of ontology accentuates single reality that exists independently whether it is effective or not. The researcher took position of realism ontological to test singular reality under true or false paradigm as our objective. Consequently, deductive research approach suits best on account of large number of sample size to test the hypothesis to contribute knowledge as positivist. Simple random sampling was finalized based on the rationale of having prior knowledge about the demographic profile of the participants. Developed hypotheses was tested through quantitative analysis run by SPSS-26 using Preacher and Hayes techniques of meditation. A sample of 450/500 employees (managers and non-managers) aging between 30 to 55 years of public organizations located at three major cities i.e. Lahore, Gujranwala, and Faisalabad of the Punjab province was selected.

The findings indicate the existence of partial mediation amid training evaluation as well as return on investment encompassing the association of training program characteristics with workplace environment characteristics and training effectiveness.

Unexpectedly, no mediation was found relating to learner readiness to which further research may look towards the philosophy of constructionism. Moreover, this study points towards trainee activation management as future direction. This research is able to unveil a new dimension of training effectiveness and adds new knowledge to contribute originality in the current literature. Furthermore, mediation analysis offers valuable input to the existing literature on training. The study was delimited to tax related public sector organizations in Pakistan. The implications of this research will enable training organizations public and private, research students, practitioners and think tanks to update development strategies, bring reforms wherever required to improve the outlook.

Keywords: Public organizations, training program characteristics, workplace environment, learner readiness, training evaluation, return on investment, training effectiveness.

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List of Acronyms

PSOs	=	Public sector organizations
PSTOs	=	Public sector training organizations
TPC	=	Training program characteristics
WPE	=	Workplace Environment
LR	=	Learner readiness
Te	=	Training evaluation
ROI	=	Return on investment
TEEF	=	Training effectiveness
STP	=	Special Training program
CTP	=	Common Training Program
TET	=	Training Engagement theory
CLT	=	Cognitive Load theory
TLT	=	Theory of Learning transfer
LTSI	=	Learning Transfer System Inventory
KSA	=	Knowledge skills and attitude
SKA	=	Skills, knowledge and attitude
KSAO	=	Knowledge, skills, ability and others
OP	=	Organization performance

Overview

Public organizations in Pakistan are struggling to compete the world by realizing the need to fill competency gaps in its workforce that has been a point of concern for these organizations and international institutions and foreign donor agencies that deal with them. It is widely acknowledged that training is a valuable field of investment and this endeavor must prove borne fruit aftermath in form of enhanced performance at individual and organizational level. But this multi-million dollar industry is now under blame in developing countries for its inability to develop skills and competencies effective enough to bring behavioral effectiveness as well as improved decision-making in volatile contemporary environment. Learners are visibly showing under-performing at workplace. This brings the training organizations under heavy criticism to justify their usefulness and relevancy as well as rate their academic outcomes (Holton EF, 2005). As organizations have come alive to the significance of training yet issues regarding learning driven by training and implementation back to the workplace environment hitherto remains unresolved. Over the years, public organizations in Pakistan could not develop a training evaluation culture which shows a great deal of weakness. The success of the training program is hard to believe without conducting a compact evaluation mechanism. Despite being acknowledged as vital, evaluation is the less adopted area as a part of the essential training cycle in majority of the public organizations. Therefore, a comprehensive approach to evaluate benefits of training is missing for which an effective creative plan needs to be developed in Pakistani cultural context for instilling a comprehensive training approach in Pakistani environment. Critical evaluation of literature review fed that the previous models presented on training evaluation could not measure low learning transfer attributed to a training system due to peculiar situational and contextual aspects.

In the quest to determine training effectiveness, the previous researches while using Kirkpatrick model could unlock little information about the transfer of the learning factor. This research tried to fill this gap by testing learning transfer theory in context of public organizations of a developing country to realign the factors for developing the existing LTSI framework towards expansion.

Despite development of a number of techniques undertake measurement of TOL, question remains unanswered whether training remained useful to the learners with regard to application in WPE (Hatcher and O'Connor, 2009). As identified by (Holton, Bates and Ruona, 2000), Holton's Learning Transfer System Inventory (LTSI) is popularly utilized instrument to measure direct transfer of learning and so knowledge to support the existing procedural knowledge. Researcher takes a good deep look to test the effectiveness of learning transfer theory after presenting a score of training evaluation frameworks and models along with famous Kirkpatrick model of training evaluation. A special emphasis was given to the philosophy and assessment methodology in local training context. Evaluation is focused on to measure the gains or change found after training and quantify the strength of change that eventually influences organizational performance (OP).

This research aimed to examine the association of training program characteristics and workplace environment with training effectiveness in public organizations. The purpose of this quantitative study is to determine the impact of training provided by public sector in terms of effectiveness and its reflection on organizational performance as perceived by public managers and non-managers and also to test a model on parameters of Learning Transfer System Inventory (LTSI) conceived by Holton, et al., (2000).

Secondly, to test the model that could explain the relationship between training program characteristics & workplace environment with training effectiveness in the public sector that has been a scanty researched area in the past. It acts to explore expectations of public employees along with their experiences during and after training conducted at the department level. The findings signal towards training evaluation along with return on investment that partially mediate the relationship of training program characteristics & workplace environment with training effectiveness. Unexpected results on learner readiness highlighted the factor of trainee inactivation found grossly among participants. Trainees' low activation therefore, emerged as a unique factor in local training environment. These distinctive results point towards Trainees activation management (TAM) as a future direction to underpin the dream of training effectiveness.

CHAPTER 1 INTRODUCTION

1.1 Background of the study

Public organizations face immense challenges owing to globalization as well as digitalization and always look for competent employees (Eun-Jee Kim, Sunyoung Park, Hye-Seung Kang, 2019) . In this contextual background, emphasis is always on employee development through training. Training has been seen as 'top spending trends' in world business during 2016-2017 but spending share in relation to size and sector or industry of the organization is difficult to ascertain (Brandon Hall study report, 2016). Organizations are therefore in a constant quest to evaluate their spending on training and justify the investment made therein.

Training & development involves a systematic process of developing job-oriented knowledge as well as expertise among people with the view to improve their performance (Swanson and Holton, 2009). Training targets to improve individual as well as organizational performance through uplifting the skill and competency levels of employees. While an organization is referred to as certain meanings carried out to attain specifically set goals related to specified time as well as place (Fernandez-Rios et al., 2004). While public sector includes all organizations belonged to public admin, social security, law & order, education, public health and social & cultural services (Van Der Torre, 2002 & Kuhry, 2003). Public institutions in Pakistan is known for their mischievous governance, poor performance for lack of accountability, incompetent management and fragmented decision-making. While efficiency of public sector grossly depends on skill development, education, and competency of its workforce (Khalid, Ashraf, Yousaf & Rehman, 2011).

Public organizations remain under constant pressure and amidst increased stakeholder expectations to ascertain their character out of flexibility as well as bureaucratic culture (Luoma, 2008). Based on Stakeholder theory, public organizations are embarked on to perform traditional bureaucratic functions such as legislation as well as authority realization side by side performing more flexible functions like researching as well as doing semi-commercial functions (pp.446-467). On the International horizon, the public sector has undergone a shift in thinking as the idea of support along with dialogue is getting hold in national administration instead of merely exercising control (Jespersen, 2004, p. 126). The idea is catching popularity due to society's lean towards "support economy" instead of services alone (Zuboff and Maxmin, 2004).

All over the world, public organizations are confronting challenges like diversification and resource constraints (Luoma, Mirja, Makikangas, 2014). Research has acknowledged the need to measure organizational success as well as efficiency rather than measuring the services of public products (Procknow, 2014; Dervitsiotis, 2003; Harisalo and Stenvall, 2003; Cinca et al., 2003). A research conducted in Finish context found that public organizations ought to acquire an impartial repute rather toiling for an exceptional repute (Luoma, 2007); this won't involve substantial resources for maintaining neutral repute, it would be better for these organizations to make sure the state of impartiality and critical distance for operation (Vilma et al., 2014). In Pakistan, high in a mill and ethical corruption, government effectiveness is showing down the hill performance (www.bloomberg.com). This makes Pakistan an ideal case to analyze and verify the role of government effectiveness in raising the performance of public organizations.

In order to raise performance and develop employees, training is one of the popular way that targets to increase employee confidence as well as creativity, which eventually contributes to augment organizational productivity as well as competitiveness (Bartel, 2000; Saedon et al., 2012). Hence, International world and institutions expect from the public organizations to adopt good governance, better efficiency, and High-Performance Management (Appelbaum et al. 2000) furthermore, it is expected to develop a work force laden with creativity, ingenuity, capacity to solve problems and familiarizing with dynamic changing conditions.

Traditionally, organizations invest through training & development to boost performance of their employees (Ameeq and Hanif, 2013). There is a worldwide trend of conducting training, however, there is less focus on evaluation of effectiveness of these programs (Dhliwayo& Nyanumba, 2014). This situation warrants the need to adopt training evaluation to assess the factor of effectiveness (Collis, 2002). Training evaluation denotes the process that aims to collect descriptive as well as subjective evidence imperative to take potential training decisions concerning training undertakings (Goldstein and Ford, 2002, p. 138). The critical role assigned to training evaluation requires to measure training outcomes is mostly ignored or marginalized sometimes (Giangreco et al., 2009). Martin (2010) opines that organizations take seldom action to assess their training needs, setting training objectives or conducting evaluation to see its impact. In spite of having a number of wishful expectations from training, it proves sour at the core. It remains untaught if flaws in training design, its delivery and final implementation are not evaluated and addressed adequately (Velada, Caetano, Michel, Lyons, & Kavanagh, 2007). To yield the required performance, it is incumbent upon organizations to plan out, design and make evaluation of training involvements (Lingham Richley and Rezania, 2006).

Barriers confronting training evaluation were recognized (Athari and Zairi, 2002; Hung, 2010; Griffin, 2010) and these challenges persistently confront training evaluation as the area was given less consideration on evaluating training outcomes and keep follow-up. Mainly this shortcoming may be attributed to lack of expertise, resources, relevant content, indifferent top management, time and cost involved, inadequate system of evaluation. Hence, it is vital to know the inhibitors and enablers of training evaluation and their comprehension may prove helpful for training effectiveness. Simmonds and Gibson (2008) established that for improved training effectiveness, proper execution of training evaluation is essential. Another research endorsed that knowing the key areas add to training effectiveness (Kennedy, P. E., Chyung, S. Y., Winiecki, D. J., & Brinkerhoff, R. O. 2014) and vital to know organizational outcomes. A number of models aiming training evaluation were developed in the yester years (Passmore and Velez, 2012). Evaluation models prove helpful in disclosing the dimensions or latent useful factors for evaluation of training effectiveness (Tzeng, Chiang, & Li, 2007). Based on their effectiveness of evaluation, these models are segregated as goal based and system based. Though a number of notable models including KP four levels evaluation model along with Kaufman five levels evaluation framework represent goal based, while CIPP model, IPO & TVS are used for system evaluation (Philips, 1991). Training literature is mostly dominated these two types of models in the past decade's years (Dahiya and Jha, 2011). Taking into consideration of certain characteristics of training program and workplace environment, this doctoral study conducted investigating the role of the factors affect learning transfer tested by the learning transfer theory presented by Holton et al. (2000) while developing the LTSI. Rationale of making choice of LTSI was due to its viable criteria to quantify the efficiency and effectiveness of training programs, to identify the weaknesses and bring improvement in prospective programs (Saks and Burke, 2012).

The previous models were criticized to provide a narrow point of view regarding training effectiveness that overgeneralizes the complexity associated with training evaluation (Bates, 2007; Guerci et al., 2010). Moreover, most of these face criticisms in failing to interpret the effect of training on the individual as well as the organization. Many could not account for the relationship of training characteristics and its effectiveness (Aluko and Shonubi, 2014; Bates, 2004; Homklin et al., 2013). Hence, there is a dire need of an empirical research which could unveil a new dimension of the impact and relationship between training characteristics and its effectiveness. Subsequently, the extant research pursues to observe mediation amid training program characteristics and their consequent influences on its effectiveness.

With the evolution of the human economic system, the public sector has emerged as a "guarantor of public economic well-being" (Subhadra, Reem, Matar, 2016). But in practical, the public sector in Pakistan has become a paragon of perks, its policies and practices are not appreciative enough to make an estimable competitive sense. Its chief assets i.e. its human resources are disgruntled and unable to reflect efficiency and effectiveness. According to one thought of wisdom, delegating time denotes "efficiency" and delegating people denotes "effectiveness" (Stephen, 2000). The knowledge and skill competency of public workforces are key to their performances. An eminent thinker and philosopher Peter Senge, (1990) lays the need to adopt a more coherent approach to manage and develop people along with delegating people to cope with the rapid changes occurring at an organizational level. This trend can be followed to resolve HRD issues in public organizations of Pakistan.

The role of management, supervisors, training management, trainer and trainees takes on greater importance in this regard and all of these actors have to understand the importance of training effectiveness as an HRD practice (Abbullah, 2000).

Training is not a solitary factor that has the capacity to underpin human development. Richard McBain, (2004) remarked about the success of training as: the most ubiquitous method intended to enhance the efficiency of persons and disseminating organizational goals towards prospective employees. Owens (2006) regarded training as a "vital function" for every type and size of the organization and found a significant connection amid training and organizational outcomes. The foregoing background entails, not training but effective training is imperative to obtain fitter performance from employees. Hence, competent employees are required to accomplish the organizational mission. The issue of providing effective and efficient training for public managers is equally critical for organizations. The development of the public employees and the training success lies with its tangible implementation. To realize this, researchers, training management, practitioners as well as trainees must exhibit a clear understanding of the phenomenon of training and its key characteristics.

1.2 Transfer of learning

Majority of the research studies are of the view that organizations face the issue of learning transfer as a major impediment. Studies indicate that knowledge and skills learnt during training undertake transmission of learning back to workplace to the extent of 10 to 40% only (e.g. Bhatti et al., 2014), while trainees are blamed for not interested to transfer learned skills as well as knowledge back to their destined work environment. Salas and Cannon-Bowers (2001) reiterated upon conduction more investigation on finding more factors that influence the learning of new knowledge as well as skills transfer to their job.

1.3 Inadequate adoption of training evaluation

Researchers are agreed that despite organizations make regular investments in training this is due to significance associated with training and development, but training evaluation is the area that is not valued as it deserves (Armstrong, 2013; Pineda-Herrero et al., 2011; Saks and Belcourt, 2006; Salas et al., 2012; Velada et al., 2007; Yadapadithaya, 2001). Conventionally, every training program outcome is evaluated using the four levels of Kirkpatrick evaluation framework and past research validates the complete use of this staple model (Alliger and Janak, 1989; Bassi et al., 1996; Bomberger, 2003; Bramley and Kitson, 1994; Plant and Ryan, 1992).

Training evaluation still rests dubious about the use of training characteristics in human resource development (HRD), either in their individual capacity or based on their mutual relationship at distinct points (Baldwin and Ford, 1988; Bates et al., 2007; Ghosh et al., 2011; Iqbal et al., 2011). Nonetheless, researching training characteristics is the least researched area to comprehend its effects on training effectiveness (Bates, 2004). Therefore, it is not feasible to measure training in isolation from the pertinent factors surrounding it (Tannenbaum et al., 1993). This background provides sufficient rationale to conduct empirical research on public organizations and their employees where training evaluation is adopted at a very minute level (Section 1.5 provides more details).

1.4 Rationale for selecting public sector in Pakistan

Public sector exists worldwide and occupies an important position. It strives to employ the best available capitals of the state and contributes to generate treasure creating proficiencies. In this scenario, governments bring a change in their character and focus to do up the capacity of its human resources (Luoma, 2000). Such renewal or modernization of the workforce requires a dynamic training system to upgrade the operational capacity.

Society cannot be strong without a robust, and productive public sector and able public servants (Noe, 2004). Public employees need to be trained and their skill development is essential. For this purpose, training gets itself integrated with HRD to reach organization financial goals. That is why it is considered as a "planned effort conducted by the organization to impart the learning (Gomez, Lorente, Cabrera, 2004) in relation to job behavior of its employees" (Pidd, 2004).

The significance of public sector for supporting country' economy is to the extent of 59.86% during the year 2019 provided ample impetus to the researcher to select public sector for investigation from the perspective of training effectiveness. The primary aim of the current research was to expand the existing understanding on training characteristics and also added workplace characteristics that impact training effectiveness directly or indirectly through the mediation of certain elements in public sector environment in Pakistan.

Pakistani organizations are different from rest of the world on the basis of their culture and unique mind set (Ahmed, Majid, Zin, Phulpoto and Umrani, 2015). Hofstede highlights the cultural impact on training and grants value at .66 on long terms basis.

This factor is scientifically valid and in line with principles of positivism that believes in objectivity and lead to unveil the reality that is measurable. While training is acknowledged as one pervasive way to address knowledge and efficiency gaps in workforce. These contextual conditions necessitate the need of training as the one solution in our country where people are not self-driven and to keep them up date, training is acknowledged as a stimulator if training and its implementation is matched. (Please see Section 2.1 for further details)

1.5 Management development Programs

Management development programs were started on the directions of Establishment Division (2002) thereby conducting compulsory training for 24 weeks for promotion to the next higher grade. 24 weeks could be either consecutive or broken depending upon the decision of training management. Minimum requirement for successful completion was proposed to be a total of 60% marks as a benchmark of expectations. Satisfactory "participation" was essential. Post-training examination is not recommended by Establishment Division. Skills development courses & concepts development courses were recommended for further development.

Different training plans were developed based on length of service of officers of different grades e.g. Grade-19 First year/ Second year/ Third year. Lectures of 2 hours each for four subjects for 3 weeks were developed. Training modules were developed, but not strictly adhered to any currently updated training need analysis (TNA) and substantial Post-training examinations.

1.5.1 Duration of Training for Civil Service Probationers

Table 1 Training Program Features

Institution	Duration (months)	Credit Hours
Civil Service Academy Walton Lahore	10	16
Directorate of Training & Research for Customs, F.E & Sales Tax & Customs	05	21
Institute of Business Administration Karachi	12	33
Total	27	70

Special Training Program (Previous Methodology) was based on

- Lectures
- Case studies
- IT hands-on training
- Simulation in examination of books of accounts
- Presentations by FBR personnel and other experts from their respective fields

STP (Current Methodology) has adopted following methods and techniques to enhance effectiveness:

- Interactive teaching
- Multi-dimensional training
- Simulation
- Case studies
- Field visits & projects

- Workshops and seminars
- Syndicates & Group Discussions on specific projects.
- Attachment with functional Units of the department.
- Distance-learning through video conferencing.

1.5.2 Current Evaluation Scheme of Special Training Programs

Table 2 STP Features

S.#	Academic Activities	%age	S.#	Other Factors	%age
1	Syndicate Participation / Assignments	10.00	1	Attendance / Discipline, Behavior and OLQ	
2	Monthly & Snap Tests	15.00		(i) Attendance	10.00
			2	(ii) Officer Like Qualities	5.00
				Evaluation by	
				(i) Director General	10.00
				(ii) Director	5.00
3	Final Examination	35.00		**(iii) Teaching Faculty**	10.00
TOTAL		60		TOTAL	40

From the above, it is clear that the process of training evaluation exists at a very unscientific level where subjective evaluation is made by the Director General, Director and teaching faculty level without objectivity on the basis of learning outcomes. Moreover, there is not a solitary level that could be held accountable about trainees' performance at workplace aftermath and credibility of training effectiveness.

Furthermore, there is a wide gap in similarity of situations between training and workplace environment that provides a great impediment in learning at training and deliver at workplace.

1.6 Problem statement

Research conducted mostly on evaluation of training hinges on KP model of evaluation to elucidate the factor of training effectiveness (Tracey et al, 2001). The KP model though the oldest model faces criticism for ignoring the impact of an individual as well as context on effectiveness of training (Aluko and Shonubi, 2014; Homklin et al., 2013). Organizations as well as individuals along with training characteristics therefore, affect training effectiveness at three stages of training before, during as well as after (Cannon-Bowers et al., 1995; Ford and Kraiger, 1995; Salas and Cannon-Bowers, 2001; Tannenbaum and Yukl, 1992).

Failure in transferring benefits of training through application at work is acknowledged as a persistent problem and recognized as the 'transfer problem' (e.g., Baldwin & Ford, 1988; Ford & Weissbein, 1997; Burke, 2001), causes growing concern for training managers, academics as well as practitioners. Moreover, an added training dilemma materializes when different training formats, method & methodology as well as instructors are employed across the board at all levels of organization without evaluating the effectiveness of training. With such abundant variations reflecting on training processes along with persistent failure in transfer rate necessitates the need to comprehend the individual and organizational factors signal to get sustainable and successful training.

1.7 The research aim, objectives and questions

The extant section elucidates the research aim, along with research objectives as well as research questions as recognized in Introduction (Section 1.1) and validates the accomplishments of these objectives in the thesis.

1.8 Objective statement

This study targets to conduct evaluation of the influence of training program characteristics and workplace environment on training effectiveness remaining inside the contextual boundary of the public organizations. Training characteristics reflect the attributes that impact training outcomes and for this study consist of: Self-efficacy, learning acquisition, skill acquisition, change in attitude tendencies, instructional style. Whilst workplace environment relies on the characteristics that include: Workplace culture scenario, perceived organizational support, innovative work behavior, and work-related attitude. Whereas training effectiveness highlights the extent of achievement of the training objectives side by side training goals (Homklin et al., 2014, p.2). The research has the aim to validate the utility of an established framework in our conditions of Pakistani public sector as well as for organizations of other sectors worldwide.

1.9 Research objectives

Objective	Description
1	To ascertain the role of training and development regarding training organizations in Pakistan.
2	To examine the impact of training program characteristics and workplace characteristics on training effectiveness.
3	To examine the mediation effects of learner readiness, training evaluation and return on investment on the relationship of training program characteristics and workplace characteristics with training effectiveness
4	To test the existence of the relationship between training program characteristics and workplace environment with training effectiveness in public organizations of Pakistan.
5	To deliver recommendations along with proposals to maximize training effectiveness in practical and make contribution to the standing literature.

1.10 Research questions

Following the research aim led to generate the following primary questions:

1- What are the effects as well as mediation role of learner readiness, training evaluation and return on investment on the relationship amid training program characteristics and workplace characteristics on training effectiveness?

2- What morale can be determined as a result of applying this approach in public sector management development training in Pakistan?

1.11 Purpose Statement

Training is a heavily invested area to capitalize on developing a competent workforce throughout the year to outperform the competitors. In this scenario, public organizations in Pakistan are under constant demand of performance in the last four decades (Khilji, 2006). The area has been of immense research where as many as theories presented a multitude of factors that worked to augment effectiveness of training. However, these theories proved ineffective on the point that their context is unmatched with the local context that creates a major hurdle to look for required results. Therefore, to advance the literature domain on training effectiveness, this study presumes that the occurrence of events in the temporal sequence at different stages of analyses may contribute to extend training effectiveness.

The purpose of this study is

To examine the mediating role in assessing training effectiveness in public organizations in Pakistan, secondly to validate a model tested by training learning transfer theory (LTT) explaining the need for training effectiveness in the public sector setting in Pakistan.

1.12 Research methodology

This study resorts to investigate the mediation effects of learner readiness, training evaluation and return on investment on the relationship between training program characteristics & workplace environment characteristics with training effectiveness. In doing so, the purpose of the extant research study was to extend earlier research on the precursors of training effectiveness through testing LTSI framework along with measuring a score of hypotheses based on former literature. Positivist epistemological and realism ontological position was adopted to test the mediating relationship (Hussey and Hussey, 1997).

Consequently, deductive research approach and quantitative research method were selected being fit to test the relation between selected variables. Following the quantitative approach (See Section 3.9.1 for further details), deductive method was followed (Saunders et al., 2016) empirically testing 14 hypotheses to ascertain their validity. This involves collection of quantitative data as well as analysis on large scale. So, the selection of questionnaire-based survey method was adopted to ascertain, recognize and evaluate the effect of training program characteristics and workplace characteristics on training effectiveness in the context of the Public sector of Pakistan. The data collection was made through a questionnaire survey that is considered a popular technique to make the survey possible.

1.13 Significance of the Study

The public sector which operates with public money is under moral and legal obligation to show justification of investment in training as a human resource development practice though there is no official data available on annual spending on training in Pakistan (Rahman,& Shiddike,2019). With low research output on training effectiveness in the public sector of Pakistan, the study is designed to test the model based on the schema of individual and category factors that may prove supportive in the public sector setting to reinforce training. It is also destined to examine the impact of antecedents of training effectiveness on organizational performance and explicate the interaction between a schema of category factors i.e. training & development, training program and workplace environment on training effectiveness with or without mediation.

1.14 Research Justification

In a dynamic and vibrant world of today, employees from any sector are in need of in-service training as they are in constant need of improving their innate knowledge, current skills as well as aptitude. The significance of training was established by Mercer, Forgnone, and Beattie (1978, p.30) that education before service has been found insufficient to maintain professional status particularly in the field of social sciences. Another rationale was presented by Egbert and Kluender (1979, p.19) that organizations operate in congruence with the socio-cultural contextual background (Thalheimer, 2011) showing increased reliance on investment in training when they feel the need to equip their employees with additional skills to endure in the volatile environment. The primary intention of training is to endow the employees with new skills and knowledge that is likely to bring improvement in their job attitudes and so performance (Siengthai, Boonkrob, and Siengthai, 2016). It is, however, to make sure that newly acquired skills are transferred back to the job adequately. A research study reported a great deal of discontentment by the respondents on the failure of training in solving performance issues and cause ineffectiveness due to weak training content (Chang, Huang, and Kuo, 2015). Training content was not included in the list of variables selected for this research study instead instructional style was adopted because the instructional technique grows from the training content. Similarly, past research has found learning principles contribute to learning that eventually supports performance in an instructional environment (Tannenbaum et al, 1993). Unlike the past, the current shift in the global economy stressed the need for employee development in both public and private sectors (Kurt, Passmore, Rebelo, and Sigmar, 2015).

Organizations, therefore, raise investment in employee training hoping that productivity will rise and that will create ripple effects on organizational performance (Kitching and Blackburn, 2002). Such initiatives certainly pay off when employees bring their learning into practice at the workplace (Hutchins et al., 2010).

1.15 Scope of the Study

The research aims to validate the factors that play a decisive role in influencing training effectiveness and eventually affect organizational efficiency and performance in the public organizations of Pakistan. Thriving on the pertinent literature which unveiled a score of factors which impact training effectiveness in the public sector of developed as well as developing countries. The use of Holton, Bates and Ruona, 2000), Holton's Learning Transfer System Inventory (LTSI) provided justification to comprehend the mediation case of training effectiveness in the Pakistani public sector. This helped to derive the methodological foundations for the current study.

1.16 Justification of selecting training effectiveness as an area of research

I selected training effectiveness as my area of research because of my 'personal and professional interest' with T&D. I have been working with a public training institution for the last 12 years where I served as a faculty member/trainer. Prior to this, I served the public sector organization at different management positions and gained a lot of experience by attending various training programs. By working on this research project, I had a great opportunity to add my professional experience and academic exposure to prospective research work.

The training was found as developing inherent KSAs of the employee required to undertake task performance adequately on the job (Korte, & Mercurio, 2017). Furthermore, training programs aiming for professional development services to enhance the job-related skills and knowledge of the employee to execute a particular job. Another study found professional development training a process to bring the desired change in the current KSA of employees while performing their respective jobs. It works to update the inherent talents by improving the existing ones (Pace, 2016). The employees require professional development based training to perform their duties efficiently (Brown, & Wassif, 2017). Public organizations need to create a progressive and sustainable learning environment at the workplace where employees are able to expand their existing knowledge base and grow their competitive skills (Procknow, 2014). On the contrary, professional training programs of the public sector get fame by highly trained public employees along with leaving an assenting impact on their return-on-investment (Watkins, 2016). Significance of training and development associated with it reiterated upon the need to conduct research on training effectiveness. Ineffectiveness of training may result in poor employee performance, under-utilization of resources, low output, and low employee efficacy.

Making selection of respondents reaches the critical point during the proceedings of questionnaire survey depending on a number of factors like nature and level of evidence required, involvement of language and use of terminologies required for the questionnaire (Saunders, Lewis, & Thornhill, 2009). Most of the information required by this study was therefore, targeted from employees of public sector working at different managerial position and those were found appropriate on having long association with the public sector to deliver required information.

Based on the above, tax offices of three cities Lahore, Gujranwala and Faisalabad were selected. It is pertinent to mention here that ab initio, the researcher had the mind to include Multan as the fourth city that is why four cities were mentioned in the research design. But this idea was dropped and three cities Lahore, Gujranwala and Faisalabad were finalized as access was an issue in Multan office, moreover when requirement became fulfilled and required data was achieved from these cities the fourth one was excluded.

As mentioned in section 2.33.3, in the past less focus was drawn on job-ready people that reflects a somber gap. Training is required to be customized with the use and style of a contemporary world that is known for technological advancement and dynamic tools. Recent years have witnessed a great deal of significance that necessitates the need for training irrespective of the causes or commitment level may be linked with the training process.

At the formulation stage of research problem around key terms, when I was building a conceptual structure of my research, my initial intentions was to follow constructionism to develop a framework. Later, the philosophical and ontological position changed. I shifted from social constructionism to positivism that lets to test hypotheses than developing a framework. Hence on the basis of realism ontological and epistemological position, the researcher tried to generalize the results rather than developing the framework.

Training and development offers processes that are equally important for every sector irrespective of public or private, profit or non-profit. The common goal borne by these sector is efficiency. In public sector, training and development is deployed to assist employees to become proficient to perform their corresponding jobs. Traditionally, training models need to solve deficiency of knowledge and skills. So training is considered best to solve performance related issues. If issues persist, there is a need to identify whether the issue is performance related or training related. Such need analysis would help to ascertain the optimum solution. In case of removing or minimizing a performance gap, training does not always offer the best. Training within organizations are organized with the view to bring change in attitudes, updating currently possessed knowledge as well as employee ability so that work performance could be got enhanced(Yousaf, 2002). Job performance itself reflects employee ability, skills, experience, job execution with the best satisfaction of their seniors reducing the job inefficiency at workplace (DuBrin, 2006). To prove training as effective, there should be visible improvement in performance along with ability of the trained people.

Moreover, systematic problems occur at workplace is due to incompetency of staff and lack of training. In Malaysia, a survey conducted by Cegos in 2015 highlighted that Malaysia was able to surpass other countries of Asia Pacific on account of corporate training provided within the organizations. Training is required to modify the employee behavior signaling to attain organizational goals and provides support to improve the gap between what is happening and what is actual required to happen to get sustainable performance from the employees (Dabale et.al 2014). From this perspective, training is considered one of the solutions.

1.17 Limitations

This study was delimited to tax related public sector organizations in Pakistan. Besides this delimitation, this research happened to face certain limitations:

1. First of all this study is limited to test the effects of training program characteristics on training effectiveness in public sector, particularly management development programs which may reduce generalizability. There is a possibility that some predictor variables may be different beyond the public sector, particular management development. Thus, the predictor variables reflected in the theoretical framework ought to be tested in other organizational settings that holds training programs in the homogeneous or heterogeneous culture which may cause misperception in these organizations. This lays the need to test the theoretical framework for its further generalizability.
2. This study recourses to limitations with the intention to raise questions that need to be investigated by future research. The initial limitation is that we could not consider many variables that could influence the relationship between our IVs (TPC & WPE) and DV (Training effectiveness). Recent literature unveils a score of contextual factors that have potential to influence people in their social attitudes. This is a matter of conformity to fit the behavior with a particular normative context and soften their personal values while it is more likely that people with lower conformity promptly follow their indigenous values and reflect these in attitudes as well as behaviors (Boer and Fischer, 2013).
3. The study had restricted sample from the public sector, so its generalization to other groups may be difficult. Future research may take sample with different characteristics and cultural background.

4. Relying on self-reports means to depend on truthfulness of participants. Self-report measures may represent another limitation.
5. Limitation was restricted to test the effects of workplace characteristics on training effectiveness. Further research may include the some other characteristics pertaining to training including training leadership, trainer selection and trainees activation management.
6. Another limitation faced by this research for not considering the effects of some other factors including individual characteristics as well as environmental factors on training effectiveness. Future research may take into account the effects of other factors on training effectiveness.

Despite these limitations, the study is able to offer some stimuli that may be utilized in training programs and could contribute to run deep analysis of TE in wake of the multi-factorial facets

1.18 Theoretical Implications

This study made the following theoretical contributions:

Theoretically, training evaluation received a lot of contribution through developing a theoretical framework examining the impact of training program characteristics and workplace environment on training effectiveness in public sector of Pakistan during the course of training. Besides, the present study has profound importance for training managers as well as trainers for developing suitable training characteristics pertinent to management development training programs for employees in the public sector of Pakistan and allied industries. The results suggested that training program characteristics as well as activities serve as the potential factors that contribute to fulfil the trainees' expectations and training performance expectations. Meanwhile, learner readiness did not support negative expectations relating to training effectiveness. In this wake, training management of public organizations should manage trainee activation for training before starting and improving their expectations regarding the training characteristics, this would create motivational learning during the course of training. Moreover, this study is able to provide practionerss with a unique set of characteristics pertaining to training thereby they willfully invest their time in training for achieving the required results. The results suggested that training environment, trainees' self-efficacy and trainer performance emerge as the potent factors that contribute to support learning. Thus, training professionals as well as organizations ought to invest more time and effort to extend training characteristics.

1.19 Definition of Main Terms used in the study

Public Sector: Public sector includes all organizations belonged to public admin, public policy, law & order, education, public health and social & cultural services (Van Der Torre, 2002 & Kuhry, 2003) It does not include private companies, voluntary organizations, and households (Britannica).

Training: Training refers to an information action to develop the current stock of employee proficiency to perform the assigned task (Laird, 1985; Nadler, 1990).

Development: It refers to growth at individual level irrespective of a particular assignment or prospective job (Laird, 1985; Nadler, 1990).

Government-sponsored training: comprising undertakings carrying peculiar learning objectives inside an organizational platform or through outsourcing. Target is to get improvement in the existing KSAs of trainees and so performance on job (Hill, 1999, Phillips, 2003; Twitchell, Holton III and, Trott., 2000).

Training evaluation: is indicative of systematic evaluation of a training program to ascertain its value and worth (Phillips, 1997).

1.20 Thesis Structure

This PhD thesis is organized on the formulation of Philips and Pugh (2010) work those lay down that the structure of the PhD must comprise of the four key points: i) background theory, ii) focal theory, iii) data theory and iv) novel contribution. The description of the chapters 1-5 is appended below:

Chapter One: Introduction

Chapter One includes the background and provides an outline of the extensive field delineated in the research study. It accentuates the key concepts relating to the research problem, the significance associated with the study, and aims as well as objectives of the study.

Chapter Two: Literature review

Chapter Two provides a critical review based on academic literature pertaining to training as well as training evaluation. It undertakes investigation of different definitions assigned to training and its evaluation and resorts to identify and examine major dimensions of training, training effectiveness and training evaluation. It throws light on different aspects relating to training & development.

Chapter Three: Research methodology

Chapter three offers the methodology embraced by this research. This chapter sets out to discuss the selection of the research paradigm followed by this study. It elucidates the methodology adopted, philosophy, approaches, and strategy with sources to gather data as well as data collection. This chapter further highlights discussion on data collection along with pertinent issues regarding sampling, the choice of sample, sample size and rationalization of groups.

Chapter Four: Analysis and Interpretation of Data

Chapter four introduces the primary data. Hallmark of this chapter is to confer a summary retrieved from the results delivered by the study along with analyses. Issues pertaining to training effectiveness in the public organizations of Pakistan along with impact of training evaluation and factors affecting training effectiveness are contemplated.

Chapter Five: Conclusion

Chapter five encompasses the research findings and discussion that pertained to evaluate the impact of training program characteristics and workplace environment on training effectiveness. This chapter includes the revised framework relating to training evaluation developed on the basis of interpreting the study findings. Contributions along with implications are made a part of this final chapter. It resorts to acknowledge the limitations, delimitations, suggesting prospective areas for research along with conclusion of the study.

Chapter 2 LITERATURE REVIEW

2.1 Public sector setting in Pakistan

Public organizations in Pakistan still live in British times. They have yet to renew their shape and structure and get rid of bureaucratic attitude, unscrupulous governance and intellectual backwardness Public training organizations do not publish the budgetary figures invested by the government as there is nothing to show as objective outcomes. A substantial content is published as information but there is nothing to show as knowledge delivered and shared. (Khalid et al, 2012). In this context, organizations of developing countries develop their peculiar 'managerial style' those affect all business activities in the organizations. Organizations under the pressure of global changes in telecommunication, technology, values and managerial orientation feel the need to perform (Gordon and Whit Church, 2007).

After observing many public policy failures like the security crisis across the country, the energy shortage, the economic meltdown and the shortcoming of the government machinery in handling these issues appropriately, it can be singled out that the public sector trainings proved ineffective and training modules of public managers have incapacitated to matchup the required service delivery (Akhtar, 2018). This has resulted in a negative vision by the people towards its civil service bureaucracies.

We also hear that employees of some organization are not trained in a process or skill. It is imperative to realize the importance of training so that the workforce can be educated (Knowles et al., 2015; Chalofsky, 2014; Rothwell, 2013). Although training and development prima facie necessitate to suggest the need for professional development, they are inherently different as per their nature and strategic purpose (Mann, et al., 2012).

Training and development are not only often used in combination but also interchangeably. However, there are certain differences between the two terms and it is vital to understand the differences so that different ways of educating the workforce can be understood (Anshan, & April 2013; Price, et al., 2004). This part of the literature emphasizes on distinguishing between both the terms.

Individuals get a formal education and join organizations. Organizations work on their development through training on the job and manage to learn for them. Selden (2009) emphasized that employers ought to value their employees as top assets as their success revolves around their performance. Hence, it is significant that employees must receive training enabling them to get success on the job and perform best for the betterment of the organization. By upgrading their knowledge through training, employees become human capital to raise their individual and overall economic value (Barcala et al., 1999, Bras and Rodrigues, 2007). But training is not the only function of human resource management that targets employee competency to uplift organization performance, career management, and performance appraisal work as major functions for organizational development (Mahapatro, 2010). Training, therefore, targets to improve the current stock of KSA of employees to execute current jobs skillfully and in the long run aims to develop employees for performing complex tasks (Kirkpatrick, 2004). As said earlier, human capital is one of the three decisive domains that mark success for organizations (Boudreau and Ramstad, 2005). To earn the competitive advantage, an organization has to create high economic value as compared to the marginal competitors those remain at breakeven (Peteraf & Barney, 2003: 314). Organizations can position themselves as they can get their resources developed and applied for the realization of organizational and employee benefits (Rumelt,1984).

Organizations can tailor their indigenous training programs to carve high value among employees and configure them with local and international labor market to make their full utilization to utilize the full breadth of individuals' idiosyncratic skills.

Governments in developing countries are stick to the "rolling" job for the enterprises. Now, these are assumed to adopt the "steering" role (Awortwi, 2003). Managing organization and providing services is much more challenging for governments than formulating policies and implementing regulations (Awortwi, 2002; Monteiro, 2003). For an organization's success, the germination of human capital is highly desirable to gain a competitive advantage (Crook et al., 2011).

An organization' employees get recognition for their employees as human capital in terms of the accumulation of their respective knowledge, abilities, and capabilities (Roslender et al., 2006). This elucidates the fact that people and organizations are vital for the growth and development of organizations and their collective attitudes affect overall productivity (Zula and Chermack, 2007). In other words, investment in human capital development leads to improve employee' productivity (Stiles and Kulvisaechana, 2003; Zula and Chermack, 2007). Human capital attributes (qualification and experience) impacted trainees' ability to learn, unlearn and relearn for training applications (Cook, Belliveau, 2004).

Human capital assumes high importance in countries where labor is abundant. The abundance of labor is attributed to high rates of birth under local atmospheric circumstances. Human resource is abundantly available as compared to the tangible capital resource. Based on effective inputs by quality education, professional experience, and strong ethical standards, human resource get transformation to Human capital.

In that case, raw resources like humans can be molded into capital. Labor intensive countries are facing the dilemma of tangible capital shortage. The formation of human capital at an enhanced rate and investment in public or private sectors need a resolve to settle this problem. As a link between tangible financial capital and national growth, human capital and human development are inter-related (Haq, Mahbub ul., 1996). UN has acknowledged the magnitude of human capital in the World economy while evaluating the development of diverse nations (UN official website). Human Development Index (HDI) offered a rate of forming human capital by offering a blend of indices on life expectancy, education and income. The context of each index was to ascertain the prevailing health standards in the country, educational standards with literacy trends and living standards maintained by the countries respectively. HDI indicator, therefore, offers a positive configuration between human capital and financial viability (Human Development Report, 2012). The report probed that the development of human capital at higher rates is linked with ascending trends of HDI that eventually affects national per capita income positively. Research has proved that to outperform the others, organizations must nurture the human capital at their disposal (Crook, Todd, Combs, Woehr, and Ketchen, 2011). Human and economic development finds support through inventing, re-inventing and reengineering human capacities to develop human talent (Mahroum, 2007).

Human Capital development is an expensive concern enriched with enormous intellectual and monitory benefits at all levels (Khan and Khan, 2010). In today's fierce and competitive business environment, the growth of intellectual capital has made a key to the success of an organization rather infrastructure (Flamholtz et al., 2003; Bullen and Eyler, 2010).

Therefore, organizations need to show commitment in managing development programs for their human capital. Such moves help to build the HR capacity and further reinforce them (Bras and Rodrigues, 2007; Zula and Chermack, 2007).

In summary, development of human capital is inevitable to change the destiny of the organization and decisions of raising investment in developing human resources take on criticality.

2.2 HRD as a field of study

The current age of globalization and digitalization necessitates the need for the human resource development (HRD) as a viable factor to leverage human resources to do more in achieving organizational goals (Bob Hamlin, Jim Stewart, 2011). HRD, therefore, emerges as an important function of human resource management by dint of which management can look for organizational stability and strive to attain stated goals of high productivity, efficiency, and profitability.

The emergence of a new leap of technology in the 60s to 90s has laid the need to evolve more understanding and application of HRD practices. The fast pace of new technology and its development required the workers to learn at a much faster rate. The decade of the 90s witnessed the growth of global business expansion and competition. With that, the need for HRD became even more apparent.

Many believed that HRD is constituted by HRM and its practices that link it with organization development and behavior (Bob Hamlin, Jim Stewart, 2011; David McGuire, Maria Cesh, 2006; Nadler, 1990; Ruona et al. 2003; McLean 2003).

Before this, Hargreaves and Jarvis (1998) identified T&D, OD, R&S, JDs, C&B after bargaining with the union as six main segments of HRD. Grieves and Redman (1999) distinguished HRD as a strategic intervention that aims to win a competitive advantage in a stiff neck business world.

In the later research, Dilworth (2003) ascertained HRD as a source of managing change, learning processes, knowledge, career development, safe and healthy workplace, leadership and socio-technical fitness. Ruona (2001) stressed the need to develop 'training within the industry' (TWI) behind the emergence of contemporary HRD as a disciplinary field. Ruona and Gibson (2003) argued that training and instructional systems design proved instrumental in promoting HRD.

In an organizational setting, human actions and intent in the particular context of work and surrounding environment are critical to getting desired outcomes (Rice et al., 1985). Employees constituting an organization from top to bottom are considered as real wealth of the organization. HRD sees the development of its human resources through systematic and needs-based training enabling them to learn a range of job and general skills relevant to perform at the workplace effectively (DTI et al., 2000). The research identified the broad canvass of HRD involving three elements such as training, short term acquisition of skills and attitudes that make people effective (Stone, 2002).

The global business competition puts HRD in the driving seat to drive organizations towards learning and development (Gilley, Quatro, & Lynham, 2003). Job performance and employee growth are two focused areas of HRD. Education, training, and development reflect as learning avenues underscored by HRD (Nadler, 1990).

HRD takes training as a vehicle to get required performance aftermaths in form of change in behavior as well as improved performance (Santos and Stuart, 2003). According to Ballot et al., (2006), T&D programs are vital for organizations and their employees a systematically developed workforce is considered as a key to winning distinct advantage amidst competition. Current research provided evidence that training programs are considered effective if these conjure positivity in trainees' behavior that eventually impacts organizational performance (Bras and Rodrigues, 2007; Mahapatro, 2010). On that ground, training is considered essential for the HR development for the organization (Bras and Rodrigues, 2007). However, to control the benefits linked with training remains a challenge for an organization (Bras and Rodrigues, 2007; Zula and Chermack, 2007).

In today's close competitive world, building a trained workforce makes the difference and becomes a source of sustenance for the majority of the organizations (Huselid & Becker, 2011). Therefore, acquiring, training and building human capital becomes a decisive key to augment organizational success. For instance, research conducted by Delaney and Huselid (1996) established that effective staffing practices adopted by the organizations are significantly related to training to get perceptions on organizational performance. Studying 1,000 companies, Huselid (1995) was able to predict sustainable employee performance as a result of applying high-performance based work practices like optimum recruitment & selection, viable compensation systems, as well as effective training. A score of studies on organizational effectiveness in the European context found a significant link between training practices with policies and established the role of training in building a competent workforce that serves to drive different metrics based on business well-being.

The research recognized training as a great medium of raising investment in developing the workforce in different operational conditions and found contributing significantly to develop the national economy (Aguinis and Kraiger, 2009).

2.3 Training and development

If an organization is looking to enhance its training and development (hereafter T&D) result by associating them with the performance management, then management must realize that training activities are distinct from that of development activities (Gold, et al., 2016; Poell, et al., 2015). The reason behind this is that the right mechanism must be chosen to address the needs of the organization (Wilson, 2012). The questions then arise that what is the distinction between training and development and whether it matters to know the difference. It does matter to know the difference so that the right activity can be identified.

2.3.1 Taxonomy of training

Training represents an organized event such as a workshop, seminar, or conference where there is a particular beginning date and an end date. It typically involves a group activity but the term training is also used to represent particular instructions given on one basis. The process of training is usually short term. It generally needs guidance sequentially for gaining a skill or predictable knowledge (Dickmann, et al., 2016). Training represents the process whereby employees are equipped in a particular organization with particular skills, knowledge, and competency so that various tasks can be handled by them. Training practices are usually awarded to new workers so that they can interact with the processes and operations of the company (Boxall, & Purcell, 2016). In other words, while training to staff during service, when a worker first comes to an organization he is confused and is not aware of the organization's culture.

From the first day, he joins the job he is given training about various activities of the job so that he can aware of himself and play his role in fulfilling the duty he assigned. The worker is given rigorous training so that he can also facilitate other workers in the execution of their duties.

The gaps are being identified by managers in the experience and knowledge of their employees when they are being hired. They can do this under testing or observation (Torrington, et al., 2017). The way an employee does her job is also helpful in identifying the gaps in her experience and knowledge. With the right training, an employee can do her job. Training on policies and procedures is imperative to integrate the new worker into the workplace (Beardwell, et al., 2017).

Training represents the process whereby an opportunity is gained by trainees for learning the skills which are vital for doing the job. Training represents learning while earning. It is helpful for workers for understanding the acute nature of the job and its various requirements (Redman, et al., 2017). These days training programs are organized by organizations particularly for new workers right after they are inducted and selected so that the new workers become aware of the policies, rules, and procedures for directing their attitude and behavior according to the needs of the organization. Training is also helpful for workers to change their conduct towards their subordinates, superior, and colleagues. It is helpful for their professional grooming (Torrington, 2014; Beardwell, & Thompson, 2014; Briscoe, et al., 2016).

2.3.2 Need for training

Chalofsky, (2014) refers training as an act to enhancing the skills and knowledge of the worker for execution a particular assignment. There are various methods of training which are employed by management. There are two categories in which such methods can be divided as illustrated in the following figure:

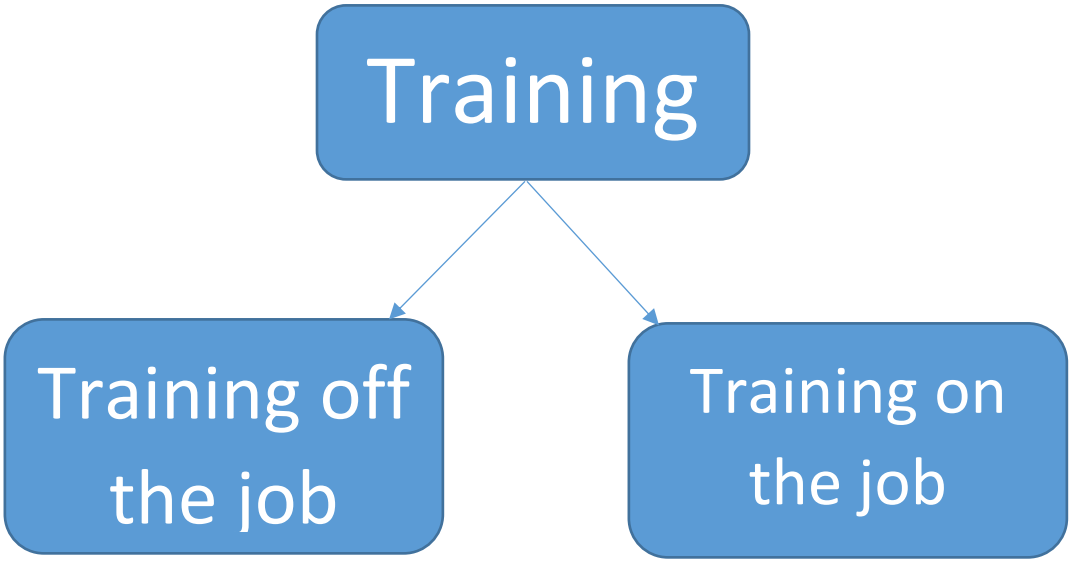


Figure 1 Types of training

An organization carries out an analysis that involves identification of training needs, requirement of knowledge as well as skills, evolving training resources, gathering training materials, directing the program with following review along with feedback as depicted through figure 2.



Figure 2 Process of training

This analysis is carried out to comprehend the organizational needs that necessitate the need for conducting training. This kind of analysis is run based on organizational goals, objectives as well as strategies. Organizational analysis enlightens one about the authority that decides about the need for training, the occurrence of problems that ignites the importance of training. Training exists in different forms incl. vestibule, induction, on-job, apprenticeship, internship training, and promotional training (Budhwar, & Mellahi, 2016).

Linked with Section 2.1, the need for training intervention varies from organization to organization in the context of change required at the operational and implementation level of individual and collective work needs (Roberts, Hulin, & Rousseau, 1978; Sundstrom, DeMeuse, & Futrell, 1990). These circumstantial factors eventually enable or disable implementing training in form of enhanced knowledge as well as skills learned. In other words, training needs support from the organizational system and its processes to make itself effective. Besides these, training content and optimal training delivery were identified as vital to align with the circumstantial factors. To ensure that training can bring the desired change, system contribution is imperative to incorporate. The organization has two direct responsibilities. Firstly, the selection of trainees can absorb knowledge and skills imparted during the training. Secondly, training implementation for which training is invested in. Compatibility of training goals and trainees' suitability are prerequisites to aspire desired results in developing countries such as Pakistan. In other words, in local conditions, a suitable attitude is a prerequisite to get improved knowledge and skills to address the attitude gap that exists in public organizations at individual and team levels. A study tested employee attitudes, performing behaviors, as well as human capital employing longitudinal design to know the role of training in improving financial outcomes alongside improvement in performance outcomes (Faems et al., 2005).

The research takes the position that to address the gaps in knowledge and skills, mediating effects associated with workforce attitudes, performing behaviors, along with human capital need to be embedded at all levels of the public organization. Public employees need encouraging support from their organization and management to learn and apply new skills at the workplace.

Training, therefore, leads to developing new themes that can serve the organizational quest for change. Dire is the need to monitor and evaluate the training activities (Khalid et al., 2012).

Pakistan needs a transparent, accountable and pre-emptive governance system following the scenario of the 18th constitutional Amendment that drove towards power devolution among the provinces. In the above context, Pakistani organizations are in quest of institutional capacity building, performance evaluation and raising their credibility as well as build trust amongst the citizens. This scenario necessitates the need for training in view of job needs and in relation to improve service delivery in an efficient manner. There remains strides for facelift and smooth operational functioning of the public sector (Ministry of Planning Development and Reforms, 2015).

The merits of training are as follows:

Table 3 Merits of training

	Merits	Author
1	It gives rise to higher qualitative and quantitative productivity	(Budhwar, & Mellahi, 2016)
2	It is helpful in developing various skills in the workforce	(Beardwell, & Thompson, 2014)
3	It increases the performance of the workforce	(Beardwell, & Thompson, 2014)
4	It gives rise to sense of cooperation and promotes team work	(Boxall, & Purcell, 2016)
5	It enhances the confidence of the workforce	(Knowles et al., 2015)
6	It reduces the turnover rate of workers	(Rothwell, 2013)

7	It reduces the chance of accident	(Chalofsky, 2014)

2.3.3 It's all about intention – not the vehicle:

Various organizations complain about employees being not trained. Previously training was meant to be given in a classroom with an instructor. It had a particular starting date and particular ending date and, in the end, everyone had the same instructions (Redman, & Wilkinson, 2013).

2.3.4 Now there is more to it:

Things have changed now. The organizations these days are becoming smaller. The workforce is also increasingly becoming more educated than previous workforces (Bondarouk, & OlivasLujan, 2014). Training can now easily be provided on the job even by a fellow worker or a team leader. Even though formal training in a classroom setting still exists but in many organizations the workers are educated on site. Classroom only provides the environment for training; it is not training in itself (Taylor, et al., 2015).

It is pertinent to point out that there are various forms of training. A classroom may be an option but as time goes on, classroom training is becoming less important. It is not the most common method of delivery (Lawler, et al., 2015). Several things need to be done to enable our workers to understand that training on the site is valid. On the job training need to be legitimized but using certification, language, and different training records. It is imperative to ensure that the trainer means "I will train you" instead of just "I will show you." (Halbesleben, et al., 2015).

2.4 Training or Learning

It is also significant to realize the distinction between training and learning even though they are linked. However, still, both have different processes involved. Training represents imparting knowledge and information through writing, speech, or other methods of demonstration in such a manner that trainee is instructed (Scholz, 2017; Buckley, et al., 2014). Learning, the other side, is a process whereby the trainee absorbs the information given to him and transforms it into his skills (Sistare, et la., 2015). Whatever be the goal, the quality of learning relies primarily on the training quality and so that the trainer's role is highly significant as it can cast a huge impact on the result of the learner (Fleetwood, & Hesketh, 2010). Recently various organizations have removed the term 'training' from their processes and introduced 'learning' instead. This is also done as per the theme and culture prevailing in the organization (Robertson, et al., 2010).

Figure 3 The purpose of training



Source: (Robertson, et al., 2010).

2.4.1 The characteristics of learning:

As indicated above that learning represents the process whereby the worker absorbs the information and retains it so that he can transform it into his competencies and capabilities (Hoque, 2013). Learning represents going through an unexpected situation by relying on the knowledge and skills one acquired during training sessions. Learning enables the worker to undergo challenging situations (Chanlat, et al., 2013. Learning represents equipping the worker with knowledge and skills to undertake complex of the tasks (Lawler, 2012; Klimoski, et al., 2014).

2.4.2 The characteristics of training:

The focus of the training is on developing new skills among the workforce which they can use in the execution of the tasks. Training represents the process that each employee undergoes when he joins the company for learning how to conduct the daily operations (Pynes, 2013). Training enables the worker to become aware of the activities, processes, and duties of his department and the tools he needs for the execution of the responsibilities (Yenming, 2012). Through training, the workers can learn how things are being carried out in the organization (Martocchio, et al., 2012). After training the workers can carry out the tasks on their own. These days organizations are also focusing on e-learning environments whereby the workers are not only given education but also training through e-platforms (Pynes, & Lombardi, 2011). They are then able to tackle present problems, enhance their problem-solving skills, and develop lifelong skills, and utilize resources for the execution of their duties (Pynes, & Lombardi, 2011). Knowes et al., (2005) claimed that training and learning are quite different but there is a need to describe the difference between teaching and training. Therefore, the following table describes

Table 4 Difference between training and teaching

Teaching	Training	Authors
Teaching provides breadth of knowledge in all spheres	Training provides depth of knowledge in a specific sphere	(Gold, et al., 2016; Poell, et al., 2015)
Teaching jack of all trades	Training makes a master of a trade	(Beardwell, et al., 2017)
Teaching is, in general, a broader area	Training is for a specific area	(Chalofsky, 2014)
Teacher provides information, knowledge, experience	Trainer facilitators learning	(Boxall, & Purcell, 2016)
Teacher usually creates the need to know, the knowledge for students	Training, the student himself approaches for the knowledge as her realise the need to know	(Redman, & Wilkinson, 2013)

Learning represents the process of absorbing the information. It is one of the strategic plans of the organization about its workforce (Knowles et al., 2005). Organizations these days must be agile to remain competitive in the business environment these days. Training typically takes place to ensure compliance (Wilson, 2012). Training is not what workers are required to undergo every day, learning can be that process (Hawkins, 2012). As Parsloe, (2017) indicates that the literature on business management is increasingly pointing out that in future training alone would not be sufficient. It is important that people learn every single day and then align their learning with their goals. Training would still be a strategy, but learning would have to be the core element (Gould, & Baldwin, 2004; Frost et al., 2013) the following table shows the major difference between training and learning.

Table 5 Difference between training and learning

	TRAINING	LEARNING
Meaning	The action of teaching a person a particular skill or type of behaviour.	The acquisition of knowledge or skills through study, experience, or being taught.
Term	Short term	Long term
Focused On	Immediate needs	Career development
Audience	The masses	The individual
Aim	Specific job or role related	Conceptual and general knowledge

Source: (Gould, & Baldwin, 2004)

2.5 Development

Training given to the top hierarchy of the workforce is regarded as development. It is also called executive development. The process is systematic and ongoing whereby managerial staff can increase their theoretical knowledge as well as conceptual knowledge. It enables the workers to bring effectiveness as well as efficiency in their performance at work (Connor, & Pokora, 2012). While, Loon, (2016) indicates that development is not limited to particular tasks but is also aimed at enhancing their attitude and personality for growth which is all-round. This will be helpful for them to face challenges in the future. It changes the workers' mindset and prepares them for competing and challenging environment (Loon, 2016).

The development of employees is quite an inclusive and bigger thing. For example, if a manager pairs a new employee with an experienced one, then the new employee will be able to learn about the job in a friendly environment (Kraiger, et al., 2015). The responsibilities of employees may also be rotated so that they continue to learn about their jobs.

This represents employee development (Nafukho, 2013). This shows that the development of employees is a broader term which also includes training.

It also involves encouraging the workforce to learn. By this means the term 'development' is an extensive one (Kraiger, et al., 2015). Development is also focused on the development of workplace relationships so that teamwork is encouraged among the workforce. Development encourages the workforce to experience steady growth so that they can handle their job (Handshaw, 2014). Furthermore, development is also conducted so that the workers develop leadership and management skills. This is why it is called Employee Development (Johns, 2012). There are various development programs employed by different organizations so that the skills of the workforce can be polished. The employee's development programs represent the programs that the management has conducted for workers who are senior managers and executives of the organization (Carpenter, & Qualls, 2015). The development represents education the focus of which is to prepare the workers for the future. The development plan of the workforce is focused on equipping workers with what they should know in the future (Hildebrand, & Judy. 2018). The focus of employee development is on preparing him to undertake challenging tasks in the future. Development is focused on the skills of the workers in their current job so that they are ready for their future roles and responsibilities (Carbonnier, et al., 2014). It may also include working with seniors to draw inspiration from them to learn from them. This prepares them for a new role and responsibility shortly (Almeida, et al., 2012). As technology updates, the manpower of the organization is also needed to be updated. Therefore, development is necessary. The development represents training the workforce for higher-level challenges. Mentoring, coaching, job rotation, counseling, and case study are some of the useful means of development (Pollock, et al., 2015).

Productive leadership and management come from the workers who have been well trained, educated and developed through employee development programs. Research shows that managers' performance can be enhanced through better knowledge, increased skills & capacity, and changing attitudes (Liang, & Chen, 2014). The idea behind development is improving the effectiveness of leadership through structured and planned learning. A planned approach for developing leaders and managers will enable the growth of the workforce. It will also be helpful to meet the future needs of an organization or business (Opperman, 2015).

2.6 Comparison of development and training

Training and development targeted to employees represent the indispensable element of human resource management and function. The aim of both activities is on enhancing the productivity and performance of workers. Training represents the program that the organization has prepared for developing the skills and knowledge in the workforce according to the needs of the job (Biech, 2012). Development, on the other hand, represents the organized activity whereby the organization's workforce grows and learns (Stewart, et al., 2014). In training sessions, the workers are equipped with technical skills as well as knowledge which is required to undertake an assigned job and emphasizes enhancing the ability of each worker (Moser, 2012). In contrast, the development represents the educational process the focus of which is on the maturity and growth of the organization's persons. The difference between training and development is highlighted in Table 0-4 below (Moser, 2012).

Table 6 Training vs Development

COMPARISON	TRAINING	DEVELOPMENT	AUTHORS
Meaning	It is the feature of teaching a person a particular behavior or skill. Training represents the learning process whereby an opportunity is gained by the employee for developing competency, skill, and knowledge according to the role of his job.	It is the provision of opportunity for individual to enhance their abilities, competency, and potential for overall growth. It is an educational mechanism whereby the overall growth of employees is targeted.	(Moser, 2012)
Term	Long Term	Short Term	(Stewart, et al., 2014)
Focus on	Immediate need	Future need	(Opperman, 2015)
Concentrated towards	Ability and Job	Career	(Liang, & Chen, 2014)
Who leads?	Line Manager	Self-led	(Almeida, et al., 2012)
Purpose	To improve the performance of the worker	To build the competencies of the worker	(Carbonnier, et al., 2014)
Number of people	One or more	Individual self	(Hildebrand, & Judy. 2018)
Aim	Job oriented	Career oriented	(Carpenter, & Qualls, 2015)

The significant point here is to consider the nature of activities that form part of training and that of development. For example, if the desired result is to equip the workforce with a better understanding of the way work is being done in a department, job rotation could be done. If the desired result is to enhance the ability of the worker to use computer software for accounting then direct training would be helpful (Carpenter, & Qualls, 2015). Every worker wants to do his job well. The job of the manager includes enabling the workers to perform well. Training and development are the key elements of building the potential and competence of the workforce (Gold, et al., 2016). When workers are ready to undertake their jobs, they can serve the customers effectively. Those employees who have not gone sufficient training, they feel lost in the execution of their duties. Which is why they lose interest in their jobs. It is because their skills have not developed to the point where they can execute the tasks properly (McCauley, et al., 2014). The traditional concept of training involved equipping the workers with a particular set of skills. This was being done so that the worker can improve his performance in the execution of his duties. The training was also given to enable the new workers to undertake their jobs (Wonnacott, et al., 2014). Development not only enhances the performance of the workforce but also brings out the maturity among workers. Development enhances the potential of the workforce and equips them to become better individuals (Silberman, et al., 2015). Additionally, the training and development can be differentiated on the base of the following characteristics

2.7 Aims and Objectives of Training and Development:

The prominent difference between training & development is the target of both. Training ensures that workers of the organization are equipped with knowledge and skills so that they can undertake particular jobs in the organization.

Training prepares the workers for the current needs (Blandford, & Knowles, 2013) while, Rowland, et al., (2017) believe that each training leads towards the development and training stepping stones of development (Salas, et al., 2012). Development is focused on professional and personal grooming of the worker so that their conceptual building is being done (Armstrong, & Landers, 2018). The focus of the training is to increase the performance of the workers whereas development is focused on preparing the workers for future challenges (Thory, 2016). The aim of the training is on delivering skills so that workers can perform effectively whereas development aims to build the competencies of the workers (Bharwani, et al., 2017). By introducing successive planning programs, management development inspires the career and personal growth of workers. It is also focused on relationship building, career development and leadership skills (Cox, et al., 2017).

2.7.1 Number of people participating in training and development:

Another major difference between training & development is the number of people participating in training & development activities. There are a large number of people involved in training programs (Afua et al., 2017). They are given training through seminars or workshops so that they can learn a particular trait which increases their performance for the role they are entrusted with (Bharwani, et al., 2017). Training is usually a group-based activity. However, development, on the other hand, does not generally involve group activity.

Instead, it is focused on the individual self. It is aimed at building the competence, general knowledge, and skill of the worker (Afua et al., 2016).

2.7.2 Orientation in Training and Development:

Training is given to an individual so that he can perform well. New workers in the organization are subjected to training so that they are exposed to the requirements of the job and are prepared for it (Saks, et al., 2011). Development, on the other hand, is career-oriented and is focused on helping the individual to master in a particular field. For example, an individual is developed for mastering the concepts of accounting so that he can perform accounting related job at a management position (Rigby, & Ponce, 2016).

2.7.3 Focus during Training and Development:

Training is focused on enabling the individuals of the organization to perform well in the execution of their responsibilities. This means that training is focused on the present condition and situation (Saks, et al., 2011). Development, on the other hand, is focused on ensuring that people are in the position to handle future responsibilities whenever they arise (Ramirez-Anormaliza et al., 2017). This shows that training enables the person to immediately start performing once the training phase in completed whereas development enables the person to continue to grow at a professional and personal level (Procknow, 2017).

2.7.4 Duration Length in Training and Development:

The length of duration in training & development varies. Training is focused on small periods because it is focused on equipping the worker with few skills. It is focused on preparing the person for handling the particular duty. Training only lasts for a particular time, a relatively shorter period (Olson, et al., 2017). Development, on the other hand, takes place gradually.

A person who is undertaking a development program is continuously learning on improving himself and his abilities, skills, knowledge, and other traits. Development is focused on the personal and professional grooming of a worker (O'Boyle, et al., 2017).

2.7.5 Methods:

It is the trainer who conducts the training. However, a team leader, a peer, or a supervisor may also be involved in conducting the training. Training can be given in an online session or a classroom setting. It represents the combination of exercises and lectures (Chiaramonte-Cipolla, et al., 2015). Development, on the other hand, is self-directed. In self-development, the individual himself is responsible for the progress of his person being (Leeds, et al., 2018).

2.8 Role of Motivation in Training and Development:

During training, program motivation plays a pivotal role in motivating the trainee so that they can exert their efforts and ensure that knowledge and skills are acquired for executing the tasks needed (Dehghansai, et al., 2017). The development program, on the other hand, requires the individual to be self-motivated because there are no external parties involved in it to ensure that a person can become a certain person (Nolan, 2011). A person has to focus on himself all by himself. The trainer assesses the training needs of the trainee by conducting the skills-gap analysis. It is also need-based (Clarke, 2012). Development, on the other hand, takes place based on change desired by the organization among its key workers e.g. according to the vision and mission statement of the company (Procknow, 2017). Development can also be voluntary depending based on the assessment by the individual himself. Training represents imparting education about learning new skills whereas development is about perfecting skills. Therefore, a person must be motivated enough so that he is suitable for handling the management positions in the organization (Lambert, et al., 2012).

The terms training & development are employed together in the business world and are focused on enhancing the performance, knowledge, and productivity of the workers (Rigby, & Ponce Sanz, 2016). However, there is a difference between the implications of these terms and their meanings which are overlooked often by various professionals (David, et al., 2014). Organizations organize training programs for developing the skills and knowledge of the workers according to the requirements of the job (Bell, et al., 2017). Development on the other side is not related directly to the requirements of the job. Instead, it is focused on the individual's generic development for longer-term (Modise, & Mosweunyane, 2014). Training is provided so that new skills can be developed in the worker whereas the focus of development is on enhancing the skills employee already possesses (Cox, et al., 2017). Even though both terms are used interchangeably, they are different from each other. It is important to understand the particularities of each term so that strategies and priorities can be set up in the human resource department. These two concepts can be distinguished by understanding the four prime differences between them (Torraco, 2016).

2.8.1 Short term vs. Long term:

The difference between the two terms is explained in simple terms such as the training is about meeting current needs and development is about meeting future needs. Training is provided to face an immediate challenge so that knowledge and skills which are required by employees of the company can be given to them immediately (Abban, 2018). Training is about here and now. It could enhance the employees' communication skills or to introduce them to a protocol for a new program in the organization (Sabella, & Analoui, 2015). On the other hand, the focus of development is for a longer duration. A strategy is proposed by human resource managers for putting in place initiatives for over a longer time so that long term benefits can be derived.

The process is continuous whereby the individual develops himself to undertake future challenges (Sung, & Choi, 2014).

2.8.2 Job position vs. Professional career:

Training is designed according to the needs of a particular job due to its commitment and precision for short term objectives. It equips professionals with skills and tools to perform the job they are required to perform (Mikami, & Furukawa, 2018). However, the focus of development is on the person. The objective of development is on gaining the best from the professional in the company (Wingreen, & Blanton, 2018). It seeks to identify the interests of the company whereby progress can easily be made. If the focus of the training is on the position of a job, then the focus of development is on a person (Cox, 2016).

2.8.3 Specific versus open objectives:

The objectives in training are particular and defined well. It enables a person to gain a particular skill or learn about new protocols of the organization (Dejour, 2018). However, when one talks about development there are broader objectives that can cover various skills and knowledge. Development, as compared to training, is more focused on the philosophical upbringing of a person. Development enables a person to cope up with ever-changing objectives and circumstances (Abban, 2018).

2.8.4 Group vs. Individual:

Training is an initiative that a company designs and is given through a tutor or supervisor. The expenses are borne by the company and relevant courses are being designed (Mikami, & Furukawa, 2018). It is the organization that decides which type of tools need to be utilized by the workers in training activities. These initiatives can be taught in a group setting as well.

However, in an instance involving development, the focus is on the individual himself (Cox, 2016). The programs of development are personalized often and the employee himself is responsible for completing his development. In such an instance, the focus is not on a particular lesson, but it is on the upbringing of self. Development is a process which is self-learning in nature (Wingreen, & Blanton, 2018). See table 2-5 for the divergence between training & development.

Table 7 Divergence between training & development

Characteristics	Development	Training	Authors
Definition	The development programs of workers are designed mainly for executives of higher level and also for workers who possess managerial positions	The focus of training programs is on technical and non-managerial aspects of the organization to equip the workers with necessary skills required at present	(Torrington, 2014; Beardwell, & Thompson, 2014; Briscoe, et al., 2016).
Aims and objectives	Concept and general knowledge	Skills and knowledge	(Connor, & Pokora, 2012)
Motivation	Self	Trainer	(Loon, 2016)
Number of people involved	Single person	Group	(Kraiger, et al., 2015)
Term	Long term	Short term	(Nafukho, 2013)
Number of people involved	Mastering tasks	Performing tasks	(Kraiger, et al., 2015)
Focus	Development focus on person. The programs of employee development are focused on general needs	Training focus on role. The emphasis of employee training is on meeting the particular needs of the project.	(Wilson, 2012)

Requirement/objective	Development fulfil professional need	Training fulfil professional and professional learning need	(Knowles et al., 2015; Chalofsky, 2014; Rothwell, 2013)
	Development focus on career development and personal progression.	Training is leaning and gaining knowledge on specific tasks	(Mann, et al., 2012)
Nature	Employee development represents the initiative of workers for learning new things which are related to the overall job and future programs	Training represents the initiative of introducing the workers to changed regimes and protocols of the tasks	(Taylor, et al., 2015)
Considered as	Employee development is regarded as a process which is proactive in nature	Employee training is regarded as a process which is reactive in nature	(Lawler, et al., 2015)
Result of	Development represents the internal stimuli whereby the internal development of worker is focused upon	Training represents an external stimuli whereby external instructions are given	(Halbesleben, et al., 2015)
Process	Development represents a continuous process whereby the worker is upgrading the process continuously through various programs of development.	The training of a worker is a onetime process whereby the training program is given to worker to meet an immediate need of the organization with respect to a particular skill.	(Robertson, et al., 2010)

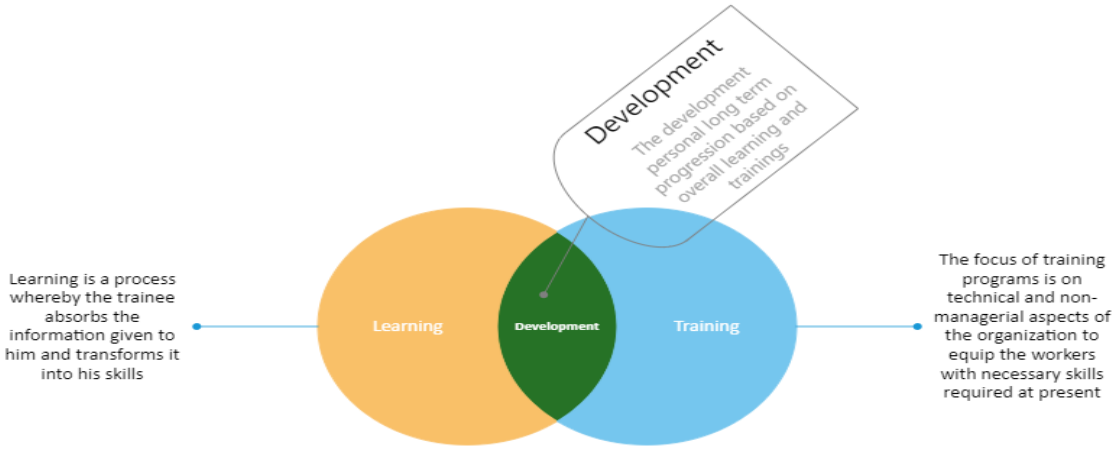
Based on	Development is based on self-assessment procedure, where individual held responsible their own to achieve their professional and personal goal through meeting their development plan.	The organization take responsibility of training	(Anshan, & April 2013; Price, et al., 2004).
Impact	Employee development represents a positive process which is advantageous for both worker and organization	If training of employee is done correctly it will be beneficial for workers as well as the employees but if the workers lose the interest in training it shows a loss for organization.	(Robertson, et al., 2010)

If the training of employees is done correctly it will be beneficial for workers as well as the employees but if the workers lose interest in training it shows a loss for the organization. (Robertson, et al., 2010)

There are many development programs which are undertaken by companies and some programs are instructions in nature, some have projects, some comprise of special courses as well as brainstorming and case studies so that the skills of the workforce can be improved, and overall development can be ensured (Anshan, & April 2013).

This also increases the workers' ability to undertake challenging tasks in the future (Torrington, et al., 2017). The following figure summarizes the above discussion:

Figure 4 Training, learning and development



Source: developed on the base of the above discussion

To summarize the above discussion on the difference of training and development it would be right to say that the recruitment of new employees is done to benefit the organization with fresh human resources (Loon, 2016). However, upon recruitment, employees must be given the knowledge and skills to perform their duties in the organization. This equips them with the job requirements. Based on training the workers can perform their jobs according to the organization's protocol (Kraiger, et al., 2015). A follow-up program is also established to oversee the performance of the workers following the training given to them. Many opportunities are available to workers when they join the organization (Handshaw, 2014). These opportunities can be of ascending the ladder within the organization. In this regard, they need skills and knowledge upgrading from time to time so that they can keep up with the changing needs of the organization. Training enables the worker to equip himself with the latest protocols to execute his duties (Johns, 2012). Development, on the other hand, is about capacity and potential building (Carbonnier, et al., 2014).

It is focused on building self from within. It enables the worker to increase his potential of undertaking challenging tasks and prepare himself for future challenges. In any organization, the training and development measures are important for the overall development of the workforce (Almeida, et al., 2012).

Employee training enables the workers to understand the rules and procedures in the organization and execute the tasks accordingly. It increases the productivity of the organization (Pollock, et al., 2015). Development, on the other hand, is career-focused. It is focused on the overall grooming of the employee from the personal and professional skills aspect (Opperman, 2015). It also increases the morale of the workforce. Training and development represent two different programs. Both programs are vital for increasing the capacity of the workforce (Stewart, et al., 2014). The difference between the two is from the aspect of the number of people involved, objectives, focus, orientation, motivation, and term. Training helps equip people with the skills required for executing particular tasks (Moser, 2012). Development is focused on the general grooming of the workers. Development equips the person with conceptual knowledge.

- Training represents the learning process for new workers whereby they can learn new skills that are vital for the job. Development, on the other hand, represents the process for the overall grooming of the workers (Anshan, & April 2013; Price, et al., 2004).
- The duration of the training process is short term in nature whereas that of development is long term in nature (Robertson, et al., 2010; Halbesleben, et al., 2015)

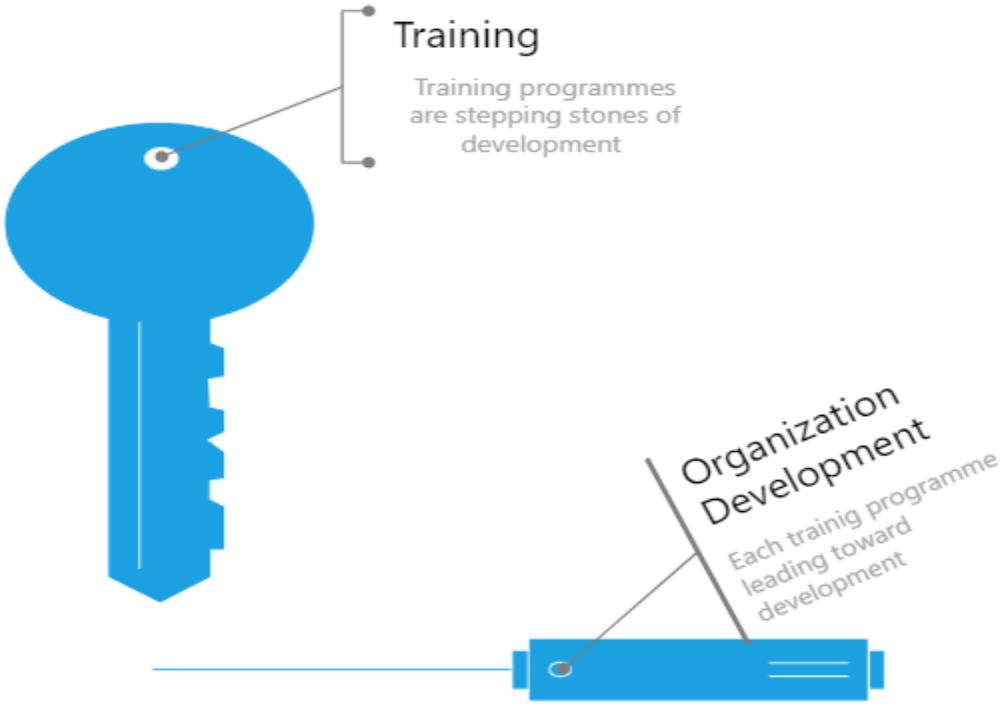
- The focus of training is on the development of knowledge and skills which are vital for the current job. The development, on the other hand, is focused on building the understanding, knowledge, and competencies for future challenges (Lawler, et al., 2015; Knowles et al., 2015; Chalofsky, 2014; Rothwell, 2013).
- The scope of training is very limited. It is very job-specific. Whereas the development is career-oriented. Therefore, its scope is wider than that of training (Wilson, 2012).
- The trainees in training get an instructor who gives them training. In development the learning process is self-directed. The employee prepares himself for the future challenges all by himself (Kraiger, et al., 2015; Torrington, 2014; Beardwell, & Thompson, 2014; Briscoe, et al., 2016).
- The training program is attended by various individuals in a group manner. Development, on the other hand, is self-directed and the individual focuses on his development all by himself (Lawler, 2012; Klimoski, et al., 2014; Martocchio, et al., 2012).

2.9 Employee training and organization development

Training and development are needed for the provision of the right knowledge and skills for bringing advantage to the employees and the organization. Training equips labor with requisite skills to perform the core functions of the organization. With the help of training programs, performance deficiency is being addressed (Martocchio, et al., 2012**)**. The stability is brought into the organization with the training program. A good training program is a worthy investment. Regular training is essential to continue to equip the workforce with tools and skills so that they can perform according to the changing demands of their roles (Pynes, & Lombardi**,** 2011**)**.

The development, on the other hand, is focused on increasing the competency of the organization. This is being done by increasing the competency of the workers (Knowles et al., 2005). Different interventions are introduced so that the competency of the workforce can be increased. A thriving organization is then developed by increasing the workers' competency (Gould, & Baldwin, 2004; Frost et al., 2013). The workers meet their objectives by increasing their competency and performing extraordinarily well. Training and development may be required simultaneously depending on the situation. Training techniques are often used in the development process as well. The end objective of both is to enhance human potential (Connor, & Pokora, 2012). Therefore, on the base of the above discussion, it would be right to say that training programs are key for organization development. The below-drawn figure entails training and organizational development scenario in an organization.

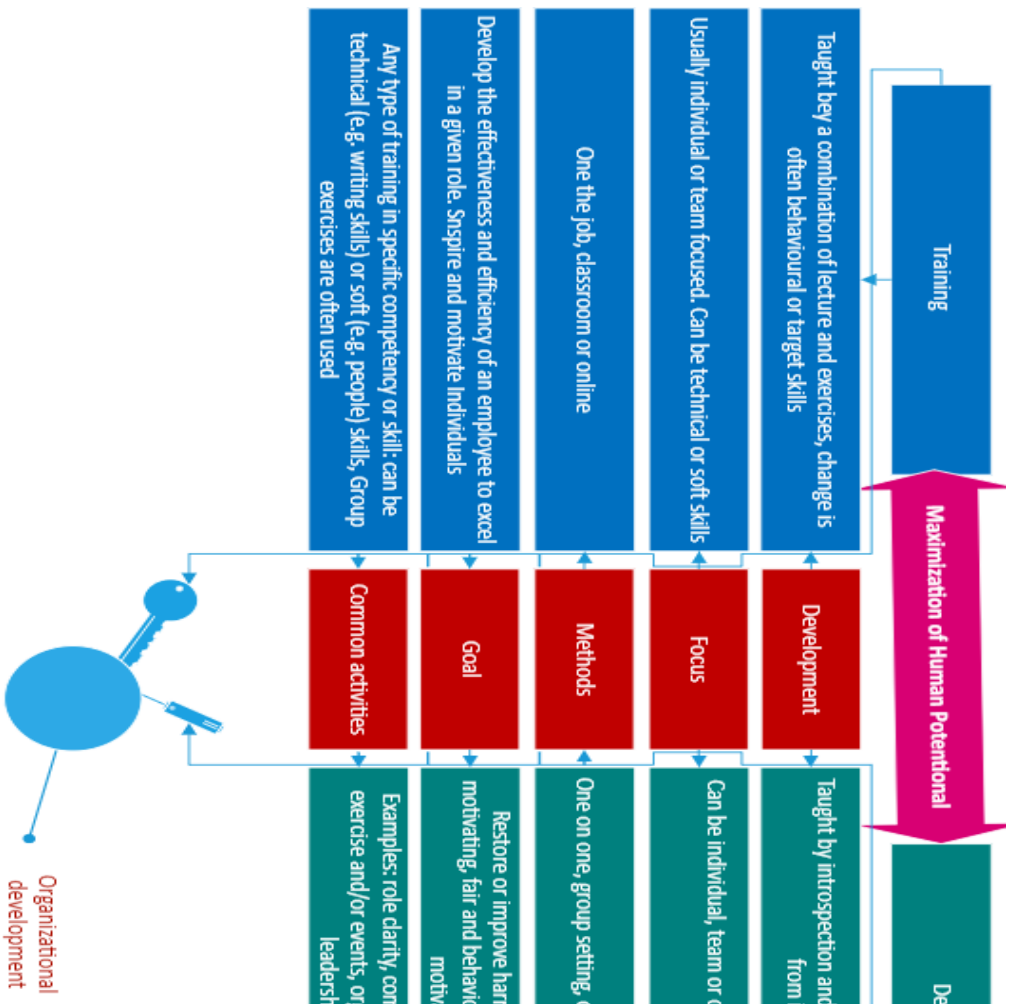
Figure 5 Training and organization development



Source: Developed on the base of the above discussion

In training, the prime opportunity is available to the organization to increase the set of skills of the workers (Moser, 2012). Development opportunities, on the other hand, are about increasing the competency. The workers who attend training sessions miss out on their work time which can cause a delay in the completion of tasks. However, even then the training is essential so that short term objectives of the organization about human resource development can be met (Moser, 2012). Training prepares the workers for tasks whereas development prepares the workers for leadership. With the help of both, the workers can meet the challenges as they arise. It is not easier to train workers as every person has his way of learning things (Stewart, et al., 2014). However, it is essential to devise training programs in such a manner that every worker gets the most out of it (Opperman, 2015). When issues, related to training and development, are not being addressed, they can affect the return on investment. However, the virtuous news is that it is not difficult to deal with such issues (Liang, & Chen, 2014) because the human resource development (HRD) need to align the training and development to maximize the human potential that would lead toward overall organization development as shown figure below:

Figure 6 Training, development and organization development



2.10 Training and Development Challenges

When it comes to training and development of the workforce it is vital that the issues are being addressed. Any organization, whether it is newly established or is long-established, cannot ignore to train its workforce (Almeida, et al., 2012). It is the training which enables the organization to grow the skills of its human resource and maintain its competitiveness in the market. However, each company has unique requirements, and there is no single universal training solution (Carbonnier, et al., 2014). The management must create the program of learning and development which addresses the challenges related to training which the organization and its workforce are facing (Hildebrand, & Judy. 2018). It is something that enables the organization to maintain its position in the market by adding to the credibility of its workforce. The question then arises that what are the key issues and challenges which the organization faces concerning training and development of its workforce (Carpenter, & Qualls, 2015).

One of the most pressing problems is that training and development is an obvious solution to competency and skills shortage. However, it is also vital to tailor the training and development program according to the needs of the organization. That is why one of the most pressing issues is to address problems like out of date courses, too big nature of the program, and repetitive in nature program (Carpenter, & Qualls, 2015). Another prominent challenge in this regard is that who would be delivering the program. Should the organization rely on internal trainers and recruiters for controlling the training and development programs or should organizations rely on external trainers and recruiters who bring skills and development from outside the organization (Gold, et al., 2016).

This consideration is vital as in such situations the organization is setting up its learning and development program from scratch and is establishing a system that is focused on training and developing the workforce for a longer period (McCauley, et al., 2014). Generally, the temptation is to develop in-house expertise in this regard. However, this may not be possible for SMEs. Therefore, in such a situation an external team may also be employed for training and development of the workforce (Wonnacott, et al., 2014). This situation prevails in public organizations of Pakistan.

Another issue related to training is that employees generally get bore of the duration of the training program if it is longer. They expect to have time for their person even during the training sessions. It is because learning something new can equally be a daunting task. In some situations, the fear may also overcome the employees that they might fail their career if they fail the training program (Silberman, et al., 2015). Generally undergoing an exam environment can be an experience full of anxiety and stress for people. The training session can give rise to such feelings altogether again (Rowland, et al., 2017). During training, the employees are also learning in a group environment thereby depending on one another. This means that issues or petty rivalries among individuals must be kept aside for meeting the needs of the team. In such a situation a self-centered view could be destructive as it can give rise to individual jealousies. Another problem is that people tend to do things according to their style (Salas, et al., 2012). Any training whereby they feel that they are trained in a manner that they do not know about their job can give rise to dissatisfaction with their job. This can also lead to the rejection of ideas by the workers because they would be dissatisfied with what they are doing (Armstrong, & Landers, 2018). Another prominent problem is the manner whereby the issue is being

handled. Workers are not interested in sitting through boring and long lectures and appear in an exam environment (Thory, 2016).

They want to be a part of an experiential environment where they experience things. Those training sessions where the environment is casual, and discussion and food are taking place alongside it are easier for workers to learn comfortably and swiftly (Bharwani, et al., 2017).

When the energy of workers is drained due to family life, working schedule and other demands of life, the risk is that they would see training as adding to their problems. Further, when the training is given during the personal time of the workers, it will only cause dissatisfaction and resistance among them. New challenges are arising due to the decentralized workforce in modern organizations (Cox, et al., 2017). The workforce in modern organizations is geographically dispersed and diverse as well. In such a situation training the workforce can be a daunting task. It may involve addressing cultural differences as well as the failure of which can cause inconsistent training (Afua et al., 2017). For example, some cultures are not comfortable with being vocal on online forums. Regardless of the number of employees being trained, their preferences must be also taken into account so that training sessions can be designed accordingly (Bharwani, et al., 2017). There are three generations involved in the current workforce as all of them have a radically different relationship when it comes to technology. So the training of the organization can be less impactful if the employee is more technologically advanced than the training they are given (Saks, et al., 2011).

Some training programs are general and are not tailored according to the personal needs of the workforce. Learners can be strained through generic training (Rigby, & Ponce, 2016). Their time and patience can get eroded if training is long, boring and only general and is given during their time. When the training budget is small the training can be steep. A strained budget can affect the overall efficiency of the training program (Saks, et al., 2011).

Another challenge faced during the training session is to keep the consistency intact and to enable the workforce to draw the same outcomes as are intended by the training programs. If the organization relies on external trainers from time to time, then ensuring consistency would be a problematic task (Ramirez-Anormaliza et al., 2017). It then becomes vital in such situations to develop an unambiguous syllabus. If a worker is working in an international corporation then he would be working alongside a diverse workforce which can be challenging in nature. In such a setting it is vital that cultural and language issues are also being addressed (Procknow, 2017). The reason behind this is that learning styles can differ from one place to another around the world. What could be a successful training program in one part of the world can be flat in another part. Therefore, training programs must be developed according to the needs of the people and generation (O'Boyle, et al., 2017).

The current generation spends more time online than in other activities. It is vital in such settings that any training program includes online sessions as well. This will attract the attention of the workers (Leeds, et al., 2018). Employees must be engaged in the learning platform which is online so that they can interact in virtual communities. Their interest in online activities will gauge their interest in attending online training sessions (Dehghansai, et al., 2017). The final of the training challenges is the exit process of course delivery. Just the way the organization faces the life cycle, the training programs also have a life cycle involved.

It is vital to ensure that the course is being completed (Clarke, 2012). Without completion, of course, it cannot be said that the training program was being completed by the workers (Procknow, 2017). Further, by giving online training the online monitoring system enables the organization to oversee the completion of the training program. It enables the organization to meet the individual needs of each worker by giving training through a dedicated online account of the worker (Lambert, et al., 2012). The online training also enables the organization to give training to more workers as the requirements which are otherwise needed in the physical environment are reduced. In this way, the trainees are kept engaged. They will feel like stakeholders in their development program (Rigby, & Ponce Sanz, 2016). The organization also gets insight into how the training session was being done and what was accomplished as a result of the e-Learning program (Modise, & Mosweunyane, 2014). Another advantage of the e-learning program is that it can easily and continuously be updated to ensure that the training content is up to date for every worker (Torraco, 2016). There are three levels whereby engagement is vital: emotional, cognitive, and behavioral. Without these three levels, the learning cannot take place. It can also give rise to a lack of commitment among the workers. Behavioral change cannot be brought about without learning engagement (Abban, 2018). When training appears to be unnecessary or irrelevant then learners will become wary of their program. It is therefore vital that the specific needs of the workers are identified which are targeted through training programs. It is also vital to enable the learners to take responsibility for their learning process. This can be done through e-learning platforms as well (Sung, & Choi, 2014).

A common assumption is shared by various organizations that if the worker is not doing anything right then it is vital to give more training to him. This makes the training an immediate go-to solution whereby the particular needs and deficiencies of the individual are not being identified; instead, he is immediately being sent to training (Mikami, & Furukawa, 2018). However, it is not a good idea to believe that training can solve behavioral or any other issues. This can cause loss of support for training program among the workforce (Wingreen, & Blanton, 2018).

Training traditionally solved a lack of skills or a lack of knowledge problems. It is easier to fix the performance issue which arises because of a lack of knowledge and lack of skills. It is vital to provide ongoing learning and effective training and support system. However, if the issue is behavioral or motivational then training would not be a helpful route for addressing the issue (Cox, 2016). If behavioral or motivational issues are intended to be addressed through training then it will cause wariness among workers concerning the training programs. It will only give rise to more motivational and performance-related issues. It is therefore vital to identify the cause of the problem. It should then be addressed accordingly. Motivational issues cannot be addressed through training (Abban, 2018).

People deal with various competing demands in a modern work environment. This can give rise to various challenges related to the performance of the workforce. It is then vital to identify the performance needs of the workforce so that the training program can be designed accordingly (Wingreen, & Blanton, 2018). The major hurdle which the learning professionals face these days is to educate the leadership about the difference in training related problems and performance-related problems. It is vital to conduct a thorough analysis in this regard.

It is also vital to conduct the performance appraisal of the workforce so that the performance-related deficiencies can be identified (Mikami, & Furukawa, 2018). Furthermore, the productivity of the workforce, the overall satisfaction of job, and overall performance at the job will drastically enhance with a single change and that matches the right solutions for the right problems (Taylor, et al., 2015). One of the biggest issues is the giving of training during a personal time of the workforce. This is a huge turn off for the workers. Instead of equipping them with knowledge and skills, it can give rise to dissatisfaction and motivation related issues (Lawler, et al., 2015).

So, if training problems of employees are unique it is vital that they are addressed during office hours and not during personal time or break time of the workforce. There are also some issues which can easily be fixed without giving of training. The training session should be a motivational session for the workforce. It should not be overly used to minimize its impact. It is important to handle unique problems uniquely without resorting to training sessions again and again (Halbesleben, et al., 2015). The discussion above highlighted the prominent challenges faced by organizations these days for the training and development of the workforce. The keys include logic, consistency, and flexibility (Mann, et al., 2012). Further, a holistic approach towards training and development is vital for including the employees of the organization in the process. Training the trainees is as much part of the challenge as devising the training program for them (Rothwell, 2013).

2.11 Taxonomy of training

Taxonomy refers to a standardized and technical implementation based on modeling methodology. Historically it is divided into three major constituents what, who and how training is formalized in form of setting training objectives, methods involved, content, mode of evaluation along with transfer (Abderrahman Hassi, Roland Foucher., 2015).

2.12 Training and productivity

Training is grossly affected by varying national circumstances, institutions and cultures and they leave their effects on organizational management. This situation is prevalent in human societies extended all over the world with minor differences (Yuxin Liu,2011; Ya-Hui Elegance Chang, Reio T., & Smith D., 2010). The performance of the organizations is revolved around the strategy adopted by the organizations (Edwinah Amah, Mildred Daminabo Wedge and Roberta Dosunmu, 2013).

This is the feature that makes an organization distinguished from the others. Allocation of public money and their way of utilization reflect their objectives and show output. The output is a rational and logical indicator of organizational performance effectiveness. This output gives the know-how of inputs and processes going on inside the organizations to create value and quality. Public organization output is judged by its stakeholders especially the society. Amma, (2006) regarded this output as ‘ productivity’ and determinant factor necessary for application and utilization of public resources for societal advancement. This does mean that the synergy of performance and economic use of public resources are prerequisites to get high productivity.

High productivity refers to the conditions in which resources are efficiently and effectively utilized in the organization with a minimum of waste. This scenario leads to create an equilibrium and a kind of balance between the utilization of socioeconomic, technical and environmental resources (Amah, 2006). Investment in business grows in this environment which ultimately promotes the development of the organizations. This situation proves the stimulus for human resource development in terms of improvement in employee skills and societal advancement (Marco Guerci, Marco Vinante, 2011).

2.13 Training characteristic and decisions will move towards public organizations

It is widely acknowledged that training is referred to as a planned phenomenon ranging from formally held classes or providing mentoring on individual basis thereby employees could be able to get their current KSA as well as behaviors refreshed for their smooth on job application (Afua Baah Bakah, M., Lewis, P., MmaB Modise, O., Tessema, M., & Joon Yoon, H. (2016). Training can prove beneficial to the organization if it advances to serve organizational needs and provides added impetus to the employees (Abban, S. 2018). Now the question arises on how an organization manages to assess its employee needs. For this purpose, probe into training methods applied with the execution of training program evaluation is made. The debate gets its logical conclusion by incorporating a special review of the workplace environment and its constituent elements.

2.14 Types and efficiency of training methods

Training involves the application of different methods that resolve to focus outcomes in terms of improvement in the quality of thinking, judgment, and decision-making (Barbara Ostrowski Martin et al, 2014).

Correct decision making finds inconclusive/supportive evidence from qualitative and quantitative data instead of anecdotes. So, a correct decision reinforces training for further inculcation. The specialty of training methods lies in motivating the training participants for learning and application of the scholarly concepts (Woods, 1995; Bates R., 2004). These represent the three most important categories: presentation, hands-on, and group building (Noe, 2005; Yang et al., 2009). In a presentation, trainees are apprised with facts, procedures, and solutions to different methods as training techniques to convey learning. Lecturing using audiovisual equipment is adopted during the presentation method. With the progression of time, the Hands-on category was introduced that included diverse training styles and techniques to impart learning. The training methods applied from time to time are OJT, apprenticeship, self-directed learning, simulations, case studies, business games, role play, and behavior modeling. Besides applying individual techniques, further methods were designed to raise the group or team building. Group-building methods included action learning, coordination learning, adventure learning, experiential learning, cross-training, team training, guidelines, and team leader training targeted group effectiveness. As a result of practice, training rose to its zenith when the diversity of training methods such as lectures, multiple experiential exercises, behavior modification techniques through audio-video films, cultural assimilators gained popularity. By this evolution, training touched cognitive and behavioral aspects of human learning-equally suitable for 'off & 'on-the-job' training. Research proved that cognitive methods were found best to develop knowledge while behavioral methods helped to develop skills (Blanchard and Thacker, 1998). Which of the training method will serve the purpose depends upon training needs, content, the context of KSA required to learn along with the capacity of the learners.

According to Polanyi, (1968), Training employs explicit transmission mode that can create desired effects that could be transmitted to others. Experience reveals that every learning skill cannot be comprehended by rules, help from the other method proves fruitful. Trainees are supposed to carry a stock of valuable hidden knowledge that is best approached through an organized training event. According to Polanyi's research findings, apprenticeship has been found extremely effective and expressive method in augmenting hidden knowledge transfer to the organization depending upon the cognition of parties involved in the game of learning. As a reference, the game of martial arts of China being a part of traditional Chinese culture offers the practical content of developing skills and culture simultaneously. Martial arts as a sport can inject its cultural spirit in traditional Chinese culture. Therefore, while teaching martial arts, multimedia is employed to create a situation enabling students to simulate instructor style and movement and get a feeling of cultural implication and charm of game learning.

Techniques of apprentice original tutorial method if applied in organizational training can ensure seamless, diversified and flexible learning. Both teachers and students share a cognition level that is conducive to learn in deeds.

The research found that single session training conducted in a real setting with hands-on practice proved as highly engaged and influenced trainees' behavior. This was found more potent as compared to low/medium engagement training served through video presentation only. However, these results cannot be generalized to larger training sessions and do not provide sufficient evidence based on which high engagement training could be recommended (Burke et.al, 2006). Every training method has its distinct advantage as well as a disadvantage that proves helpful while selecting a training method keeping because of training needs as well as objective (Saks and Haccoun,2010).

2.15 Organizational Analysis

This analysis is carried out to comprehend the organizational needs that necessitates the need of conducting training. This kind of analysis is run on the basis of organizational goals, objectives as well as strategies. Organizational analysis enlightens one about the authority that decides about the need of training, occurrence of problems that ignites the importance of training. Prior to proceed for needs assessment, organizational' strategy, capability to employ resources for deploying training and management activities, and commitment to support training is analyzed as a part of carrying out organizational analysis (Burke et.al, 2006). Organization analysis refers to an analytic process to determine training appropriateness to evaluate the organizational characteristics (Altschuld, 2003). Needs assessment helps to identify the divergence or gap found between current and desired performance level (Altschuld, 2003). Needs assessment is acknowledged as a key phase of training design to ensure effectiveness of training (Brown, 2002).

Unlike the age old techniques pertaining to training needs assessment, a cohort of analytical techniques including fish-boning, fault tree analysis, success mapping and human resource competency models in relation to training needs are applied (Gorman et al., 2003). Despite the fact that these frameworks distinctively help to diagnose the problems at core and their impact on causal relationship yet a great deal of expertise is required to apply these techniques (Witkin & Altschuld, 1995). So at planning stage, an organization is liable to ensure the availability of time, resources and expertise to manage training. For instance, PSOs if desirous to IT orientation, they need IT literate on board.

In developing countries, the training programs are facing dilemma of under-performance reflecting ineffectiveness of training programs. Why trainings lag behind and could not make their desired mark. According to Healy, (2001)' empirical findings, most of the training programs conducted in PSOs of developing countries proved ineffective for being theoretical and lacked practicality to achieve specific objectives. Employees' needs were ignored and weaknesses were not addressed. Stakeholders lacked coordination among themselves. Resultantly, precious time and investment in training is wasted and shortfall in knowledge and skills of employees could not be bridged (Healy, 2001).

2.16 Individual Analysis

After going through the organizational assessment, needs assessment encompasses to cover analysis on individual as well as task based. An individual analysis throws light on ascertaining individual needs with learner readiness to attend training. During this analysis, answers to certain questions are involved: Whether deficiencies occurring in performance are due to paucity of KSA, do they need other solutions, moreover in what areas, training is required, whether employees feel themselves ready to attend training. Based on these, managers become able to identify the anticipated needs of training.

2.16.1 Task analysis

At this stage of needs assessment, tasks are analyzed based on knowledge and skills as well as attitudes required for training to deliver. Generally, both task and person analysis are conducted simultaneously as knowledge is required in relation to tasks along with employees and workplace environment to comprehend drawbacks in performance.

2.16.2 Person analysis:

This analysis encompasses the learner instruction with instructor. Person analysis provides the reflection about the degree of knowledge possessed by the instructor. It includes as well observations, interviews, the training surveys and learner comments.

2.16.3 Work analysis:

Under this analysis, analysis of tasks is run that are required to be performed. Job analysis along with needs to perform a particular work is also a part of this analysis. It highlights the involvement of skills required with major duties assigned with employees.

2.16.4 Content analysis:

It involves analysis of documents including laws and procedures required on job. Main core of content analysis is to shed light on the information and nature of knowledge required on job and in relation to which training program is required to create. Manuals and other document serve as major source for content analysis.

2.16.5 Performance analysis:

Need of performance analysis arises when employee's performance is required to check against standards already set by the managers. In case of answer in 'No', training proves helpful to get performance improved.

2.16.6 Training sustainability analysis:

This analysis test seeks to understand as to whether training served as the best solution provider in solving the employee problems. Irrespective of the best solution provider, training is effective enough to develop employee competencies. If training does not come up to the standards, it proves the investment in training programs farce and considered wastage of money.

2.16.7 Cost-Benefit analysis:

This analysis gets the height of importance in the life of an organization. Cost-benefit analysis speaks about the return on investment. Effective training provided to the employees is likely to bring desired return for the organization and contribute to incremental increase in organizational productivity as well as development.

Here the training managers has to make a decision about adoption of a particular training methodology; such decision requires up-date information for clarity of concept. Training management has a plenty of options for choosing a specific training method for employees either delivered through classroom style, seminars, workshops, conferences, meetings and demonstrations. Worthwhile to mention here that no training method is void of drawbacks as a lot of time as well as money is involved and it may convert into a sheer drawback if it is not invested with adequate planning.

An independent, intricate and challenging training may contribute to augment employees' self-efficacy while a boring training creates no effect (Kreitner, Kinicki, Cole, Digby, & Koziol, 2010).

2.17 Conception of Public organization vs Entrepreneurial Government

In the awake of automation, global market is facing tight shelf life for skills that is causing to create wide skill gaps in the market (Linkedin learning and development report 2018). Public organizations in Pakistan are struggling to compete the world by realizing the need to fill competency gaps in its workforce that has been a point of concern for public organizations and for international institutions and foreign donor agencies (World Bank, 2012). According to UNDP report for the year (2016), five factors are responsible: an action environment (socioeconomic and political conditions that impact the organizations' performance), the public sector institutional context (refers to the institutional environment includes rules and regulations, formal and informal power relationships, GOPs, SOPs that shape organizational functioning), Network of Tasks (coordination among the organizations that impact organizational performance), organization itself (refers to organizational structures, internal processes, resource, management style and actions to achieve performance targets) and Human resources (how HR are groomed to achieve target objectives of the organizations).

PSOs in Pakistan is much deficient in these areas and has a lot to do for improvement. Current style of supervisory management in Pakistan is of bureaucratic nature which is itself an impediment in the professional and career development of employees. Organizational structure in public sector is not flexible. Decision making is centralized (Mehrunisa Ahmad Ali, 2000). Owing to centralization of powers and resources, performance is hard to achieve in this environment.

Performance from the subordinates can be achieved only when they have appropriate skills and clarity of organizational plans/objectives (Torraco, 2016). As Pakistan has a peculiar national culture (Mehrunisa Ahmad Ali, 2000), so it should strive to build its indigenous design thinking configuring its peculiar national background on the lines of China as its great neighbor.

The new century witnessed a score of reforms, digital vicissitudes and novelties in the domain of training management. Striving to resolve many problems relating to public administration, government has focused on increasing efficiency and effectiveness of training programs in the country to promote professionalism and sense of responsibility among public managers and non-managers. However, this policy is hitherto looking for impact.

From accountability point of view, there is an increasing demand among public and intelligentsia to make sure that training is effective enough to influence OP and brings back return on investment in terms of improving current performance standards and visible change in employee attitude. Moreover, it has been seen that training has not been evaluated either through a compact evaluation mechanism or with quantifiable ROI gauge. Therefore, unevaluated investment in training is like walking in a dark alley.

Unlike traditional times, current global technological environment warrants persistent learning and development from employees. Conceptually a training program offers a design of systematic procedures, techniques and activities to impart targeted information to the trainees and retrieve due performance (Barbara Ostrowski Martin, Klodiana Kolomitro; Tony C.M. Lam, 2014). Certain tools (flashcards, whiteboards, flip charts), objects or apparatuses (video, films) help to support the training objectives (Bink, Wampler, Dlubac, and Cage, 2011).

Training at one hand, accentuates to create competencies among public employees (managers and non-managers) and secondly strives to build an integrated and self-governing training system at all level of public administration. It is expected thereof, that training makes a direct contribution in developing organizational performance (Holton, 2003). Resultantly, organizations are justifiably curious to know the successful and positive return made by the training following the investment of public money (Plant and Ryan, 1992).

Working on a research premise extended over the last decade, Holton et al. (2000) pointed out the involvement of individual and secondary factors that create an enabling scenario for transfer of learning from training to the workplace environment (Baldwin and Ford,1988; Fordetal.,1998). A number of empirical research studies found that training environment, training reputation, and quality of the training material influences trainees that warrants the need to conduct training evaluation (Baldwin, Magjuka, and Loher, 1991; Hansen, 2001). Based on evaluation, such built-in characteristics play a key role in ensuring training effectiveness, it can be assumed that training evaluation should be serving as a mediating variable to ascertain the impact of certain characteristics on contributing to training effectiveness.

Later researchers found that researching receptiveness of workplace environment in acclimatizing new knowledge is still scanty (Holtonetal.,2000; Pham et al., 2012). Training literature recognizes that training contributes to OP either directly or indirectly by developing human capital and dissemination of new skills and knowledge (Van Eerde et al., 2008). The effect can be gauged through training evaluation.

The study is likely to reduce the gap currently found in research on training and look to answer the question how public organizations can get positive and sustained organization performance form their employees after experiencing training effectiveness. The evaluation approach currently in vogue at public organizations is inappropriate so reliability along with validity of the evaluation results become inconsistent. The perceptive achievements consequent of training are frequently intangible and difficult to measure. Secondly, the current evaluation process seems segmented. For example: in China, training organizations concentrate to adjust the training functions on continual basis after evaluation while in the UK, the main motive of the training institutions focus to achieve the desired learning and objectives with quality in training delivery (Xiao, 2011).

Research is therefore, needed to identify role of certain individual and category variables in making training effective with or without mediation of training evaluation and return on investment. A mediation analysis based research is need of the hour at workplace setting in the context of reported low performance and ill attitude among public employees in Pakistan. The area is of paramount research for researchers and practioners but there has been limited research on TE-OP link in Pakistani context.

With the emergence of the concept of "Entrepreneurial Government", public organization are under obligations to produce innovative acts that may nurture entrepreneurs in the prevailing environment. For thriving this level of entrepreneurship, governance provides the right key to pay way for embracing innovative models and technique to see off the challenging issue and make use of accountability to control the drawbacks of unrestrained powers (Syeda, Shabib, Sajjad, 2014).

This research targets to investigate the factors like training program characteristics, workplace environment, training evaluation and return on investment and to comprehend their mutual association in strengthening training effectiveness in Pakistani context and their eventual impact on organizational performance (OP).

2.18 Dynamics of Trainer and Training assessment

The major role assigned to a trainer is to translate the information implicit in the training manual and make it explicit for understanding of the trainees to get the required results along with facilitating the requirement of a training process, a fit training material, and a pleasant environment.

2.18.1 Training assessment

It is rarely done to keep trainees under observation, make assessment and give feedback while they are receiving education at workplace. This strategy leads to show interest in diverse methods relating to formative assessment that involves observation and provides feedback opportunity. Research found formative assessment an effective way to get change in trainees' behavior (Norcini, & Burch, 2007). Role of trainer or faculty assumes critical position in implementing the bounties of training successfully. Formative assessment provides trainees an opportunity to get feedback.

Faculty development is key to maintain quality and get effectiveness out of formative assessment. A number of assessment methods were developed with preliminary evidence on the reliability and validity of these methods identifying a score of mixed factors that support to augment the efficacy of assessment at workplace, the main out of these is feedback consistently relating to learner needs focusing on attaining the desired level of the performance.

Literature suggests a number of effective methods that influence learning. These lay the need to adopt strategies to expedite more participation in training.

2.18.2 Efficacy of Formative Assessment and learners' feedback

Intention of formative assessment is not confined to grades assignment meant for trainees on their training performance but to perform in line of the instructional process to promote learning (Shepard 2000). Visibly, feedback emerges as a vital part of formative assessment (Sadler 1989), proves key to learning at the core of training instruction (Branch & Paranjape 2002). As a matter of fact, it is therefore imperative to take into account feedback as an integral part of assessment with instruction as an integral entity (Hattie & Timperley, 2007). As per laid practice, trainee observation is given limited value and feedback is rarely sought. According to findings of a research, feedback highlights learning attained by student in three means (Gipps 1999, Shepard 2000): Trainees are informed about state of their progress thereof;

Trainee's gets advice on the basis of observed learning needs with availability of resources to expedite their learning; and it encourages trainees to engage consistently for appropriate learning. This makes it evident that formative assessment along with feedback can powerfully influence trainees' performance at workplace if observing trainee for his or her past performance, and his or her current learning achievements are diagnosed adequately as a marked gap was noticed by a research based on what ought to be done and what is the actual ground practice (Holmboe et al. 2004). Lacking diagnostic assessment and lack or inadequate feedback are found as the most significant deficiencies in current training practices (Norcini, & Burch, 2007).

A research recommended 360-degree assessment based on performance information as well as acquired feedback against each trainee, employing structured questionnaires ended with all the stakeholders. The assessments were made on directly observed behavior (Wragg et al. 2003).

The discussion leads to conceptualize feedback on the basis of information obtained from a teacher, self or peer relating to a specific performance or indulgent (Hattie & Timperley 2007). Learner can use this statistics to upload the same in memory, as knowledge-domain, meta-cognitive basis, self-beliefs or cognitive schemes as well as strategies' (Winnie & Butler 1994). Here feedback serves to narrow down the inconsistency on required practices or indulgences (Hattie & Timperley 2007).

Formative assessment-based strategies may lead to bring change if trainees are encouraged to undertake self-assessment before getting external feedback, responding the feedback adequately and to make sure that a plan is developed for action by the trainees as a part of translating feedback.

2.18.3 Assessor training

To implement a formative assessment strategy at workplace successfully, it is imperative that the faculty must implement formative assessment strategies enthusiastically, give accurate observations and what trainees receive as feedback must be effective. A research conducted in the field of medical education emphasized to raise assessors' ability to identify errors in trainees' performance using the checklists (Noel et al. 1992). Assessor' ability has emerged as a gap in organizational training that needs to speak through adopting innovative strategies.

In the workplace context of public trainees, little information is available about the application of formative assessment to guide the learning of public trainees. We further need to ascertain the impact left by feedback on learner behavior and what change occurred at the workplace in terms of performance benefits as a result adoption of effective formative assessment strategies. Literature reveals a lack of developing assessment strategies that could change scenario at the workplace. A research advocated the use of situational judgement tests (SJTs) to evaluate a job scenario based structured training method (Cox et al. 2017).

2.19 Learner readiness

Learners of today have grown up amidst experience of traditional classroom settings but having no experience to deal with digital technology-based situations (Watkins, 2003). In the awake of prevalence learning situations with regard to instructional settings, measures to ascertain learner readiness in this new environment are hardly assessed to check their intentions of learning (Watkins, & Corry, 2004). A study conducted behavioral analysis of trainees for learning inter-personal skills. Assessment of learner was made during and after training to ascertain the change in behavior (Meyer, Mabaso, Lancaster and Nenungwi, 2007:275). For example: for educational industry, cost benefit analysis is carried out and costs information leading to benefits is helpful for practitioners those are in need of knowing input costs and monetary value carried out by anticipated outcomes, cost incurred on administrative as well as personal cost, training trainers and costs incurred on training development and many others (Meyer, Mabaso, Lancaster and Nenungwi, 2007:275).

2.19.1 Selection of candidate/learners

Selecting suitable candidates for training those fulfill the laid criteria is the foremost need to lay foundation of training effectiveness. This criteria covers trainee' current health, age, satisfactory performance, experience, qualification, and meritorious achievements to build an eligibility threshold.

2.19.2 Learners audit

An audit of learning acquired by learners using different tools reveals the extent of learning. For example: buying the electronic product either you will consult either with your friend, instructional leaflet, or historic customer who had purchased this item earlier. Consulting friend will reflect group discussion, retrieving information from leaflet reflects individual learning.

Trainee audit—to conduct trainee audit, characteristics of trainer must be known. Training in specific tasks is learning depending upon nature of task and nature of trainee before developing training design.

2.19.3 Trainer selection in understanding the working practice of public organizations

It has been recognized in past decades that public organizations in Pakistan suffered from low transfer problems in organizational training while researching low learning transfer has been less or no researched area. Training transfer problem exists in organizations (Baldwin and Ford, 1988). Broad and Newstrom (1992) researched three actors and characters involved in a training phenomenon. These three were trainer, trainee, and workplace manager.

They pointed out three training time periods – before, during and after training thereby trainers/instructors reinforce training material with contextual teaching techniques and real life examples to imprint long lasting effects. This International trend can become supportive to resolve Human resource development issues in public organizations in developing countries.

Training program time, venue, relevancy, its duration can serve to expedite learning transfer phenomenon. Lack of support from management, trainees' capacity, learning conditions and organizational strategy may block transfer of learning. On the basis of these findings, they developed a 'Role and Time' Model to measure the factors those impact learning transfer process. Organizations must confirm to the occurrence of learning transfer in their respective systems and support processes those expedite learning transfer (Kozlowski and Salas, 1997). There are many issues attached with trainer, but research is focusing on learner readiness as per research limitations.

2.20 Development of an effective training program

An effective training program and its development resorts to find the answer to the question what an employee will do after accomplishing the training (Cox, Barron, Davis, De la Garza, ,2017). Based on learning by doing approach in relation to training that is widely acknowledged, a number of companies still rely on feel good type of training programs as compared to those aim to get target competencies utilizable tangibly at workplace.

For example: most of the trainings that involve acquisition of soft skills like communication, listening, leadership, teamwork, etc, generally these topics prove eye-catching but these are able to provide insufficient evidence about effective gains and actual put into practice as the utilization of information delivered in such training sessions is hard nut to crack.

Quoting another example, team training is commonly prevalent without making sure what and how of the training outcome (Javier, Víctor. Tercero-Gómez, Jose, Iris. 2014).

Team training at its core, serves to impart understanding of typical decision-making at group level centering on an imaginary situation like coping with the wilderness when lost or how to survive in a desert with nominal resources. Participants set priorities as a group and supposed to ensue collectively. The idea behind this exercise is to enable employees to compare and counter a hypothetical situation with a similar situations encountered on-the-job. But translating these training experiences into skills at workplace is thought-provoking. These training exercises may prove distracting to evade stress, but they do not aim to fill the gap of dealing with technical training that aims to enhance the how of employees range (Tony, Bonnie, Davar. 2006). It has been observed that although trainings are able to address diversity along with quality, so provide ample entertaining but rarely provide a real time applicable 'hands-on experience' that enable employees decode comprehension into action (Schraeder. 2009). Though a number of techniques are often employed i.e. games, role-playing, and simulations support ideas presentation in a more tangible manner, but they hardly ever prove impulsive to acquire useful skills. The participants remain unaware about the implementation of what is delivered in a realistic background. Such trainings more often than not proves somewhat costly and wastage of time as well as money (Pedro Soto-Acosta, Isabel Martinez-Conesa, Ricardo Colomo-Palacios. 2010). It is therefore, imperative that training ought to involve only palpable, handy skills and visible behaviors. In the awake of discussion on soft skills, training initiatives prove less effective as compared to skills-based approaches.

Multiple characteristics govern the type and depth of the training program. For instance, the training program could address a specific job or pertaining to a job it may reflect one relevant program aspect. For determining training and its nature, its type and levels required for employees has to be determined.

A research study reiterated upon the need of customizing training program in relation to its context. Training management may develop a program matching with organization needs in collaborating with training contexts and following some previous standard set by instructional programs (Bragg & Jacobs, 1993). Before this, Grubb and Stern (1989) emphasized upon inducting customized training relating to firm-specific which can better address requirements of a firm instead of a generic vocational programs (p.31), however tailored training has loose boundaries that can be tailor made. For example: in the United Kingdom, customization was adopted at different levels. One aims for general training program with customization at basic level, another type of customization was achieved at middle level whereby contents, and contexts are standardized. Another condition pertains to a tailor made training program that is structured in a unique manner for specific needs of client (Prince, 2002). The following factors constituting training program characteristics and work place environment is part of the narration of taxonomy of training.

2.20.1 Self-efficacy

By self-efficacy, organizations are able to get to the feelings of trainees that they have considerably improved their knowledge as well as skills after training indicating their learning self-efficacy (Chiaburu, and Marinova, 2005). By this measure, other employees can be shown to the trainees about their successful acquisition of knowledge as well as skills, they can also be shown the relevant data for successfully achieving the target knowledge and skills in the training context (Chiaburu, and Marinova, 2005).

Recent and past researchers are agreed that high self-efficacy seeks to create network of relationships with other variables (Saks, 2002; Chiaburu and Marinova, 2005; Kirwan and Birchall, 2006; Velada et al.,2007). These findings are in line with Bandura (1986) that identified self-efficacy as: to judge people on their capabilities and develop action plans to get required performance. According to formulation of this theory, performance does not depend on skill possessed by anybody rather it seeks basis from judgement to perform a task (p. 391).

Bandera's Social Modeling theory stated that desired behaviors can be retrieved from trainees if they are provided with desired physical and symbolic (mental) practice of exhibiting the new behaviors. Subsequent of reviewing literature of 117 studies on behavior modeling training (BMT) identified a substantial change in learning as a result of change in skills and level of knowledge acquired. Review found smaller behavioral effects with meager impact on organizational results subsequent to training. Skills and job behavior was found stable after training but knowledge decayed over time (Taylor, 2012).

(Bandura, 1995) a cognitive psychologist researched self-efficacy referring to the beliefs around individual capabilities for organizing and executing the tasks assigned for managing future (p. 2). It was further illustrated that when people have confidence in themselves they get their functioning improved. This performance modeling helps to raise self-efficacy.

Based on this research evidence, the behavior modeling was researched as a useful training method that has pertinence with self-efficacy. Variation in degree of self-efficacy causes variation in relapse process relating to cognitive behavior (Marx, 1982). Hence, employee self-efficacy can be used as a great indicator of training transfer and training effectiveness in post training scenario (Hill, Smith, and Mann, 1987; Gist, 1987; Latham, 1989; Tannenbaum & Yukl, 1992). By dint of high degree of self-efficacy, trainees can control stressful events at workplace that are helpful for maintaining their positive health behavior and emotional well-being (Taylor, 2012). Employees get their self-efficacy beliefs developed through gaining mastery experiences after undertaking tedious tasks. Humans with low self-efficacy show restraint from doing difficult tasks (Reiner & Mynhardt, 2008). Endurance to attain difficult tasks ultimately leads towards achievement. A constantly rising self-efficacy gives a roadmap of engagement (Ouweneel et al., 2013).

2.20.2 Knowledge acquisition tendency

Acquisition of knowledge reflects occurrence of a cognitive process of learning (Goldsmith, Johnson, & Acton, 1991; Kraiger, Ford, & Salas, 1993). Learning is triggered by the amount of knowledge acquired. Learning implies the capacity of a person to perform a task differently after training. Knowledge acquisition involves the acquisition of knowledge from experts from diverse fields (Wagner et al., 2003). It may be acquiring knowledge about a specific problem (Byrd, 1995).

Knowledge acquisition is still a bottleneck in training and development. In post training conditions, representation, inferences and validation of knowledge has become a serious concern in the way of training effectiveness (Harrington and Guimaraes, 2005).

Knowledge is considered represented when it is properly organized for re-use. Mapping and encoding of knowledge are integral part of Knowledge representation. When knowledge is tested for its accuracy, it is considered validated (Zahra and George, 2002). In order to implement knowledge acquired, it is imperative that organizations must hold the "absorptive capacity" to assimilate knowledge acquired from other sources such as training with other people, internal functions and system to use it for profit purpose (van den Bosch et al., 2003). "Absorptive capacity" empowers the organizations to utilize knowledge for refinement of existing products, developing new products, improve services and processes (Cepeda-Carrion et al., 2012; Newey and Zahra, 2009). As a sign, knowledge acquisition is required to be assimilated into organizational systems for transformation and commercialization of products and services (Zahra and George, 2002). Hence public organizations must feel a need to enhance their "absorptive capacity" to absorb new knowledge.

2.20.3 Skill Acquisition tendency

According to (Kaufman, 2005), acquisition refers to mastery and competency acquired at individual and small group level. Acquisition represents trainees' retention of learning after the training process (Yunchen Huang, Lesley Strawderman, Kari Babski- Reeves, Shaheen Ahmed, and ArashSalehi, 2014). In general, expansion in knowledge and skills occurs as a result of the instructional experience during training.

2.19.4 Change in attitude

Programs are designed to bring change in attitudes as well as values for sustainable development (Katherine, 2009). Attitudes must be conceived to deliver objective behavior (Crano, & Prislin, 2006).

The literature highlights the Elaboration likelihood model (ELM) that theorize change in attitude (Petty & Cacioppe, 1981) offers a framework to organize, categorize and understand the processes underlying the need to bring effectiveness in persuasive communication. This model of attitude change outlines the attitude as general evaluation made by people in regard to the other people or issues or objects. This general evaluation is reinforced by behavioral, affective along with cognitive experiences that has the capacity to influence and guide behavioral, affective along with cognitive processes (Petty & Cacioppe, 1981). Literature reveals three processes such as compliance, identification and internalization that provide basis to attitude change (Crano, & Prislin, 2006). For example, in response to a political change occurring in Pakistan recently, one gave donation to the campaign indicating behavior originated change as the theme music of change got fame commercially, and prompted a general agreeableness (affect originated change) and the person liked the candidate and his or her political position indicating cognitive initiated change.

The country that inherited resilient bureaucratic elite and feeble political base with paucity of quality as well as competent leadership (Sumrin Kalia, 2013). Public organizations in Pakistan have the traditional culture. Such a culture can only produce risk averse public managers instead of proactive and dynamic managers capable of meeting the current challenges. The situation warrants qualitative improvement in training methodology and provision of compatible work station ecology (Sumrin, 2013).

2.20.5 Use of Technology

Public sector has a spear head role as compared to the private sector mapping state activities within the boundary of country' economy. It permits comparison of performance across space and time. Over the years of evolution of human economic system, public sector has emerged as "guarantor of public economic well-being".

Revolutionary advancement in technology has brought a score of structural alterations overcoming barriers and challenges formidable once. Technology refers to application of a scientific study relating to practical matters (p.4) over the use of technology (Stolovitch & Keeps, 1992). A set of fundamental principles govern this discipline distinctly from the others guiding the practionerss to delineate the principles deeply.

2.20.6 Expectations

Learning is a preferred product of training; in case if training falls short of expectations it needs adequate alignment between training and learning (Salas, et al., 2012). Learning targets the acquirement of "new knowledge and behaviors as a result of practice, study, or experience. It involves relatively permanent changes in behavior and affect." Teaching public managers to think and take suitable decisions needs correct alignment between training objectives and learning, as an integral part of their training. The best way to enhance the impact of training is to plan it well, organize it well, facilitate it well, and follow-up well (WHO, 2010).

2.21 Workplace environment validation

The work environment refer to the conditions that surround employees while performing their tasks (Holton, Bates and Ruona, 2000, pp.333-360). The area is eye catching for investigation but least research on empirical grounds. The environment is comprised of physical infrastructure of office.

Public sector in Pakistan is bearing huge financial burden due to overstaffing, low morale and low organizational performance. There is a long emphasize on competency of staff to uplift organizational performance (Khalid et al, 2012, pp.121). The training literature shows scanty research on the effects of WPE variables affecting training transfer (Pham et al., 2012, pp. 1-19). It was argued by Holton, Bates and Ruona, 2000, pp.333-360) that in spite of the proven importance of the WPE, its relationship with organizational performance has been less studied. Literature has shown incoherence with regard to the effects of WPE variable on organizational performance (Cheng and Ho, 2001, pp. 102-118). A number of studies pointed towards the need of more research on finding novel areas like focusing more on WPE keeping in view of its significant association with training transfer (Blume et al., 2010, pp. 1065-1105). This study aimed to fulfil this gap and investigated role and effects of workplace environment on training effectiveness by workplace support scenario (WPSC), attitude at work (AAW), feedback scenario (FBS) as its attributes.

Like a score of empirical studies executed in Thailand (Homklin et al., 2014, pp. 116-131) majority of studies conducted in Portugal tested KP four levels model to evaluate training effectiveness, whereas little research was conducted on training transfer (Velada et al., 2007).

A research emphasized upon the need to focus relationship (direct and indirect) with allied factors such as sub-culture and management support to understand better the tendency to transfer training (Egan, 2008, pp. 299-322). While much research focused on investigating program design as well as trainees' individual characteristics in endorsing learning transfer, workplace environment variables still remained the less attentive areas (Alvarez et al., 2004; Baldwin & Ford, 1988; Holton et al., 1997; Tannenbaum & Yukl, 1992). A more favorable workplace environment lends change and provides feedback of results.

It was suggested that learned behaviors may unveil cognitive and behavioral dimensions that may enhance learning towards the job (Burke and Hutchins, 2008). Research has provided evidence that betterment of WPE for application of new KSA is critical to ensure the implementation of training (Saks, Salas, and Lewis, 2014 pp. 81-83). For adequate application of skills, the attitude and behavior of supervisory management really matters for transfer of learning.

2.22 Training environment

More than 2 million public sector functionalities are operatives in Pakistan. Public sector is still finding direction. Character and behavior of public managers are required to be in the best interest of nation and its dwellers. To safeguard public interest is the foremost responsibility of a public manager. If public interest is not safeguarded, this will create "trust deficit" between government and the citizens. A public manager passes through pre-service and in-service training. This training system despite proving efficient in knowledge and skills delivery, prove incapable and deficient to address cognitive and behavioral needs prerequisites for character building.

Public at large is the customer of public sector and public mangers as administrators. Public managers need to be equipped with soft training skills to work in the best interests of the citizens (Sumrin, 2013).

Three key values encircle the human life: experiential (what we experience), creative (what we create), and attitudinal (what we behave in tough conditions) (Frankl, 1947). While agreeing to Frankl opinion, Stephen R. Covey posited that attitudinal values come to the forefront. Difficult conditions create paradigms and bring shifts in terms of "new frame of references".

In this era of dynamic change, synergy between task execution and technology has required from employees to improve their stock of learning to outperform the others (Pulakos et al., 2000). Training provides a strategic platform for employees to acquire what is required as new skills (Goldstein and Gilliam, 1990). Role of training becomes more critical when workplace introduces newer computerized system and technology to support its operational activities (Colquitt et al., 2000). Thus, organizations require their workers to be more competent, adaptable and flexible. This improvisation is to be fulfilled through adequate training. Research has suggested that visualizing organizational desire about workers, management actions emit intentional or unintentional signals to motivate employees. This motivation serves as fulcrum to add effectiveness to a training program (Baldwin and Magjuka, 1991). Another research found that when employees attend training at their intrinsic choice instead of management behest, they feel more energized and motivated (Tsai and Tai, 2003). Nature of training (obligatory or discretionary) and its mode further develops trainees' perceptive behavior on organizational processes. Framing of training by management builds perceptive value and weightage about training (Quinones, 1997). Empirical research on training framing and its effects is however, fewer than expectations.

To this objective, studying training framing and its effects on trainees' self-efficacy and intrinsic motivation is the one of the purpose of the present study with the help of examining the impact of individual and collective variables on training effectiveness. According to Colquitt and his co-researchers (2000), self-efficacy of trainees and intrinsic motivation is fundamental requisites to determine training effectiveness. Trainees' contextual framing about training and other organizational factors reflect their premeditated vision and contribute to strengthen their performance.

A proficient and trained workforce is the need of organizations and training is the most acknowledged and pervasive methods to fulfill this need (Arthur, Bennett, Edens, & Bell, 2003). Getting aligned with this, need is to expedite the initiatives to capitalize on the efficacy of organizational training. Numerous research publications have underscored the impact of training intervention, context, and design on training outcomes (Bell & Kozlowski, 2002, 2008; Colquitt, LePine, & Noe, 2000; Keith & Frese, 2005, Hurtz & Williams, 2009; 2008; Kozlowski & Bell, 2006; Sitzmann, Bell, Kraiger, & Kanar, 2009). An all-encompassing literature articulates the way trainees acquire self-regulatory attitude (Pintrich, 2000; Sitzmann & Ely, 2011; Kanfer & Ackerman, 1989) and realize the importance of training evaluation (Kraiger, Ford, & Salas, 1993; Kirkpatrick, 1994; Sitzmann, Brown, 2005; Brown, Casper, Ely, & Zimmerman, 2008).

2.23 Support scenario

Workplace support scenario helps to broaden employee understanding about factors that influence training success. What kind of knowledge and skills are required and what kind of behavior required to accomplish the tasks appropriately (Kraiger, 2008).

2.24 Internalization

Internalization denotes learning capability of employees. By internalization means employees with an exceptional command over tasks' execution. They can learn to adopt the top practices with best application to perform the assigned tasks (Ahn and Chang, 2004; Lee et al., 2005)

2.25 Organizational Culture

The concept carried by organizational culture is broad as well as complex and advances on the basis of sharing values and pattern of consistently adopted beliefs that assist individuals comprehend organizational functioning by following organizational norms set during this course (Deshpande and Webster, 1989), whilst (Wallach, 1983) suggested three types of culture explicitly bureaucratic (aligned on formal procedures), innovative (risk-taking as well as creative), and supportive (relationship-based) cultures. PSOs in Pakistan exhibit a bureaucratic type of culture.

2.26 Evaluation validation

Evaluation is seen as a determinant of achievement of program objectives by looking at actual outcomes versus intended outcomes. In a broad sense, evaluation research includes all efforts to place value on things, people, events, or processes (Rossi, Lipsey& Freeman, 2004). Research worked on a score of factors such as training design, content, changes accruing learners as well as organizational payoffs responsible and found these related to effectiveness and presented a model based on training evaluation as well as training effectiveness (Alvarez et al., 2004). Yet there lies a great amount of smog on the effectiveness of training and its subsequent effects on implementing training at the workplace which is the core aim of this study.

Evaluation offers a measuring technique to examine the extent of achievement of the goals set by training programs. The evaluation procedure adopted hinges upon the training goals with training design, changes occurring in learners, and organizational payoffs (Rossi, Lipsey & Freeman, 2004). The evaluation examines the training program using a methodological approach to measure learning outcomes.

It scans training results from a micro perspective. On the contrary, training effectiveness offers a theoretical approach to understand the outcomes (Arthur et al., 2003). In other words, learning outcomes give a clue of training effectiveness providing a macro view of training outcomes. Lastly, evaluation results are indicative of the outcome of the training intervention (Arthur et al., 2003).

2.27 Instructional style

Even though researchers strived hard searching for developing an effective instructional style to innovate the field of training (Arthur et al., 1997), organizations still rely on lecturing in the classroom with audio, video modes as a traditional form of instruction (Van Buren, 2001). The contemporary advanced research on training is working on investigating the use of the contemporary mode of instruction such as online learning in the wake of global learning needs.

2.28 Evaluating Practices

The literature has demonstrated the role and value of practice in promoting learning and transfer. To grow and prosper, organizations need formal communication practices (Senge, 1990) (Salas, et al., 2012) identified practice as a key feature of the development of new knowledge and behaviors.

They suggested that there must be an alignment between learning and transfer amidst different scenarios (Isenberg et al., 2005). Repetitive practices that enhance the effectiveness of a program are called “Best practices” (Cook et al., 2013).

2.29 Evaluating Feedback

(Willis, 1994) cites Peter Senge states two types of feedback that characterize the organizational processes i.e. reinforcing and balancing. Reinforcing feedback reflects the type of expectations a manager expects from an employee’s performance. An employee will get the manager’s attention according to the potential of performance shown by him or her. The kind of behavior lies to produce a “self-fulfilling prophecy”. Employee development depends upon his or her interaction with the manager. In case of the 2nd kind of feedback i.e. balancing, the processes thrive in organizations are hard to address. Public organizations are known for change-resistant. According to Senge, in case of resisting a change, one can look for more than one hidden process for balancing. Need is to identify the “source of the resistance” and challenging the norms through soft behaviors. Feedback tells how findings, actions underpin or thwart each other. Instead of focusing linear cause-effect relationship, “circles of causality” help to bring a shift in thinking. Looking for interrelationships instead of cause and effect linear chains and change processes (patterns) instead of snapshots (inaccessible events). Feedback lays its influence in form of cause and effect not in unitary direction. Systems thinking centers on feedback that is indicative of a communal stream of influence. To systems thinking, each influence carries its own cause & effect. Influence does not occur in a solitary direction. Systems thinking point to divergent patterns on behavior through reinforcing as well as balancing phenomena. Senge argued that the contemporary world needs system thinking much more than before due to its complications and frequent interfaces.

Systems thinking look into "structures" through a discipline to stimulate intricate situations, and to discriminate from among the leverage points. Western corporate structures are widely used in the East but western values like accountability (to give answer to your acts), assertiveness (open and free expression), proactively (preemptive about options), dignity (self-esteem) and openness (directness) are rarely applied to achieve organization performance successfully. Public managers in Pakistan consistently display their resilience as well as for adopting creativity belonged to the other corporate structures those believe trust and self-regulation in society. But instead of pursuing western values, these are replaced with local values such as patience (sabar), caring for others sentiments (layhaaz), honor (ghairat), peace and harmony (ghairat), obedience for authority (tabadari). These conflict and contradict the core values underlying western corporate models. Meetings in our public organizations are nag-sessions and lectures delivered by one while many remain quiet awaiting the time for closure. This is unlike open and direct communication in western management meetings. The ultimate spirit lies with this discipline aims to bring a shift in mind.

Feedback reflects trainees' judgment based on the generic or specific issue. Perceptions indicate whether trainees are under influence by some specific factors or general feelings, it is called the "Hallo effect" in negative direction but if perceptions indicate specific issues while judging a training program.

Feedback based on the previous poor performance of a program will not be real feedback (Willis, 1994). Traditionally, organizations use `happy sheets' which is delimited to a certain continuum of feelings. Instead, these organizations should need to comprehend the intended change in behavior, and learning echelon and the subsequent impact on the performance of trainees (Saari et al., 1988).

2.30 Training Effectiveness

Trainees or preferably supervisors are focused as respondents at the individual level to measure training effectiveness, thereby reported data is taken as training effectiveness (Ahlstrand et al., 2003; Brinkerhoff & Gill, 1994; Kirkpatrick, 1996). The way training is imparted wants to know how effective it is to meet the needs of 2019 and what it means to measure employee performance. Past time researchers like (Ford, 1997), (Noe, 1986), and (Tannenbaum, 1992) acknowledged support for training effectiveness as a crucial need of organizations. Employee performance as well as productivity of human capital as vital to the organization is liable to be improved measurably if training substantially proves effective enabling organizations to evade extravagant or uneconomical spending on unproductive trainings. The majority of the organizations are aspirant of a good return on investment in training. Researchers predicted that there will be more training intervention as a result of highlighting the significance of training effectiveness within the organizations (London, 1989; Noe, 1999).

Scanty literature on training effectiveness is evident in low attention and less understanding among people about its importance (Hogan, 2007). Developing human capacities is possible through the systematic and planned occurrence of training at an organizational level (Afua Baah Bekah et al., 2016). That is why organizations continually invest in training programs (Buren, 2001). These enhanced capacities can be observed at the workplace through an exhibition of KSA learned through training. This proves instrumental in development at the organizational and individual level both (Holton, Bates, and Ruona, 2000, pp.333-360). Organizations are supposed to provide enabling environment to employees after training for implementing KSAs learned through training Holton, Bates, and Ruona, (2000, pp.333-360). Individuals need to apply themselves visibly and innovatively. If they do not induct new

knowledge at the workplace, an investment made in training will prove farce. This research examined training in the public sector from a psychological or cognitive perspective. Works of training scholars, researchers and practitioners were examined relevant to the concepts of training effectiveness and training evaluation and to analyze the path taken by training over time. Hence, training is acknowledged as a manageable instrument applied at the institutional level that directly works for human development and indirectly contributes to organizational development (Otoo, et al., 2019).

There has come a paradigm shift in the mode of delivering training from instructor-led to hands-on computer or simulation-based. Till today, organizations and researchers are looking for a focused instructional approach or principle of learning (Salas &Cannon-Bowers, 1997) that could create and generate the desired flavor in learning. The period leading from the 60s to 80s witnessed lesser training research but saw a shift from an emphasis on learning principles to instructional approaches (Kraiger, 2003).

Instructional methods imparted by instructional approaches aimed to assess learning through a change in behavior (Decker & Nathan, 1985; Golstein & Sorcher, 1974). From the 80s to the 90s, a rebirth of training research was seen as a "decade of progress" (Salas & Cannon-Bowers, 2001).

The explosiveness of training research-focused training methods (Arthur, Day, Bennett, McNelly, & Jordan, 1997; Shebilske, Regian, Arthur. & Jordan, 1992), training simulators (Gopher, Weil, & Bareket, 1994; Jentech & Bowers, 1998) or computer led training (Brown, 2001). Searching training methods focused on training as an effective and innovative field of inquiry (Colquitt, LePine & Noe, 2000; Noe & Colquitt, 2002).

Experimenting with utilizing different training methods to ascertain their capacity to impart certain skills, it was researched that the effectiveness of organizational training varies along with training delivery methods, the skill being taught, and the measure required to operationalize effectiveness. As an instance, the lecture being primitive method is widely used (Van Buren & Erskine, 2002) despite many feel exhausted and dull during lectures (Carroll, Paine, & Ivancevich, 1972). A meta-analysis study found "robust effects" developed from lectures contrary to their bore image among trainees. In most of the research outcomes, results do not speak about the effectiveness of a particular method. We, therefore, need to know the "instructional attributes" relating to a method and its effectiveness in face of different training contents and contexts (Winfred, Winston, Pamela, and Suzanne, 2003). Organizational support and learner' readiness were found as leading support or inhibiting factors in the way of carving the direct impact of training (Noe & Schmit, 1986).

Examining the training effectiveness model brings to the fore the following essential characteristics of a training activity: role of supervisor either positive or negative in providing technical support to trainees before, during and after training, and cognitive abilities of trainees (Noe & Colquit, 2002). Training effectiveness is the study of the variables that influence training outcomes at every stage of training i.e. before, during, after and even late intervals after the training process.

Considering the effectiveness of these variables, training outcomes are classically studied in three extensive categories i.e. individual, training, and organizational characteristics (Kaye, Salas, Christina, 2004). We intend to analyze the influence of a set of individual and collective

factors with their respective context on training effectiveness as the main focus to augment organization performance in a Metropolitan city-based public organizations.

2.30.1 Three ways of training effectiveness

Training effectiveness reflects in three ways: employee willingness to attend training, learning and transfer intentions (Quinones, 1997). Training effectiveness models hypothesize that age, personality, trainability along with attitudes of trainees are variables influence trainees' motivation, learning intentions during the course of training and its transfer to improve work performance. Research has found that learners equipped with boldness, fearless to loose and carefree in quest for learning (mastery orientation) exhibit high motivation to learn (Colquit & Simmering, 1998; Fisher & Ford, 1998, Philips & Gully, 1997). Studies on workplace environment indicate characteristics such as organizational climate, supervisory support as well as organizational justice that impacted trainees in pre-training states.

Trainees who voted in favor of a supportive work climate showed more inclination to attend training for learning (Maurer & Taruli, 1994' Noe & Wilk, 1993). Regarding perceived organizational justice, trainees were given fair assignments on training scenarios.

Training effectiveness reflects the degree of change in attitude, new knowledge, and skills in learning and its application learned for the duration of the training programs. It is impacted by trainees, their mixed attitudes, expectations, values, and training environment. Job involvement of employees, satisfaction with career plans, training content and trainer' capability provides reflections of training effectiveness (Subhash, Sunil; Praveen, Chougale., 2014).

Training effectiveness has been analyzed for decades and various models have been suggested. Training programs in public organizations could not hold currency because of non-validation of measurement through effective design. A valid program design encompasses emotional reaction and gains in knowledge measured after training as its design (Endres, Brian, Kleiner, 1990). Many researchers, training specialists, and managers in Pakistan describe training effectiveness at its lowest level (Bashir, Khattak, 2008).

Training effectiveness denotes the degree thereby the intended results are achieved through the training (Sitzmann, Weinhardt, 2015). It is measurable through evaluating numerous facets relating to the training program including training design, knowledge transfer & acquisition (Gopal, 2008) and change in performance as well as behavior at the workplace (Yunchen, Strawderman, Reeves, Shaheen, and Salehi, 2014). According to Hill,(1999), signpost of an effective training is to augment its problem-solving capacity within organizations further linked with training characteristics such as trainees' attributes, training efficacy, effective delivery (Bartel, 2000) and ease in transferability (Yunchen, Strawderman, Reeves, Shaheen, and Salehi, 2014).

The individual processes give a clue of predictors of training effectiveness (Grossman & Salas, 2011). Determination of training effectiveness (TE) is possible to understand through the attainment of training goals (Warner and DeSimone, 2009).

Training effectiveness is usually determined by assessing a criterion blend given by Kirkpatrick's (1967) hierarchical model of training outcomes (Broad & Newstrom, 1992). Trainees' positive reactions were seen as indicative of ingenious as well as well-administered training programs. Moreover, trainees' attitudes as well as expectations may attenuate training as a gauge to measure effectiveness in respective organizations.

It was established that training framing influenced trainees' attitudes that are likely to contribute to training effectiveness. Trainees' pre-training motivation, accountability after training and organizational climate are key determinants liable to be researched in different contexts regarding their effects on training effectiveness (Wei-Tao Tai, 2006). Subsequent research implied training venue, trainer' role clarity, refreshment/meals and practical application as effective predictors of training effectiveness (Pyali Ghosh, Jagdama Prasad Joshi, Rachita Satyawadi, Udita Mukherjee, Rashmi Ranjan, 2011). Therefore, the development of criteria using a suitable combination of factors taken from the public sector will be researchable.

The current digitized and vibrant world has placed increasing demands on the public organizations to furnish more diverse skills at different levels. It requires that public training systems must impart high order skills required to show a high level of performance. In other words, this is required to be finalized in fewer time and smaller capital cost. This necessitates the need to optimize training effectiveness by transforming HR into human capital that has been identified as a master key.

Training effectiveness cannot be ascertained until the role of individual and category factors are not ascertained and operationalized to adjudge their dividends. Therefore, identification of critical training variables can present a tangible view of training process effectiveness as prerequisites. The framework developed so will give a lucid picture of training effectiveness. Measurement of the training Performance is possible through ascertaining the actual role-playing and actual work performance sampling. Each task carries a cognitive element at its beneath and so learning associated with it. Training performance, therefore, reflects the effort invested by the trainees fulfilling special or routine criteria.

The literature on training effectiveness posited a score of factors at the individual and organization level that tangibly influence trainees' ability and motivation to perform effectively during and after training (Noe & Colquitt, 2002). Information processing models inspired by modern learning theory (Newell & Simon, 1972) paved way for instructional designers and psychologists to look for an effective training environment by expanding advanced learning paradigms (Cannon-Bowers, Rhodenizer, Salas, & Bowers, 1998). Different scenarios were analyzed and adult learning was found needy in receiving effects on motivation to learn in training. This is possible through the effectiveness of training material and the determination to attain goals (Noe & Colquitt, 2002). Training has to make it effective by developing a responsive expectancy attitude for training and its utility (Gagne & Medsker, 1996). Training methods are considered efficacious when these clarify the objectives and guide to achieve new skills, practicing opportunities and feedback at the workplace.

(Noe & Colquitt, 2002) highlighted Trainees' understanding of training objectives and attainment, training content, learning aids, practicing environment, feedback to trainees, interaction among trainees and efficient coordination and arrangement of the training program as key characteristics that make training effective:

2.31 Need of Training Effectiveness

Despite the rising trend of training investment, the tendency of measuring training effectiveness by the managers is declining. Similar conditions are prevalent in European Union training, where least efforts are made to evaluate the outcomes of the programs systematically (Galvin, Industry 2001).

By adopting systems thinking as a disciplined framework, organizations can detect patterns of change by observing interrelationships instead of taking static snapshots. Responsibility is shared by everyone for system-generated problems (Peter Senge, p-63).

Although the effectiveness of training is the need of every organization organizations are reluctant to evaluate the business impact of a training program (Markgraf, 2016). It has been a neglected and unheeded area in the field of HRD (Brimstin, Hester, 2015). Evaluation is vital to know the outcome of a training intervention in terms of improved productivity, better employee-employee relationship, growing competence, cost-effectiveness (Surbhi, 2015). An effective evaluation provides meaningful data for effective decision-making (Surbhi, 2015). To know about training effectiveness, training evaluation is must understand from different perspectives (Markgraf, 2016). According to the findings of Warner and Desimone, 2009, training is considered effective if it is acknowledged as achieving training goals. This means training goals or program objectives must be set as criteria and indicative of training effectiveness. Training effectiveness is referred to as, to collect, analyze, and synthesize the information systematically to select, adopt, value creation and modify different training processes for making informed decisions about training in a logical and coherent manner (Warner and DeSimone, 2009).

2.31.1 Use of competency modeling

Over the years, the use of competency models has increased by organizations and practitioners for the development of a training curriculum. Personal individual characteristics, knowledge, skills, and abilities provide the basis of performance at the workplace. These develop an inter-linked cluster to develop competency (Noe, 2002).

In contrast to conventional job analysis, tasks are handled by competency modeling that is employee focused. Competency modeling is connected with organizational objectives and outcomes are generalized in the mainstream of organizations accordingly (Shippman et al., 2000). To encapsulate the competencies for a specific cluster of jobs, organizational strategies and employees' characteristics need to be examined quantitatively (Kochanski, 1997) to validate a specific competency model. Using a competency model, training or other employee development programs are designed; performance management is revisited for improvement (Noe, 2002). Using the growing popularity of competency modeling and analysis, it can be deduced that the competency modeling approach boosts training value. Pre-training assessment and grouping of KSAO (knowledge, skills, ability, and others) based competencies are the outcome of competency modeling. Management needs to be aware of deficiencies in performance, tasks to be instructed and convergence among decision-makers, managers and employees on engaging problems and methods to resolve the differences.

2.31.2 Training and Job opportunities to use skills and knowledge

Training contributes to enhancing the perceived control feeling about time management (Häfner and Stock, 2010). Employee time management can be expected to improve when employees attend training. Training is, therefore, emerged as an endeavor to raise human skills for application of learning at the workplace (Saeed, Tahir, Tayyab, Basit, Anis, Ahmad, Mushtaq, 2010). As there is no agreed-upon methodology or contextual framework available for the evaluation of training, there persists a scholarly quest for evaluation scale or instrument. Training, therefore, helps to bring a positive behavioral change in the normative beliefs of an employee or develops new positive normative beliefs.

2.31.3 Benchmark of training delivery and actual objectives (during training)

Employees training enact early training groups for desired behavioral change, and their visible change in behavior will make the followers follow performance norms (Sarkis, Gonzalez-Torre & Adenso-Diaz, 2010). On these grounds, it is expected that training delivers positive effects on developing desired performance norms, hence brings a shift in beliefs of an employee about requisite behavior. Colombo and Stanca (2008), Sepulveda (2005) and Konings & Vanormelingen, (2009), found that training serves as a cutting edge instrument if organizations are serious to attain their goals and objectives depending upon the training plan and design. It shows the depth of training design and magnitude of delivery that provides learners the capability to undertake learning transfer back (Holton, 2000). After this logical sequence, the training faction has to be assessed and evaluated whether it is meeting the emerging challenges or need to redefine its boundaries to build up a new response capacity.

Despite majority of the organizations are agreed to the fact that organizational success depends upon well-groomed and developed leaders yet there is a deep black box about self-development state of public sector leadership and there is a great need to know the state of training effectiveness and its contribution to organizational performance (Leeds et al., 2018). These patterns may typify to set a benchmark of training delivery against actual objectives set by the PSOs. An allied purpose carried by the study is to look for a taxonomy that may be used to classify the training activity under patterns preferred by public managers and non-managers for suitable application at the workplace. A survey detected consensus on bounded opportunities as a result of inducting multiple digital training techniques aiming to target learners through online and desirable learning innovation.

The training industry faced discourses of alternate delivery methods for learning including online as well as distance learning as compared to a traditional classroom setting for training.

2.32 Return on Investment in Training

Time and again, researchers raised an argument that the return on investment (ROI) of training programs through accounting methods is insufficient since their ineffectiveness to deliver high managerial skills (Broad & Newstrom, 1992; Awoniyi, Griego, & Morgan, 2002). Since training is taken as an investment in human capital, it still needs to be considered like investing in modern technology, physical plant, and machinery (Hermann Schwind, Hari Das, Terry Wager, 2007). Following the huge investment in HRD, much stress is given on evaluating training effectiveness as payoffs are not evident. Questions were outstretched on many times seeking justification for such weighty investments (Aldolaimi, 2006; Al-Otaibi, 2008; Al-Qahtani, 2011; Collins and Kim, 2010).

The public sector employs a customary form of administration backed up by training programs. To bring a change in administration in Pakistani setting, it becomes imperative for employees to must elevate their knowledge as well as skills to transfer these to the workplace using advanced technology, resultantly the sector will get importance.

Organizations always look for prepared employees to perform well today and in the coming days. To ensure that employees are well motivated, they need to develop skills specific to perform particular jobs along with additionally generalizable skills. As stated above, efficiency and seeking more advantage in fierce competition, T&D help the organizations to make the employees more productive and high performers to get high pay entitlement.

By experience, it has been observed that conducting training entered the public sector as management fashion that became institutionalized in the Pakistani public sector context as 'rationalized myth'. This provides sufficient ground to illustrate the relationship between training and organizational performance by integrating theories on training and its working.

Research conducted in the last two decades prescribed several theoretical and integrated models on the working of training by including micro as well as macro perspectives (Kozlowski & Salas, 1997; Tannenbaum & Yukl, 1992). The research identified the influence of some levels at the individual, group and organization that receives effects from training (Salas and Cannon-Bowers, 2001) enunciate training as a science that deals with many disciplines such as cognitive science, management, education, and engineering systems as well as industrial and organizational psychology that helped us to comprehend training effectiveness and theories relevant to it. This study by inspiring from the past research resorted to select several individual and category factors that prove impactful at primary, secondary and meso levels on training effectiveness.

One evidence came out of the theoretical advancement of training is regarding the transfer of training. Transfer indicates that the extent of learning transferred from training to the job for subsequent application or affecting the job performance later. Learning got its exclusive meaning in the domain of cognitive psychology (Gick & Holyoak, 1983) referring to the extent of the application of learning made on one task facilitates learning on the other task. Therefore, estimation of training transfer can be obtained based on running comparison of performance metrics gathered from the job with learning scores made during the training can provide the mutual association and extent of transfer from the training to the job (Newstrom, 1986).

The transfer becomes critical therefore as, without it, organizations are no longer to extract potential benefits out of the investments made in training. By that time, applied researchers were restricted to estimate the rate of training transfer (Newstrom, 1986) until a model depicting the process of training transfer was presented by (Baldwin and Ford, 1988) through observing the relationship of variables such as trainee characteristics, training design characteristics, and the work environment in generating learning transfer. This model provided the basis for coming empirical studies to identify several methods that could more or less support transfer (Grossman & Salas, 2011).

Ford and Kraiger, (1995) uncovered to find an association between learning and its transfer in different contexts of the domain of cognitive psychology. Such works on training transfer expanded the knowledge on this area and unveiled the phenomenon occurring at the organizational level and generation of learning during training and its application afterward. Theoretical advancement in training led to developing a score of training effectiveness models. Former training models focused to identify training needs, training design, and delivery (Goldstein, 1986).

Modern research recognized a number of factors individual differences (Noe, 1986), performance measurement (Cannon-Bowers & Salas, 1997); training transfer (Baldwin & Ford, 1988); learning control strategies (Ford, Smith, Weissbein, Gully, & Salas, 1998); training motivation (Colquitt, LePine, & Noe, 2000); vertical processes of transfer (Kozlowski, Brown, Weissbein, Cannon-Bowers, & Salas, 2000) that prove impactful in comprehending the point to train employees individually and collectively. Linked with the above, training, therefore, assumes the importance of a nerve that shapes the competency and functioning of employees to meet organizational needs.

While an employee development signals growth at an individual employee level irrespective of any particular task or assignment (Laird, 1985; Nadler, 1990). The advent of new technology reiterates upon the workers to learn briskly (Miller, 1996; Nadler, 1990). The knowledge along with skills possessed by employees are key to charge organizations for performance. Learning as well as constant improvement stand as much-needed factors to advance its performance. That is why employee training has become an industry of billions of dollar across the world (Salas & Cannon-Bowers, 2001).

2.33 Training and organization development

Based on training literature, it can be argued that training involves the systematic occurrence of processes at three stages of training either before, during action and aftermath. Each of the time frames has its distinct importance that is required to check strenuously for implementation. Training management and organizational leadership constantly face several unanswered questions regarding training effects while implementing a training suite of apps. This makes training as an evolving activity to fill the gap detected in development. Training conducted anywhere (Dessler, 2009) through self-study or lecturing targets skills development (Zula and Chermack, 2007). Organizations, therefore, must recognize the significance of training at all stages to yield maximum dividends (Yadapadithaya, 2001; Brinkerhoff, 2006) failing with costly investment in training will lose its worth.

The knowledge levels prerequisite for workers of contemporary age altering every day; subsequent thereof, there is eminent increase in skills demand for jobs (Nadler, 1990). Workers get training and retraining learn new skills to meet the professional needs of the job. Public organizations are facing the same challenges.

To come across these challenges, both public and private establishments embark on to grow into learning enterprises to face the competitive world (Kirwan and Birchal, 2006). In this sense, training is an integral part of HRD to adjust the changes in work patterns and organization (David McGuire, Maria Cseh, 2006). Since changes come through technology, training tends to abreast with the changes occurring around. Performance, efficiency, quality, productivity, and commitment are the areas affected by training. These areas contribute to organizational growth and development.

Organizations are living in a competitive environment and always look for developed brains and aptitude. Personal growth and development are important for employees. Campbell and Kuncel, (2001) underpinned training as an effective operational intervention in the field of HRD. Training helps employees to learn novel techniques of managing problems and improves organizational commitment that eventually improves performance besides the acquisition of new knowledge, skills, and abilities (Cheng & Ho, 2001; Karia & Asaari, 2006).

The development serves to make qualitative and quantitative advancement inside an organization particularly for managers. It focuses less on physical skills but more on acquiring skills about bring change in employees' knowledge, attitudes, values, and behavior. Henceforward, development points towards an iterative process while training is managed in the context of addressing certain areas and range of objectives. It is incumbent upon every organization to evaluate the state of training effectiveness in the organization and its reflection on development that contributes to organizational performance. Literature provides a broad base scenario about the development of human capital.

Employee training is part and parcel of today's age, unlike in the past decades. Companies irrespective of the sector are involved in some kind of training for their respective employees. Some companies regard training as a formal process and conduct training programs for initial as well as ongoing employees. Many hire consultants to get the training process going smoothly. Hence, training continues in every organization but with varied motivation levels. A very few companies are devoted to conducting training programs with a commitment to augment the skills as well as competencies of their staff. Forlornly, many companies involved in training merely for the sake of appearance.

(Stredwick, 2005) argues that employees are ably helped by human resources to get their learning improved; this is the most important role assigned to human resources (deploying T&D). Training therefore, sets out to change future learning design to enhance growth (Marquardt, Nissley, Ozag, and Taylor, 2000) signifies the benefits associated with employee training & development and future dependence of organizations on well-trained employees who will be able to accomplish tasks successfully and compete globally.

From the traditional point of view, the concept of training was to deliver technical knowledge as well as skills, so education used to be designed accordingly. It was in no way to address organizational issues. The current era that is marked for its dynamic changes affects training as well as education closely, hence influences organizational development. The process grows on with the growth of an individual employee that contributes to organizational performance (Sabrine, Abdulaal, Rampur, 2018). The world has been on to an age-old apprentice training model that focuses to transfer knowledge as well as given skill practice. We are heading towards solving organizational problems along with the development of individual skills, the approach referred to as organizational development.

2.33.1 Onsite monitoring during the training program

Traditionally, training is used to teach a person how to execute a task, but this philosophy needs alignment in today's technological environment. Now public managers and non-managers must think of how to make practical decisions to address problems (Cornell-d'Echert, 2012). Unlike robots that are built for tasks operating under a set of rules and commands, human managers are to prepare for situations. For this purpose, it is imperative to enhance their thinking ability. A substantial difference exists between educating and training a manager.

Training at its rudimentary level, is supposed to support the knowledge and skills acquisition, with modification in attitude through deliberate as well as systematic activities. For trainees to obtain the required competencies to successfully perform the overall mission objectives, training must result in justifiable modifications in behavior as well as cognition. The performance of any system directly depends on the training of its managers and non-managers who constitute the system (Salas, et al., 2012). Here the concept of onsite monitoring is gaining ground.

2.33.2 Development/modification of training-during training

As said earlier, training drifting towards new paradigm through adopting a context-fit model that could solve fundamental and day to day arisen problems (Sabrine et al,. 2018), this would enable training management or trainer to develop/modify training-during training.

2.33.3 Use of technology in the development and delivery of training of program

Observation and experience have unveiled that less focus is drawn on job-ready people that reflect a somber gap. Training is required to be customized with the use and style of a contemporary world that is known for technological advancement and dynamic tools (Sabrine et al,. 2018). The analytics system provides concurrent learning analytics for improving on-site lectures (Atsushi Shimada et al., 2018). The use of technology lets you employ a system of e-learning as well as an e-book to monitor teaching and evaluate learning activities going on in a real-time environment between lecturers and students.

Data is collected and analyzed on a real-time basis and feedback is given to the lecturer according to before or during the lecture. Lecturer using analytics graphs at his or her PC can glance at previewed pages, students' status and students' responses to teacher instructions (Atsushi Shimada et al., 2018). This can bring improvement in teaching along with on-site learning.

Developing a pertinent and technology-driven curriculum configured with the global market with the induction of advanced training labs as well as virtual F2F training predict human resource development (Rajasshrie Pillai, Brijesh Sivathanu, 2018). Recent years have witnessed a great deal of significance that necessitates the requirement for employee training irrespective of the causes or commitment level may be linked with the training process.

This rise is mostly linked with the rapid adoption of technology by society and sectors either public or private. Evidence suggests that the Use of computer-based training, multimedia, WHATSAPP, Facebook, Instagram could prove more influential. In another scenario, older employees were found reluctant to adopt new technology due to perceived complexity, learning validity, and readiness of technical support (Rajasshrie Pillai, Brijesh Sivathanu, 2018). In other words, modern technology, high tech development, and innovative dispersion constantly helps to develop and deliver tremendous training courses. Modern technology-enabled training to be delivered on-site is premeditated to address current and future skill needs of staff. Technology-driven learning environments before and after training leads to trigger learning on the self-regulated basis (Dirk Tempelaar, Bart Rienties, Quan Nguyen, 2018).

2.34 Culture and training effectiveness in the light of Hofstede cultural dimensions

The research established that it is a must to comprehend the prevalent culture in the beginning before understanding the organization (Barczak et al., 2010), therefore, this study is aiming to discuss local culture prevailing in Pakistan by exploring the public sector and culture dominating around training conducted in PSOs. The national culture reflects the mindset and its shared programming that categorizes the people from one another. It leads to developing the context in which social behavior finds its growth (Mishra, 2012).

Culture has many visible and invisible tiers, the visible tier exists in form of tangibly existed buildings with nutrients for sustenance, and other invisible tier finds its basis from prevalent belief system, norms, and values (Hofstede, 1994: Hofstede et al, 2010: Trompenaars and Hamden Turner, 1998 cited in Khlif, 2016). Cultural exposure enables an individual to learn cultural values as well as emotional behavior (McSweeney, 2013). The research established

that learning accurate behavior is possible through experiments and circumstantial observation (Cassell, & Blake, 2012). The fact was detected that experience and observation help us to comprehend the different culture and watch the change in behavior (Alhirz, & Sajeev, 2015). Exploring our country's culture using the lens of the 6-D Model, a glimpse of prevailing Pakistani culture is shown below with its tentative intentions towards innovativeness and assertiveness.

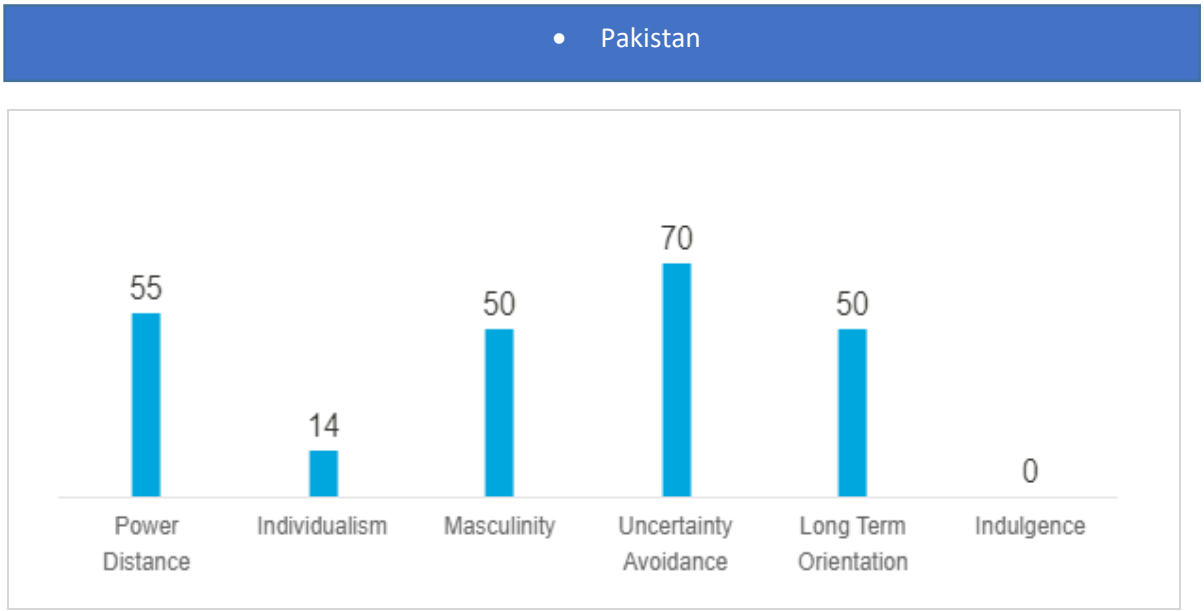


Figure 7 Hofstede cultural dimensions

2.34.1 Power Distance

Pakistan carries a high power distance in the world comparing the other nations. It is at 55 positions in this regard. Drawn on this score, a preference is hard to drive for Pakistan concerning this dimension.

2.34.2 Individualism

Pakistan is placed in 14th position considered a low score to become a collectivistic society. This is reflected by a member-based group that has long-term close commitment among each other. Group based loyalty prevails over other rules and regulations of society.

2.34.3 Masculinity

The society gets a high score on this aspect and reflects that mutual competition, sense of achievement and success drives the society. Success is measured based on male dominance, power, forcefulness, and success in the form of material gain. This culture believes in power lust.

This type of culture has its value system that persists right from the school to the organizational life. Being placed at 50 scores on this front, its intermediator position selects for it a neutral approach towards masculinity factor.

2.34.4 Uncertainty avoidance

How a society looks towards the future and how it deals with the uncertainty or unstructured situation. It likes to control the future or let the future happen. Pakistani society reflects a high inclination towards Uncertainty avoidance in the 70th position. High Uncertainty avoidance shows leaning towards rigid beliefs and proves fanatics in behavior as well as ideas. Hence, in this culture, innovations are resisted, rules are needed to an emotional extent.

2.34.5 Long Term Orientation (LTO)

A society is judged for its long term orientation and provides a reflection on how it deals with present and looks into the future by taking inspiration from the past. In summary, how these two existential goals are handled by society differently. Scoring low at this position means change-resistant and honoring age-old traditions as well as norms. High scoring at this position reflects inclination towards adopting the pragmatic approach: they hearten frugality and strive to get sublime future through advancing in modern education. Being placed at 50 scores, the Pakistani culture does not reflect the preference for long term orientation.

2.34.6 Indulgence

It deals with the challenges confronting humanity in the form of socialization of children this lack of socialization is the barrier to becoming human. This dimension is pertinent to people's styles to control desires as well as impulses depending on their upbringing. Weak degree of control is referred to as "Indulgent" and comparatively, strong control is referred to as "Restraint".

Cultures may fall into two categories such as Indulgent and Restrained. Pakistan, based on standing at the lowest score of 0 at this dimension, is called restrained society. Societies with this characteristic become prone to cynicism as well as pessimism.

Training that is conducted concerning a specific cultural context is not applied to its implications. A study found the impact of culture to push for learning new skills during training and transfer it to the workplace (Shreya Sarkar-Barney, 2004)

2.35 Evaluation of a training program

Evaluating a training program has become a serious concern for Pakistani organizations as their performance is fading in the face of the global standard (Aldolaimi, 2006; Collins, and Kim, 2010). As per implications laid down by Topno (2012)' framework, training evaluation refers to assessing training as well as development impact on trainees' behavior and performance. In the wake of increased outflow on training and development activities, there is a widespread question to seek justification for this investment in the form of return. In other words, the organizations are justified to know about the efficiency as well as effectiveness linked with service delivery following the investment raised in training and development activities.

This makes it imperative for the organizations to evaluate training and development activities (Topno, 2012). (Gopal, 2009) established that training and development activities take off with needs identification and land with training evaluation. The major task of training evaluation is to make sure that candidates implemented what they learned during training or they continued to harp on the same old string. By evaluation, organizations can understand whether training and development activities responded to the organizational skills needs and presented suggestions (Nagar, 2009). Despite the efficacy of evaluation, organizations still have a blurred concept of evaluation.

That is why, training institutions adopted evaluation in an unsystematic and ad-hoc manner (Hashim, 2001). A research conducted by Griffin (2010) established that there lies a gross incongruity between the inherent desire of organizations to conduct training evaluation and the actual effectiveness of evaluation. Evaluation is targeted to determine a change in organizational behavior and required changes in the organizational structure. In this way, certain aims are targeted to fulfill (Al-Ajlouni, Athammuh, and Jaradat, 2010). Evaluation is carried out in the wake of analysis of cost incurred and benefit acquired. This requires data to be analyzed and summarized after comparing it with training data. Based on this comparison, strengths and weaknesses are identified to mend the procedures in perspective training. Before this, (Ogundej, 1991) found evaluation as a potential tool to augment the effectiveness of training in three ways through ascription, assessment as well as controlling quality. (Mark and Annie, 2003) conducted a critical evaluation of training investments, organizations must comprehend how to change in reactions, acquisition of knowledge and change in behavior affect outcomes. Also to measure the value to measure training at different stages.

For ensuring effective implementation and to keep follow –up, evaluation as an ongoing process must aim for successful implementation, using premeditated criteria against each learning initiative. Evaluation needs to occur at different critical times: well before training called diagnostic evaluation), during a running training session called formative evaluation and at the ultimate stage of a training program called summative evaluation, or erstwhile following a training program called longitudinal evaluation. Many interim evaluations are recurrently taken up to thwart inertia and support the ongoing training programs. The evaluation process ought to encompass opportunities to revisit the training strategy to realize amendments as well as improvements (Meyers, 2002).

Evaluation is a learning management tool that operates from the front end while monitoring is a back-end approach. It provides the database for 'evaluation' (Meyers, 2002). Both the M&E concepts reflect the marked difference in outlook and application as shown in the below-drawn

Table 8 difference in outlook and application of monitoring & evaluation

Monitoring (M)	Evaluation(E)
It is a continuous function and a kind of routine checking to confirm the progress against the definite direction.	It is a one-time function aims to check the correctness of chosen direction.
It monitors the pace of the program towards output targets usually based on reporting (monthly and quarterly).	Measures performance in terms of intended objectives. It may be formative (to promote learning and enhance stakeholders' understanding) or summative (extent of achievement)
It focuses on current progress and suggests corrective actions against the deployment of resources like use of people, money, time and materials.	Runs an in-depth assessment of outcomes in relation to outputs.

2.35.1 Elements of a Monitoring and Evaluation Plan

Table 9 Elements of a Monitoring and Evaluation Plan

Component	Explanation
Projected results in terms of outputs and outcomes	Using documents of program design and results chain.
Indicators	Based on results chain Derivatives and SMART indicators
Data source	Acquiring Data either through a survey, a stakeholder interaction or a review
Data frequency	Data accessibility and its frequency
Responsibilities	Assigning responsibilities to collect the data organizing and verifying its quality and source?
Analysis and reporting	Frequency analysis, investigative method, and obligation to report.
Resources	Resource estimation speaks about planned M&E activities.
End use	Who will be the end user of information with purpose to serve?
Risks	The risks and assumption involved in executing the scheduled M&E activities? Affecting the scheduled M&E events with data quality?

2.36 Mathematical impact evaluation

A mathematical answer to the Impact evaluation question is represented by Formula: $\alpha = (Y \mid P = 1) - (Y \mid P = 0)$. This is on measuring the two states in different contexts and their comparison i.e. within or without participating in the program.

P = a vocational training program

Y = income

1 = attended one training

0= attended no training then

The causal impact caused by the vocational training (α) = Income of an individual (Y) following partaking the vocational training (P = 1) subtracting income of the same person (Y) sharing the same point that those not took part the program (P = 0). Investment in training may find justification if its impact comes out in the form of change in performance through the desired change in employee behavior (Smith, 2004).

By evaluation learning, we need to know that learners need to deepen and reinforce their learning on the job. Moreover, training does not alone get the job done. On the business side, the application of learning matters. Two biggest missing links between training to performance are remembering and application to the job. Training intervention is to create training understanding. We need to do to create remembering. The other missing link is all by forgetting the application to the job. We need to persuade or motivate the trainees to apply what they have learned. Performing poorly or below the standards may not be due to the absence of knowledge, skills, and attitude; it may be attributed to some situational factors or due to the inappropriateness of pro-mechanism. Training is nothing to do if the KSAs of some individuals exceeds the requisite standards. In many organizations, the common assumption of the performance gap is linked with training issues.

That is not always the case. Need analysis is what to identify we expect from the people to do and what to identify the people achieved and then finding shortfall is due to KSA, we might be able to redress it through training. Two elements are critically involved in a training phenomenon: schema acquisition and transfer of learning procedures. Training offers to learn in a controlled environment. It moves to a workplace under a comparatively automatic processing environment. Intellectual growth associated with training depends on the activation of these elements. The success of a training program lies in its ability to create learning to be transported by trainees to the workplace (Holton 1996; Holton, Bates Ruona 2000). Although it is evident that training lays the foundation of psychosomatic transformation at an individual level, training cannot remain aloof from the effects of the organizational system and its processes.

Training can be implemented successfully and effectively if it may encompass sociocultural factors more than relying upon technical approaches alone. Trainees are not able to implement and demonstrate to make the system effective. For employing a good implementation training strategy, little is known about the role and effectiveness of sociocultural factors in training programs (Ann, Julie, Nina, Deena and Paula, 2012).

Despite economic and financial crises in the country and lack of evidence of justification of investment, public organizations constantly invest in training and education of public managers. This indicates that training and professional development are on the high priority list (Bruno Broucker, 2015). However, public organizations are looking for the impact of these programs on managers' individual and collective performance. This raises the necessity to judge training effectiveness by examining the role and influence of diverse individual and collective factors on training phenomena in the public sector.

The worldwide importance of training proves it a strategic and versatile investment. However, it is critical to optimize effectiveness and efficiency. The US has worth 109$ billion training market in the world (Mary Crane, 2006). As no single method does prove efficacious to deliver targeted information to trainees, public institutions continue to look for the best and viable delivery method. It is relevant to understand the concept of the training method before moving forward in the literature review.

2.36.1 Setting Benchmark Training objectives and actual results

For the current study, the researcher is eager to measure which of the training measures TPC, Te, and WPE is relatively significant. Also:

1. To identify measures and build up scales to measure the main variables shown in the proposed model evaluate the psychometric qualities of the sample population
2. The potential value of the model is assessed to improve and understand the phenomenon of training effectiveness.
3. To provide suggestions for future application applying IVs selected using cross-section field.

2.36.2 Rationality of Evaluation

The evaluation approach currently in vogue at PSOs is inappropriate so the reliability and validity of the evaluation results are based on the discrepancy. The perceptive achievements consequent of training are frequently intangible and difficult to measure. Secondly, the current evaluation process seems segmented.

For example: in China, training organizations concentrate to adjust the training functions continually after evaluation while in the UK, the main motive of the training institutions focuses to achieve the desired learning and objectives with quality in training delivery (Sun Xiao Catharine Ross Jonathan Liu, 2011).

2.36 Kirkpatrick model of evaluation

Out of the most widespread theories that critically explain learning transfer through the lens of the Kirkpatrick model, The HRD Research Evaluation and Measurement Model and Holton theory of learning transfer and many other notables.

Kirkpatrick's model is the most recognized training evaluation model having four levels (Kirkpatrick, 1979). This model considers employee' training experience and monitors its transformation into learning, change in behavior and its impact on organizational performance (Smidt et al., 2009). Past researches have acknowledged this framework as being simple and systematic to conduct training evaluation basing an established criterion (Alliger & Janak, 1989; Bates, 2004; Shelton & Alliger, 1993; Tannenbaum, Methieu, Cannon-Bowers, & Salas, 1993; Wang, 2003).

Table 10 A critical appreciation of the training evaluation framework

Level of Measurement	Application
Level 1 Participant's Reaction after the training session	Reaction concerning training reflected through a set of questions. Verbal feed, body language and observing participants linked with reaction.
Level 2 Learning Learning during training. The extent of change in KSA after attending training.	Pre-test is taken at the onset of the training session and a post test is conducted at the end of the training session. Any change in scores on measure of KSA is compared on demonstration of learners' new understanding. In some cases, specially designed performance tests and simulations are conducted to determine learning measure.
Level 3 Behavior Change in behavior fit with the job	Pre and Post training tests are taken to measure change in behavior on workplace. Results are evaluated as evidence for training effectiveness
Level 4 Results Performance change after training	Changes are recorded accrued over the time against baselines to ascertain impact of the program on organizational performance. Decrease in absenteeism and employee turnover, gains in productivity and reductions in cost are the visible indicators of positive results of training.

Source: Author

Based on four concise levels, this framework examines trainees' reactions at level 1, ascertains Learning at level two, behavior at level three, evaluates results at level four. According to the findings of Kirkpatrick, (1970), trainees must have elapsed three months at least since they last participated in the training. While the criteria set, the said expert opinion was kept in view.

Level 2 sets out to get wind of knowledge earned by the learners but this level is unable to highlight the trainees' future potential for implementing learning acquired during training (Bushnell, D.S 1990). Learning is assessed through taking tests, applying tools like role-plays, group evaluations, mockups, and skills practice to make sure that the content is absorbed by participants with allied know-how for its application.

Level 2 involves positive assessment of training participants but does not predict the application of learning back to the work (J.J. Phillips, 1997a). Level 3 deals with application of new skills but unable to foretell to what extent these skills will be applied and what change in performance these will bring along.

At this level, changes in the behavior of the participant are measured as they are back on the job, various assessment tools including observation, subordinate or supervisor interview, using a questionnaire for trainees' supervisor, and self-assessment of participant using a questionnaire or through focus group. Even though participants are assessed at Level 3, this does not guarantee positive business results and impact reflecting on the organization (Phillips, 1997).

Level 4 measures output, quality, cost, time and customer satisfaction but it does not pinpoint cost versus benefits or achievement. If the training program is not able to generate measurable business results, the cost incurred on conducting a program may overshadow the benefit received (Phillips, 1997). Effectiveness required to measure at level 1 is possible to get score of 4/5 against each area of rating; rating may result in presenting 100% effectiveness. If response gets at 4 with a percentage of 50%, training will deem 50% effective.

Gaber (1995) established that evaluation at Level 1 is liable for all kinds of courses. Level 2 evaluation seeks application with regard to application of specific skills like hands-on computer skills, typing skills. Change in behavior like evaluation is conducted at Level 3. These include e-learning courses for professional drug trafficking, communication as well as presentation skills. Evaluations at Level 4 pertain with courses of result-orientation; for instance e-filling.

Kirkpatrick's four-level evaluation levels which are presumed to suit public organizations provide a taxonomy of levels interlinked with each other starting from reactions, learning, behavior to results. (Goldstein, 1986) researched that these are not levels but steps of evaluation. (Hamblin, 1974) regarded the four evaluation levels as causally linked. Holton critically remarked that the KP model does not qualify as a model rather based on taxonomy of conceivable intervention outcomes for future research for developing the theory. Holton also designated that the levels involve weak causal linkages among the levels. Each level out of four levels of Kirkpatrick is self-regulating in its functioning. No causal link exists between these levels. Linkage among KP levels though weak but bears significance at their respective place. Further research specifies that the levels do not reflect type as hierarchical (Alliger & Janak, 1989) because the trainee's reaction (Level 1) does not reflect positively about gaining experience in knowledge (Level 2). A behavior in change (Level 3) at the workplace, after attending a training program, could be a result of something other than learning (Level 2) from the program. According to (Geoghegan, 1994), organizations should make the application of Level 3 and Level 4 easy and concise for others to make use of it. Action and Golden 2003 state that pre and post-training tests are essential for the evaluation of training effectiveness. (Everett Rogers, 2007) opines about status of the KP approach ought to be considered like scientific knowhow advancing through five-stage in relation to (DOI) model that stresses upon activity, knowledge, purpose, process, along with design. The KP approach was not researched for evaluating the areas of teaching, as well as administrative tasks. This underutilization of the KP model widened the gulf between users as well as non-users of this model.

The ASTD reveals that sixty seven percent of enterprises carry out program evaluations with the help of KP approach. Kirkpatrick's evaluation model has the status of the staple in the domain of training evaluation (Holton, E.F, 2005).

Despite criticism, Kirkpatrick offered logical constructs for program evaluation. The new evaluation "culture" (Twitchell, Elwood, Holton III and, James, Trott, 2000) encouraged the measurement of outcomes (results) rather than only outputs (activities done). Twitchell (1997) conducted a study on U.S. business and industry organizations that delivered technical and skills-based training.

The sample population was 348 organizations with a 35% response rate. Respondents indicated they evaluate 72.74% of their programs at Level 1; 47.05% at Level 2; 30.54% at Level 3; and 20.82% at Level 4.

2.36.1 Kirkpatrick Each Level Application with its Percentage

Work is done by Twitchell, (1997) provided empirical evidence and established ROI at Level 5 in his study by stating that trainees' individuals interact with the workplace environment and create characteristics that influence training effectiveness. According to Holton, (2007), ROI in training measures participant satisfaction with the program.

ROI in training measures changes in knowledge, skills, and attitudes. ROI in training measures changes in job behavior. ROI in training measures business impact by capturing changes. ROI in training compares program monetary benefits to the program costs. By considering these characteristics, training effectiveness can be better understood. The following table gives an account of the historical application of the Kirkpatrick model of training evaluation:

Table 11 Historical Application of the Kirkpatrick Model of Training Evaluation:

	Twitchell (1997)	Hill (1999)	Blanchard, Thacker, &Way (2000) Management	Non-management	Gomez (2003)	Phillips (2003)	Sugrue& Kim (2004)	Sugrue& Rivera (2005)
Level 1, Reaction	72.7%	80.6%	71.0%	68.3%	87.3%	72.2%	74.0%	91.3%
Level 2, Learning	47.1%	52.6%	17.2%	31.0%	54.4%	31.7%	31.0%	53.9%
Level 3, Application	30.5%	30.8%	37.2%	46.9%	26.5%	20.4%	14.0%	22.9%
Level 4, Impact	20.8%	16.7%	42.8%	35.9%	14.0%	12.2%	8.0%	7.6%
Level 5, ROI		3.7%			10.0%	5.3%		2.1%

The above data reveals that over the years, levels 1, 2 & 3 were employed more often showing acknowledgment among researchers for its viability in organizations. Level 4 and its application for evaluation showed a consistent trend as well along with ROI at level 5 for scanty application by the researchers.

Most of the survey studies are conducted at Level 1, using a questionnaire to measure the reactions or satisfaction level of participants. But it does not measure participants' ability to transfer knowledge to the workplace. A favorable evaluation at this level does not indicate that participants have learned new knowledge or skills (Phillips, 1997).

The information obtained at this level faces delimitation depending on trainees' reactions as measuring criteria that the program has achieved its conceptual and operational objectives satisfactorily (Warner and DeSimone, 2009).

KP model does not cover these factors specifically, therefore, evaluation made through the KP model will not be valid enough to gain recognition. A study of the healthcare industry showed that 80.58% of respondents evaluated their programs at Level 1; 52.59% at Level 2; 30.77% at Level 3; 16.70% at Level 4; and 3.73% at Level 5 (Hill, 1999). Models like Training Validation System (TVS) approach (Fitz-Enz, 1994), Input, Process, Output/ Outcome (IPO) Model (Bushnell, 1990), Hassett's training investment analysis approach; Kaufman's five-level evaluation model, Mahapatra Lai (2005) and Sadri and Synder (1995) presented theoretical perspectives instead of practical efficacy of these models (Harshit Topno, 2012). Kraiger's model identified target areas instead of adopting customary levels for evaluation. Each of the areas had different training content, design and criteria desiring visible change in learners' behavior, cognitive and affective aspects, in form of organization pay-offs in transferring learning and emphasizing results corroborating job performance, transfer climate and results (Kraiger, 2003). Kraiger's model did not present a taxonomy rather presented diverse modules from where an organization may be able to select their desired approach (Aguinis & Kraiger, 2009).

The model showed the direction but not able to tell how to achieve training evaluation through this approach. Literature could not present empirical consideration required to get a validity for establishing this model.

The training proves fruitful if evaluation becomes part and parcel of a planning activity (Brinkerhoff, 2006). Stephen R. Covey expresses his thought in his book, " the seven habits of highly effective people" that without identifying training objectives, a definite criterion, a set of guidelines, resources, a viable accountability system, positive results cannot be dreamt of. (Hutchins, 2009) stresses the need for starting to follow up campaigns after training. If these areas are made a part of the training strategy, organizations can better evaluate the investment made by them.

The research found that the KP model rarely went beyond the smile sheet test at the reaction stage and experience stage for capturing trainees' experiences (Nickols, 2005). Secondly, it is assumed that causality factor at one level causes to inform the others (Alliger & Janak, 1989; Holton, 1996; Bates, 2004) but this assumption does not reflect in Kirkpatrick model and provides no proof of assumed causality (Alliger & Janak, 1989; Alliger et al., 1997). Even though several models were presented subsequently, the KP model still holds its popularity among organizations (Bates, 2004; Rafiq, 2015). A model subsequently presented by Tannenbaum et al. (1993) stretched Kirkpatrick's approach and extended the focus on training attitudes in post-training phase-shifting the previous focus from training reactions. The research raised an argument that trainees after training are supposed to carry changed perspectives as compared to the time they joined training (Tannenbaum et al., 1993, p. 20), which positively affects trainees' self-efficacy, learning satisfaction, research divided trainees' behavior into two factions, one relates to behavior at training and the other pertains to behavior after training in terms of performance. It was required to ascertain the degree of acquiring knowledge during training and application of this knowledge after training to perform tasks i.e. training transfer (Tannenbaum et al., 1993).

In other words, the behavior was ascertained based on competency and change. This model reflected the same weakness as shown by Kirkpatrick. The model relied on trainees' reactions to evaluate training and ascertained the training performance based on learning during training and linked this learning causality with transfer performance and finally with results. Phillips added another level in his model of training evaluation thereby return on investment (ROI) was stressed upon to determine the value of an investment in financial terms (Phillips, 1991). The levels resultantly suggested by Phillips' framework are (1) reaction and planned action; (2) learning; (3) job application; (4)business results; and (5) return on investment. Phillips expanded Kirkpatrick's four-level framework by adding a fifth level, ROI. Return on investment is calculated to show the value of training investment in financial terms based on cost-benefit analysis extended over some time (J.J. Phillips, 1991; Phillips & Phillips, 2001; Kumpikaitė, 2007). To underpin the worth and practical value of training evaluation, the ROI must be measured to justify the investment raised in training (Stewart, 1999).

2.37 The HRD Research Evaluation and Measurement Model

Motivation to transfer lies in trainees' desire to acquire the desired degree of knowledge and skills to improve their job performance (Noe and Schmitt, 1986). Strong training material will induce the trainee to carry it to the job place and apply it to improve his degree of performance. It has been observed that trainees those fall in this category, have the inherent desire to excel. The said model conceived by (Holton, 1996) attempted to identify the deep relationships among different variables targeted motivation to transfer.

The four variables such as motivation to transfer, motivation to learn, individual performance and learning outcomes all contributed to transfer directly. The HRD model attempted to identify factors that can support trainees to transfer what was learnt from training directly and indirectly. The HRD model, however, ignored the importance of knowledge sharing behavior that plays a pivotal role in TT. Numerous theories have highlighted the human behavior and predicted motivational behaviors that help them to advance their performance level.

The stance is supported by expectancy, equity, and goal setting theories. Vroom (1964, p. 17) opines that a fastidious act is likely to bring the choosy outcome. This is the basis of expectancy theory presented by him. If his theory is translated into another term, a man is motivated by two factors i.e. desire or fear. Desire may be a job or incentive or facility extended to him and fear of losing these things. Vroom believes that an individual is pushed by his capability or skill not his willingness to perform. In practical life, it has been observed that if a person is unwilling to perform by his internal drive, no one can compel him to perform even though how competent or capacitated he is. (Porter and Lawler, 1968) presented an extension to the Vroom model and researched that behind the relationship between job satisfaction and performance, rewards play an adequate role. They described that inherent ability, individual traits and employees' degree of understanding his job when supported by training effort, leads to TT. This leads to arguing that it is the moral right of an individual that he ought to be treated fairly but when equity is imbalanced, individuals get depression and stress. Equity theory acknowledges this stance. People construct and strengthen their beliefs in these circumstances (Carrell and Dittrich, 1978).

Perceived inequities can be minimized through a change in the environment at an organizational level (Campbell and Pritchard, 1976). If individuals would try to minimize inequities, this will prove costly (Burke, and Hutchins, 2008).

Literature provides evidence that bigger organizations irrespective of size, type or sector invest more in training and have more refined HR departments (Cifalino and Baraldi, 2009; Kouhy et al., 2009). Many have focused big and stable organizations as a unit of analysis in management studies (Tanriverdi and Venkatraman, 2005). Results found valid for larger organizations in one context may diverge in different contexts (Lee and Choi, 2003).

Despite variations in HRD activities, organizational context cannot be ignored while considering HRD activities within an organization (Tsoukas and Vladimirou, 2001). In the awake of great divide among training theories, this research study conducted critical enquiry into the theories such as training engagement theory (TET), cognitive load theory (CLT) and learning transfer theory (LTT) to find their relevance to training and testing in local context.

2.38 Critical Enquiry into cognitive load theory (CLT)

CLT deals with working memory and "design of instructional system". According to the main thrust of CLT, humans have limited working memory (information processing area). In the case of an extensive task, learning style will be outfitted to absorb extra learning during a short interval of time (Cowan 2001; Dosher 2003). Operational activities going on within working memory as two sub-systems enable us to hold "visuospatial information" such as written text, diagrams and "phonological information" such as narration (Baddeley and Hitch 1974). On these operational lines, CLT recommends a remedy to utilize working memory capacity by offering a flexible instructional system design. That is not possible until the cognitive overload is managed to subside.

The past research has highlighted the importance of working memory for its cognitive and cerebral functioning capacity (Yuan et al. 2006). Human functioning depends upon the design of artifacts such as car operation (Forlines et al. 2005) and financial data processing (Rose et al. 2004).

Instructional design is another area that is characterized by the implications of working memory. CLT takes into account different types of contributions to cognitive loads though there is no direct measurement of cognitive load. (Stull and Mayer, 2007) regarded transfer test performance as an indirect method to measure generative and extraneous processing during learning.

High transfer test performance is an indication of "less extraneous processing and more generative processing during learning''. However, this type of reasoning involves a great deal of uncertainty and the need for direct measurement of the cognitive load was emphasized. (Mayer et al. 2002, p. 180), therefore, stated: ''admittedly, our argument for cognitive load would have been more compelling if we had included direct measures of cognitive load…''. Three different types of techniques are used to measure cognitive load: "self-ratings through questionnaires, physiological measures (e.g., heart rate variability, MRI), and secondary tasks" (Paas et al. 2003). Paas offered the one-point agenda of mental effort on a 9-point rating scale (Paas 1992, p. 430) without using a standard format. The aim was to build an index based on perceived reported effort. However, the timing of the questionnaire was reiterated upon. Many studies following this practice (Kester et al. 2006; Paas 1992; Paas et al. 2007; Paas and van Merrie¨nboer 1993; van Gerven et al. 2002). Later studies used a 7-point scale (Kablan and Erden 2008; Ngu et al. 2009; Moreno and Valdez 2005; Pollock et al. 2002).

Many others used 5-point scale (Camp et al. 2001; Salden et al. 2004; Huk 2006), some used a 10-point scale (Moreno 2004), a 100-point scale (Gerjets et al. 2006), and a continuous (electronic) scale with or without involving numerical values (Swaak and de Jong 2001; van Gerven et al. 2002). Research provided evidence that "the outcomes of studies may differ significantly depending on the specifics of the question asked" (Gog and Paas, 2008).

It was deduced that "when a certain condition has a lower reported load, this condition is the one best suited for learning" (Van Merrie¨nboer et al. 2002). As each condition is distinct in reporting cognitive overload, multidimensional conditions should cover different concepts. Relying on one concept in totality will not be justice while evaluating cognitive load (Ayres 2006). Measurement of cognitive load as one concept will leave no difference between intrinsic, extraneous and germane load (Wouters et al. 2009).

De Jong et al. (1999) emphasized to measure cognitive load separately. Participants were asked about the perceived difficulty about the training content, the environment, and perceived ease to understand the instructional measures including the application of tools. As narrated above, extremes cognitive load was found affecting performance (Fred Pass, Alexander Renkl, John Sweller, 2004). Extreme cognitive load may be low (under load) or high (overload). If the load is excessively low or excessively high, trainees' current stock of knowledge, skills, and attitude gets shock waves and frequency of contribution to training effectiveness derogates (Teigen, 1994). So, in situations where learning demands remain low, the trainee will seek benefits from the conditions that have a high load. In reverse, the learning situation with the high load will be benefited by practicing conditions having a manageable load (Wulf and Shea, 2002). Two situations depicted by CLT make these supportive for training effectiveness. Simultaneous tasks overwhelm a trainee and he or she has to process these simultaneously.

Following this, the actual learning begins. CLT postulates that training can be made increasingly effective if trainee cognitive needs architecture is met.

Cognitive architecture is composed of working memory that is limited to absorb new information (Paas, Renkl, & Sweller, 2003). Research has proved that in case of familiar material, this limited working memory becomes unlimited, their capacity to learn and absorb new knowledge and skills can be enhanced (Hutchins, Carolan, & Cumming, 2012). The scientific evaluation presented by CLT provides a good basis for training effectiveness. Trainees learn best under the conditions favorable to his or her cognitive learning architecture (Mayer & Moreno, 2003; Paas & Van Gog, 2009; Sweller, 1994; Wickens, Hutchins, Carolan, & Cumming, 2012).

2.39 Rationale of adopting the Learning Transfer System Inventory

The training evaluation model presented by Holton et al. (2000) posited that the manifesting definite variables support to transfer learning to the work and training transfer occurs. Such factors include individual selves, training conditions and organizational response. The HRD literature offers an inventory based on the Learning Transfer System (LTS) established by Holton, Bates, and Ruona (2000). LTSI explains manager-supervisor relationship that provides a framework to create an enabling environment for learning (Holton, Bates and Ruona, 2000). This enabling environment removes uncertainty in the organizational environment and encourages trainees to apply their best of skills and knowledge (Elangovan and Karakowsky, 1999). Nijman et al., (2006) has cited (Lim and Johnson, 2002) that managers' familiarity with trainees affected transfer that strengthens training effectiveness.

The way managers give signals to its employees shows their interest and involvement in getting the employees ready to prepare for tasks (Lancaster et al., 2003). Managers can influence the work environment positively or negatively (Tannenbaum and Yukl, 1992).

In the cost vs benefits equation, progressive organizations strive to get ROI to realize training transfer (Holton, Bates and Ruona, 2000). Diagnosing the factors that cause blockage in the transfer structure. The LTSI identified main variables including role & impact of environment, ability, and motivation on training transfer while specifying a chain of secondary variables including efficacy beliefs, performance, and learner's willingness to learn contributed to the training transfer. The LTSI model sought its application in Taiwan as well as Thailand to validate the factors backing training transfer and sound valid (Chen 2003; Donovan et al. 2001; Holton et al. 2003; Yamnill, 2001).

The effectiveness of training was assessed through the LTSI scheme of variables after KP model (Donovan et. al. 2001). Learning Transfer System Inventory (LTSI) was adopted because of its replication in Asia and in the Middle East and found useful to measure direct transfer of learning. It was selected on the basis of its predictive validity and its deep evaluation of +/- outcomes that training gets promotion since trainees get clarity about fulfilling expectations from training and the way program affects performance. Moreover, 16 factors researched by Holton, Bates and Ruona, (2000) were adopted for testing this theory was further recommended by (e.g. Colquitt et al., 2000; Smith-Jensch et al., 2001) testing of these variables is possible on the basis of mediation or moderation.

LTSI identified 16 established and published factors that impacted training transfer:

1. **Learner willingness** (LW) to learn from training

2. Impact of **environment, ability, and motivation (EAM)** on training transfer

3. **Transfer motivation**-trainees' intrinsic motivation contributes to training transfer.

4. **Peer support (PS)** boosts the on-job application of new KSA learned during training.

5. Without **supervisor involvement (SI)** and interest- training transfer is not possible

6. Positive **personal outcomes (PO)**- Positive personal outcomes create positive outcomes in terms of training transfer.

7. Facing **Supervisory sanctions (SS)**- Supervisors hinder training transfer.

8. **Content validity (CV)**-content appears valid and fit with organizational objectives.

9. **Training design (TD)**-it offers a plan to support training transfer and enables the trainees to transfer learning to the job

10. **Individual capacity** – role of personal capacity to transfer training

11. **Opportunity to use-trainees-deployment of** resources at the disposal of trainees.

12. **Self-efficacy level**-individuals' confident to change their performance through the transfer of learning related to personal capacity for transfer (Colquitt et al. 2000) and (Dumay, 2004).

13. Transfer effort performance expectation- the rendered effort as per expectation.

14. **Performance outcomes expectations-** expectations guide performance outcomes.

15. **Feedback**-remarks about job performance.

16. **Openness to change**-following negative norms blocks change for novel application.

LTSI scales are capacitated to predict learning transfer as well as learning retention (Meyer, 2009). These offer factors that helped to convey the implications delivered by the HRD Evaluation Research and Measurement Model (Holton, 1996). In this new era, public

organizations are under constant pressure to innovate and support growth. These organizations tend to outperform their peers by creating new business dynamics and new ways of collaboration. Literature reviews reveal the "missing link" amid training and its interpretation (Thalheimer, 2011).

A training process involves three dynamic areas training environment, support for learning application and subsequent, job performance (Thalheimer, 2011). For employees/trainees, understanding the ideas along with materials delivered by the training is not sufficient. What is important is to remember the information taught during training and try to pave way for novel application at the job.

Remembering is, therefore, the "missing link" between training and its subsequent performance as it plays an effective role in the job. Seven steps later called maximizers were offered to maximize the translation of training: "Valid credible content, engaging learning events, support for basic understanding, support for decision-making competence, support for long-term remembering, support for the on-the-job application of learning, support for perseverance in learning" (Thalheimer, 2011).

First of all, it needs to be ensured that training content is correct, job-relevant and up to date. Do the learners are adequately engaged and pay attention? Are they motivated enough to learn? They must understand the basic concepts to take realistic decisions, supporting long term memory. A critical insight of training literature reveals a score of missing links from training to performance.

2.40 Holistic Training Evaluation Model (HTEM)

The HTEM offers five valid factors that constitute a potential training evaluation strategy, on the basis of what-how-when-who-when-whom. An effective and established training plan can be acquired at the disposal of the management as a result of repeated evaluation. This approach witnessed successful implementation in business organization in Spain (Pineda, 2007).

2.41 SOAP model

(Jonathan Passmore and Maria Velez, 2012) offered a five-level training evaluation model for HR SOAP-M. Level 1 pertains to self-evaluation at the end of the training session. This can be fruitful for trainers and training organizations to get instant feedback. Level 2 includes pre and post assessment made through managers, peers or stakeholders. Level 3 relates to the achievement of important tasks or goals set. At this level, change in behavior or personality is adjudged. Level 4 of the SOAP-M model focuses on the potential of individuals and compares it with their actual performance. At level 5, a meta-analysis in the form of reviews of past interventions is carried out.

Most of the models on training evaluation sought to ascertain training question 'did training work?' to comprehend the training effects (Kraiger, Ford, & Salas, 1993), the taxonomies proved myopic to distinguish clearly between different perceptions to expectations found in organizations (McLinden & Trochim, 1998). The current theories were reproved for embedding a narrow domain of training (Sitzmann & Weinhardt, 2015). Subsequently, the needs of different stakeholders are ignored during the evaluation (Guerci & Vinante, 2011).

Table 12 Reflection of training evaluation models presented on HRD, HCM & T&D

S#	Empirical Approach	Applications/Findings
1	Kirkpatrick	Kirkpatrick conceived four inter linked stages of evaluation reaction, learning, behavior and results.
2	Kraiger, Ford and Salas	Three areas of learning outcomes were emphasized i.e. cognitive, skill oriented and affective attitude for the purpose of evaluation.
3	Kaufman and Keller	It offers five levels to evaluate: enabling and reaction, attainment, use, organizational productivities as well as societal outcomes
4	Hamblin's 5 levels	Hamblin was one of the first to modify Kirkpatrick's model.• Level 1: Reactions • Level 2: Learning • Level 3: Job behavior • Level 4: Organization watching change in performance by the participant • Level 5: Ultimate value – in terms of the financial effects.
5	Guskey' Critical levels	Level 1: Participant reaction towards information as well as fundamental human needs Level 2: Participant learning: examine learning level of participants. Techniques applied are taking tests, virtual reality, personal reflection, full-scale demo. Level 3: Organizational support and learning to examine and analyze skills gained by staff development Level 4: Participant application of new knowledge and skills Level 5: Learner outcomes

6	Indiana University developed a taxonomy of evaluation based on six strata	Stratum 1: activity accounting examining volume and participant level. Stratum 2: reactions at participants' level. Stratum 3: learning at participants' level. Stratum 4: transfer at participants' level. Stratum 5: business impact Stratum 6: social impact (changed in performance and reflection on society). This distinguishes the model from the one presented by Kirkpatrick.
7	The Industrial Society (now the Work Foundation)	Stages 1-6 include: Recognize the business need Describe the growth objectives Scheme of the learning procedure. Familiarity with the learning course Practice that underpins Ascertain the benefits accrued
8	The four-stage KPMT model	Reaction facing training • Learning • Transfer • value addition at Bottom line
9	Nine outcomes model	Reaction to training – Satisfactory or not Knowledge acquisition – did learner improve knowledge and skills? • Attitude shift – did shift in attitude occur? • Behavior change – did change in behavior occur? • Results – whether the results reflected success? Return on investment – how can return be assessed with regard to cost? • Psychological capital – whether the training impact corporate image?

10 Systems-based Models	Organizational elements model presented by Kaufman and Keller (1994)	• Level 1: Input – akin with Kirkpatrick's reaction level, with the inclusion of more resources and methods; • Level 2: Process – this level is also akin with the reaction level, but includes the analysis to check implementation of the intervention to achieve its objectives; • Level 3: Micro (acquisition) – this is akin with the learning level and examines individual and small-group level mastery as well as competence; • Level 4: Micro (performance) – deal with behavior and utilizing the skills as well as knowledge. It emphasizes more on application instead of skills transfer as well as knowledge; • Level 5: Macro – deals with the results level and turns to examine organizational contributions as well as payoffs; • Level 6: Mega – an added level probes into societal outcomes.
11	Holton	Holton identified five kinds of variables those are inter-related must be considered for training evaluation. These variables are secondary influences, motivational elements, environmental elements, outcomes and qualifying elements.
12	Philips	Philips added fifth level ROI besides trainees response, learning achievement, change in behavior and results in form of outcomes
13	CIRO	Context is important to prepare input, reaction and output
14	Sveiby (1997)	Values and attitude measurements
15	Hurley and Hult (1998)	The scenario in people help out others while performing their tasks
16	Burden and Proctor, 2000	The Bell system gave the framework comprising of four levels: Reaction (management reaction about acquisition of training objectives), capability (enhancement of trainees' capacity), application (training transfer) and value (training worth) levels.

As per findings of (McGriff, 2001), Instructional Systems Design (ISD) Models provide "systematic guidelines instructional designers follow to create a workshop, a course, a curriculum, an instructional program, or a training session". The system approach conception delves into the training procedure illustrated by a methodical process to identify training needs and analyze individual and collective performance. The system approach conducts a training audit logically and coherently to make sure that training programs and its contents are working efficiently to configure with the changing needs of the times. ISD models take on the behaviorist/cognitive dimension of human performance.

These models aim to examine the phenomenon in five "analyze, design, develop, implement and control" phases of a training program (Teck, Sharifah, & Kadir, 2016). An Eight step instructional plan was proposed by (Mager, 1997) constituting a broad canvass to conduct training evaluation. Training manual and guiding material provides a minimum or token information about how organizations can evaluate training effectiveness. With proper assessment of training investment, investigations are required to quantify uncertainty in the areas of training performance evaluation and training system design. To deal with these two issues/gaps, a framework is direly needed in local context along with the relevant methodology to evaluate and predict training effectiveness. The outcome of the debate on evaluation models leads to infer that evaluating training and development have been a subject of the recognized body of knowledge. Organizations give limited consideration to the systematic evaluation of training investment activities. We turn to concepts that explain the participation of trainees, trainers and training management as stakeholders in the process of evaluation with the view to expand the array of variables about evaluation.

All of the preceding training evaluation models analyzed post-training subjective and objective data results for training evaluation. Based on the above analysis, this research study presumes that instead of using a measurement system that solely relies on post-training data, knowledge of factors (individual and category) influencing training can reinforce a measurement system and support training management to improve the instructional philosophy and training design. The outcome will be handy to predict the effectiveness of training. The following tables give an account of prominent models along with their findings that provided the researcher to draw a rational conclusion to finalize the theory likely to be adopted for testing.

Majority of the training evaluation models presented either a checklist or taxonomy or framework. Many reflect a shortfall between theory and practice and do not address 'multi-stakeholder evaluation'. Moreover, much reliance is shown on the commonality of factors (Marco Guerci, Marco Vinante, 2011). Subsequently, practices do not proceed in the right direction. Moreover, because of its complexity, training institutions rely on ad hoc evaluation and eager to identify systematic ways and techniques between approaches and methodologies of the evaluation presented earlier. Hence, it is useful to gain insight into the mechanisms of evaluation of training effectiveness.

2.41.1 Types/methods/instruments of evaluation

As stated above, during the process of evaluation, a variety of information is required for which different methods/instruments are deployed that provide a basis for decision making. A score of researchers such as (Holden and Beardwell 1994:351; Rothwell and Kazanas 1998:174) and (Van, Nel, Loedolff, and Haasbroek 2001:215) presented several evaluation instruments:

2.41.2 Rating method.

The process in which evaluation is made based on the judgment is referred to as rating thereby inter-related facts are collected and interpreted for constituting the process of judgment and to finalize a clear stance. As facts remain silent until interpreted by humans, their narrative is imperative. These facts along with results need to be judged or rated. This rating is bifurcated into two categories i.e. relative or absolute rating. Relative rating is applied where the situational or individual comparison is required to be made. Absolute rating is applied when an absolute standard is assigned to the factor or value is measured against a criterion without taking account of other situations or individuals.

2.41.3 Questionnaire method.

Deployment of a questionnaire is made to get feedback about a prevalent course or activity such as training. This mode of data collection was considered useful by (Tracy, 1984:190) whereby an instrument builder can't conduct interviews personally from a larger segment of people that are targeted to obtain information.

2.41.4 Interview method.

The decision to deploy the interview method is taken with the juxtaposition of other modes of data collection. It has been found helpful to gather information directly in face to face setting. This method is expected to deliver information based on describing events, behavior or attitudes or perceptive values.

2.41.5 Trainer reports.

Trainer reports serve as a direct and viable source to get real-time information for evaluation. Besides this reporting, written tests at pre-post levels, exams, assignments, and building projects contribute significantly to the process of evaluation.

Experience has helped to understand that the neutral 3rd party should monitor and evaluate the pre and post-training tests. Moreover, participant observation gives a clue about the instructional process during the training setting and provides valid data for evaluation.

2.41.6 Group discussion.

Group discussion has been found useful to deliver actual information on trainer effectiveness, training objectivity, and availability of quality facilities. Following the broad discussion on the different instruments of evaluation, it would be feasible to take into the methods and models deployed from time to time for evaluation.

2.42 Methods of evaluation

Literature provides evidence that interviews, questionnaires as well as behavior analysis serve as a great source to provide information data for an evaluation conducted by the government organization to ascertain the influence of training and development or the scenario of return on investment. Without conducting an evaluation, the PSOs are not better placed to claim the acquisition of desired results as an outcome of training and development programs aiming to improve the employee performance for assuring desired service delivery. In this regard, a definite method with the maximum probability of yielding results beneficial for the organizations must be followed to evaluate the impact of training and development programs. The most prevalent techniques of evaluation include open-ended reactions or comments, task-based performance measures encompass simulations along with role plays, questionnaires, participants' self-assessments, reactionaries, behavior analysis, interviews, and cost-benefit analysis (Rothwell and Sredl, 1992:420). Worthwhile to mention here that a few of these methods find pertinence with formative evaluation while some favor summative evaluation.

Summative and formative come up as two vital dimensions of training evaluation. Summative evaluation measures the outcomes at a particular time after the delivery of training (Brown and Gerhardt, 2002). Whereas formative evaluation is conducted to identify weakness in training delivery during the progression of a training program at any stage (Brown and Gerhardt, 2002). Social learning theory provides a road map that familiar material becomes a social vehicle for people to learn better and apply it at the workplace in case of congruence of learning materials with actual materials.

Mixed method research conducted by (Warren, 2000) reiterated the need to adopt customized training by developing a partnership between an organization and its trainees. Warren (2000) disclosed that customized training is useful to address the traditional and non-traditional learning needs of management at all levels and equip them with the knowledge required for leadership. While conducting survey in pursuit of learning acquisition of UK based management development training program, a research found that customized training is useful to inculcate urge and high energy among participants, support rigorous learning, provide opportunities to work for team building as well as cultural change, to look for more opportunities to apply learning and provide support to the participants and enabling the organization to monitor the training and development program and subsequent performance of participants. To expedite the application of training to the workplace, researchers emphasized that training programs ought to augment content congruence (Baldwin & Ford, 1988; Garavaglia, 1993; Yamnill & McLean, 2001).

2.43 Use of technology in evaluation

Traditionally, training is used to teach a person how to execute a task, but this philosophy needs alignment in today's technological environment. Now public managers and non-managers must think of how to make practical decisions to address problems (Cornell-d' Echert, 2012). Unlike robots that are built for tasks operating under a set of rules and commands, human managers are to prepare for situations. For this purpose, it is imperative to enhance their thinking ability. A substantial difference exists between educating and training a manager. "At its most basic level, training can be thought of as the planned and systematic activities designed to promote the acquisition of knowledge (need to know), skills (need to do), and attitudes (need to feel).

For trainees to obtain the required competencies to successfully perform the overall mission objectives, training must result in sustainable changes in behavior and cognition." The performance of any system directly depends on the training of its managers and non-managers who constitute the system (Salas, et al., 2012).

2.43 Limitations of evaluations

The literature review accentuates extensive research on training as a field of study but neither of the models explicitly addresses the interactive link between training effectiveness and organizational performance. Most of the models presented are based on theoretical work out rather than an empirical investigation. The concept of limitations of evaluation draws on evaluating the complexity of the training evaluation system in vogue by exploring different approaches about summative and process evaluation as well as developmental approaches with the view to ascertain the best approach to conduct the evaluation (Carolyn Steele Gray, James Shaw, 2018).

According to the development approach, evaluation findings are grounded through the lens of complexity theory originating from idea building to implement the new model, and to bring alterations as per changing needs of the environment (Patton, 2011). Successful events in development evaluations are contrary to measuring success as compared to that of summative evaluations. Summative approaches focus pre-determined goals for success to generalize the results to the different contexts. As regards developmental approaches, (Patton, 2006) stated that: any of the conventional criteria that delimits evaluation either through pre-determined goals, replication or generalizability are not found appropriate or effective in highly impulsive environments, interventions leading to systems change and growing social innovations (p. 31). According to Patton, summative evaluations, however, cannot be conducted in a volatile environment because interventions can be held in abeyance for a long period to conduct a summative review" (p. 31). A research conducted by (Rogers, 2008) found out that setting premature outcomes is not adequate as done in case of summative evaluation, instead focus moves on to develop and redeveloping program theories (or logic models) that find a link between program activities and projected short- as well as long-term outcomes (Rogers, 2008). The design process is of iterative nature that involves framing and reframing of emergent problems and their subsequent solutions to explore a multitude of paths as well as options (Brown, 2009; Dorst, 2011; Kolko, 2013). In contrary to design causality, design thinking offers a new methodology that helps to create ideas as an upshot of creative processes (Lowe Nielson et al, 2014).

Development evaluation advances with a potential design-based approach to watch implementation as well as evaluation. Primarily, the design is realistic and practically helps to make changes in physical artifacts or delivering a service altering people experience in different ways (Steen, 2013). In comparison, service design is altogether holistic, humanistic based, and iterative that does not free of the influence of systems ecology amidst providing of services (Saco and Gonclaves, 2010). Service design brings in novel things to happen but in fewer doses, attaining feedback on spot to determine the growth of adaptation. Amidst a score of service design methods, laser focus is on value building by offering novel services to all stakeholders with maximization of benefits (Osterwalder et al., 2014). The core aim rests on value creation about a service that is persistently updated to attain the desired goals as compared to evaluating program effectiveness at the post adhoc stage. In this environment, a developmental evaluation based approach, inspired by service-design thinking, emerges as the best approach to evaluate intricate interventions that are required to acclimatize with local contexts during the progression of life-course. Today, "Design Thinking" is acknowledged as an exhilarating novel paradigm (Dorst, 1997) for tackling diverse problems relating to notable professions such as Information Technology (IT) and Business (Martin, 2009). These processes occur in seven stages simultaneously and undergo repetition (define, research, ideate, prototype, choose, implement and learn) (Simon, 1969, 55). The design thinking tends to supply the market with new ideas, developing products, prototypes, innovative processes and so on. The design thinking tends to supply the market with new ideas, developing products, prototypes, innovative processes and so on. Design thinking works to implement evaluation by removing impediments, merging supply and demand and develop the business as a part of the design process (Venkataraman and Sarasvathy, 2001) as depicted in the following figure:

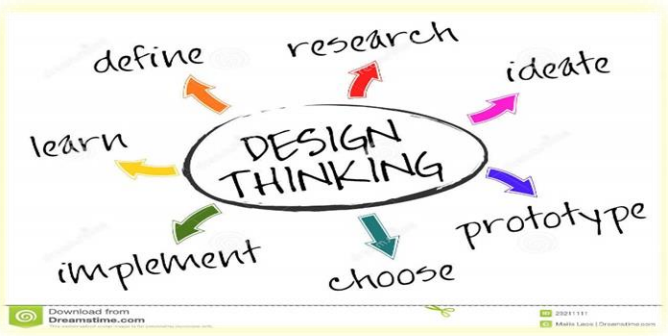


Figure 8 Seven stages of creative processes

Innovative design practices have expedited the demand to get a clear concept of knowledge on design thinking along with its salient features (Lowe, Klyver, Rosguared, & Bager 2014). Different researchers have accentuated design thinking in many ways. These are similar but offer design thinking in different ways. Many have expressed 'design thinking' with the view to broaden the collection of strategies that address the most knotty and open-ended challenges faced by contemporary organizations (Stacey, Griffin, & Shaw, 2000). Design literature reflects a novel standpoint of design thinking that proves supportive to handle a problematic situation (Schon, 1983).

Research on design thinking enables one to remain solution-focused instead of problem-focused in the realm of complex human reality (Dorst, K. 2011). Nutshell is, design thinking is a unique window to develop new ideas thereby designers are in a position to find an adequate space to deal with issues by conducting exploratory insight into design tasks.

2.44 Concept of mediation of training evaluation

The training evaluation can mediate on the wheels of five major concepts:

Feedback: by this concept, trainees are given feedback to the trainees by explaining the objectives and its linkage with their learning needs and performance.

Research: By it, the relationship between acquired and delivery of knowledge, as well as training is found out.

Control program: It extends to control the training program as it is vital to make training effective and bring advancement to the training.

Power games: Evaluative data provides highly authoritative employees i.e. the top management to use it for beneficial decision making.

Intervention: By intervening means to determine the comparison of the actual outcomes with the anticipated outcomes.

2.44.1 Process of Training Evaluation

Literature involves the evaluation process at three stages such as before, during and after training. Assessment of knowledge, as well as skills possessed by trainees, is made well before training. Generally, it is considered a wasteful activity as they do not know about training objectives, later they are asked to give their perceptive views about the delivery of training methods and they're useful with their desired learning.

This phase of evaluation is initiated during training with the start of instruction. Short testing conducted at different intervals regularly along with monitoring of performance was found helpful. In this phase, the assessment of knowledge and skills acquired by trainees is made after training to ascertain the training effectiveness.

Design on this phase is required to know about individual and organizational levels. For this purpose, different methods/techniques are popularly employed during this phase:

Observation-trainees' behavior is kept under observation at the workplace at all phases of training i.e. before, during and after training.

A well-trained observer monitors and records trainees' behavior on displaying communication, inter-personal skills, time management, customer handling, productivity, sense-making and use of critical thinking.

2.44.2 Questionnaire

This primitive method is run with trainer and trainee in which both are asked through a range of questions based on multiple choices as well as rating scales. Depending upon conditions and research design, other stakeholders and management are also included to evaluate training effectiveness.

2.44.3 Interview

Interviews exist either structured as well as an unstructured form for execution. Structured interviews are comprised of pre-programmed questions while unstructured questions take on basic questions depending on the interviewer seeing learner response. Though much time is consumed it helpfully gives nearly exact mind maps on learner thinking. It can be conducted to retrieve both qualitative as well as quantitative information. A research study gave the idea of UbD (understanding by design) that presented backward planning design marking definite criteria to expedite evaluation. The backward design emphasized the sound instructional process as key to achieve goals through trainees' learning and comprehension instead of merely teaching (Wiggins and McTighe, 1998, 2005).

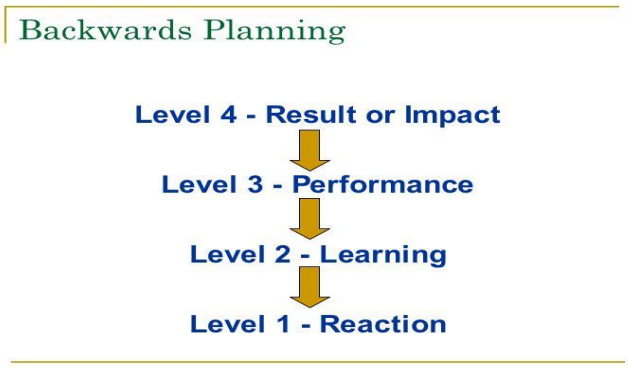


Figure 9 Backward planning

To conduct optimum planning as well as analysis, there is required to move backward through identifying progression of levels 1-4:

Level 4: The wanted impact to look for the improved outcome or result-oriented performance.

Level 3: The extent of performance shown by an impactful learning

Level 2 To understand the level of learning required for performance in the form of the knowledge and skills

Level 1: Basis of their perception

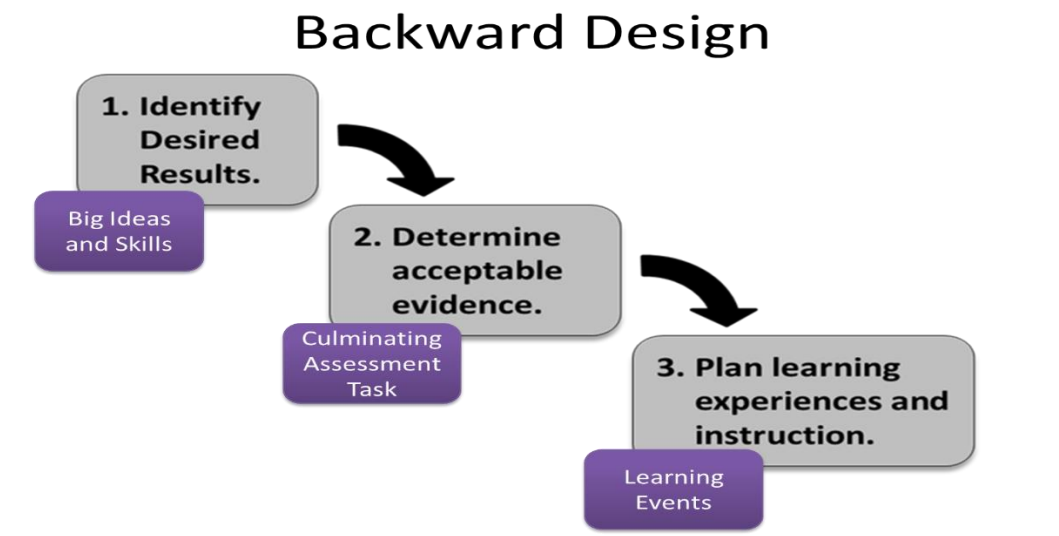


Figure 10 Backward design

2.45 The Research Setting

The research was executed in a large and sensitive public organization operating throughout the country. It was agreed with the management of the organization that every kind of confidentiality will be maintained about employee data and other information that will come across during the process of data collection. This confidentiality was in any way not to hamper with the research methodology adopted by this research study. This confidentiality factor was not allowed to contribute to the limitations of this research.

Perpetual re-skilling and undertaking new experiences is the hallmark of the 21st century based career model. The skills landscape as well as hiring criteria to point towards pertinent human skills but the majority is unprepared to take on the challenge to face (Otoo, et al., 2019).

The report postulates that the public sector serves an active role in selecting and developing human talent. According to the Edelman trust index, "*people worldwide place 52% trust in business to "do what is right" versus 43% in government*". The public sector is grossly impacted by the external environment and perceives the leadership gap in society.

Public organizations are under constant challenge to maintain internal agility to respond effectively to deal with the exterior ecosystem, thus serving to overcome hurdles to their mission (Report on Global human capital trends, 2018). The public sector workforce is evolving into knowledgeable human capital where 42% are not able to manage their performance. Seeking new pathways, public organizations are confronted with a daunting task to generate unique experiences for individuals. To squeeze a "21st Century Career Mindset," the public sector carries the opportunity to enrich growth as well as development, with a multiplicity of experiences, emphasizing lateral movements instead of hierarchical across organizations (Sumrin Kalia, 2013). The sample size is planned to set a continuum of the sample selected from a given population. As per the study design, the study was executed with multi-source in four steps under non-contrived natural conditions.

(i) Selected public managers, non-managers, supervisors and training managers.

(ii) Reviewing the framework applied to know the individual and category factors affecting training effectiveness

(iii) Initiation of data collection and its analyses to get results

(iv)Developing understanding and awareness about elements that contribute to training effectiveness.

PSOs requires culture where objective knowledge should be desired with special focus on cognitive content. In a reverse culture, instead of skill-based and affective content, preference is more on getting subjective knowledge (Sununta, Duangporn, and Malee, 2016).

A research study identified three categories of training contents cognitive (fundamental knowledge about certain job roles), skill-based (how a task is to be done) and attitudinal content (attitude culture and values promising high confidence and self-efficacy) (Yang, Wang, Drewry, 2009).

Training in PSOs is conducted in an unprofessional manner, without conducting TNA before training, with the selection of right trainees and without conducting program evaluation (Khalid et al., 2012). Most of the managerial decisions are constrained by the organizational culture (Taylor, 1996; Wilkins, 2001). Most of the training models and frameworks followed in Pakistan belong to western culture. These may not prove effective in non-western conditions. Furthermore, these are situational and pertain to a particular context (Khalid et al., 2012).

2.46 Research gaps in context of a developing country

Training is in constant pursuit of developing managers in the public sector to bring change and innovation in their day to day office activities (Kim, 2005) but practically there are no systematic and coherent training programs for non-managers in an organizational setting. That is why there creates a huge gap in work efficiency and the effectiveness of managers and non-managers in the public sector. This provides a significant rationale to conduct a research study on managers and non-mangers perceptive contribution to training effectiveness.

Past researchers found that “trainees’ attributes incl. trainee’s characteristics; motivation, learning styles and attitudes influence training effectiveness in non-voluntary training scenarios” (Clark, 1983, 1994; Noe, 1986; SitzmannIt et al., 2006). But it was not answered how these influence training effectiveness.

For this research study, it is unknown in a developing country context, how training characteristics affect training effectiveness that ultimately impact organizational performance. A critical review of the pertinent literature review on lack of training effectiveness in the background of a developing country, the following gaps in literatures are discussed in the approaching section.

1. The government is investing a lot of revenues on training management at all levels but public organizations are not able to evaluate whether this investment is proving borne fruit. Investing a huge sum in training without measuring its effectiveness is a major gap that needs to be investigated.
2. There is also a dearth of research on the TE-OP relationship in the particular context of developing countries such as Pakistan. Moreover, research studies that examined the impact of training effectiveness (TE) on organizational performance either lack theoretical reasoning or underprovided a holistic view of the training practices and their impact on organizational performance. So there is a dire need to investigate how TE affects the performance of public employees especially in public organizations of Pakistan where the role of a public employee is much more critical than any other sector for its contribution to country’ GDP.

3. Public service in Pakistan is passing through a critical phase of its history with the ever-increasing need for a paradigm shift. To become fit with this shift, it is direly required that public administrators must transfer what they learn during training and organization must evaluate their competency and administrative skills. But the current working of public managers does not reflect the desired quality of service level. This missing link may be attributed to fact-finding research on inadequate training effectiveness.
4. Apprehensive financial conditions in developing countries and vibrant globalization warrant the need to seek equilibrium between effective analyses of trainees at training and evaluate their contribution at the workplace.
5. There exists a great deal of interest in training effectiveness in the training field but it is not without confusion. There is a lack of consistency in the conceptualization and operationalization of training effectiveness.
6. In wake of the low current strength of empirical investigations in Pakistan, more and more studies on training effectiveness in the public organizations is required.
7. There is a paucity of studies in the context of low or no or unsystematic evaluation of training in the public sector. These gaps require to be addressed from the perspective of the developing country (Kuipers et al., 2013; Senior and Swailer, 2016)
8. There is a scarcity of literature on training effectiveness in Pakistan in public sector, the area is still deficient in Pakistan and a wide gap required to be addressed for contribution to the literature. This reflects a great paucity of experts and practioners in the field of training evaluation. Moreover, academia has ignored the area of training effectiveness in Pakistan.

Furthermore, publication on the areas of training evaluation and training effectiveness are not in great numbers that is owing to shortage of experts relating to the area and deficiency of research through external experts.

9. Public sector has not been able to give an academic outlook to its organizations in spite of huge investment in training & development that is why limited research is available on this area.
10. In view of prevailing scenario, a profounder understanding of training effectiveness in the contextual background of public sector in Pakistan is direly needed. According to Riggs (2001), development of administrative models is needed in the local context as well as needs. Undertaking research in the setting of public sector aims to address the gaps highlighted above. Moving ahead, identification of factors that impact training effectiveness should be the target.

2.47 Summary

3rd world is gripped in orthodoxies of the time. Organizations are having a substantial barrier in the way of constant development in terms of low employee engagement and inadequate development of employees (SHRM workplace forecast, 2013). Public organizations in Pakistan too, are facing these two biggest challenges. This has created a more bureaucratic environment and fostered a gap between managers and non-managers in Pakistan (Ibrahim, 2010). This study intended to analyze LR systematically to advance our understanding of TE and discover new horizons to benefit future research. This technique has the potential to replicate, translucent, methodical and appropriate in the context of objectives of this study Literature is replete with mixed perspectives on training and its diverse roles, this study attempts to outline major erudition in the field.

Training has come out of its traditional groove and evolved to meet learners' needs. An insight into public organizations can lead to guide these organizations to transform a local HR into a global (Tranfield, Denyer, & Smart, 2003).

Training that does not pay desirable returns is not justifiable. This necessitates the need to assess the objectivity of training. Employee readiness, managerial performance in crisis and decision-making depend on the way how its training system imparts critical knowledge and skillfulness. Moreover, financial constraints raise the need that public training resources must be optimized to realize requisite training objectives within the shortest frame of work and time. It is often perceived that due heeds must be given to understand the factors that impact training effectiveness and ensure optimum transfer of learning from training to achieve performance improvement.

The previous research conducted on the training system focused comparatively on notable variables, such as training design, content, equipment, and quality. This research assumes uniqueness and the importance of seeking a combination of individual and collective factors construe effectiveness equation. Training effectiveness has phenomenal complexity. Past research has pointed out several factors that influence training effectiveness irrespective of training context and content. Goldstein rightly researched that, "we must consider training as a system within work organizations rather than simply treating instruction as a separate technology" (1980, p. 263). In this backdrop, understanding the key factors that may support or hamper training effectiveness is the primary need of the researcher. This necessitates the need to examine certain factors from training equation and organizational and situational factors (e.g., supervisor support in the transfer environment) (Noe & Schmitt, 1986).

Moreover, the application of relevant theories proves helpful to generate hypotheses and find an adequate base to erect decision design (Cannon-Bowers, Tannenbaum, Salas, & Converse, 1991).

Yet, the prospective picture will become visible since organizations become acquaint with the factors that make it possible to adopt this approach successfully. So, identifying the responsible factors is critical for conducting empirical investigation. Research posited evidence that specifying certain factors and finding their relationship are vital practically and theoretically failing with success and generalizability of training is hard to determine (Campbell, 1988; Cannon-Bowers et al. 1991; Tannenbaum & Yukl, 1992). Since successful or unsuccessful training is unsupported by any compact mechanism or sound training principles, to know the real causes of failure of a training program becomes a farce. Practically speaking, resource allocation and its consumption need to be sub-optimized to understand the score of training effectiveness. For instance, failure of a training program may be due to the low efficacy of trainees but an evaluator may attribute failure to the faulty training method. The literature demonstrates that whatever the size and type of organizations are in a constant struggle to integrate their employees effectively with their work-life (Sikula and McKenna, 1984). This implies that employees at all levels must have updated skills and knowledge to perform their tasks adequately. Considering the above goals, the role of training demands more clarity when it is required to equip organizational employees with renewed skills and abilities to enable them to play their organizational roles effectively. This means that training and organizational goals are interlinked and must be in line. It is akin to other functions of personnel management such as recruitment and selection, performance management, compensation & benefits and so on. In this connection, training emerges as a potent tool for managerial development processes

and policies. If it is designed carefully, it can serve the organization with the desired flow of expertise at the right time and right stage. Staying on this perspective, training is a means to achieve organizational goals.

If these goals are flexible, training will undergo a paradigm shift. This means that training will ensure its effectiveness if it works in collaboration with all other functions of management. This unveils another aspect that training cannot resolve all the organizational problems solitarily. The integrative literature technique was applied to identify the themes like customary conception about training, transfer of training, training evaluation, critical analysis of popular training evaluation models, Kirkpatrick, LTSI, HRD evaluation and measurement model, ROI model, the holistic training evaluation models, IPO & TVS models and examining role of training effectiveness. The study resorts to propose a framework to include mediating variables not found in previous training effectiveness models. This may contribute to explore new dimensions of training effectiveness.

2.48 Theoretical Framework of the Study

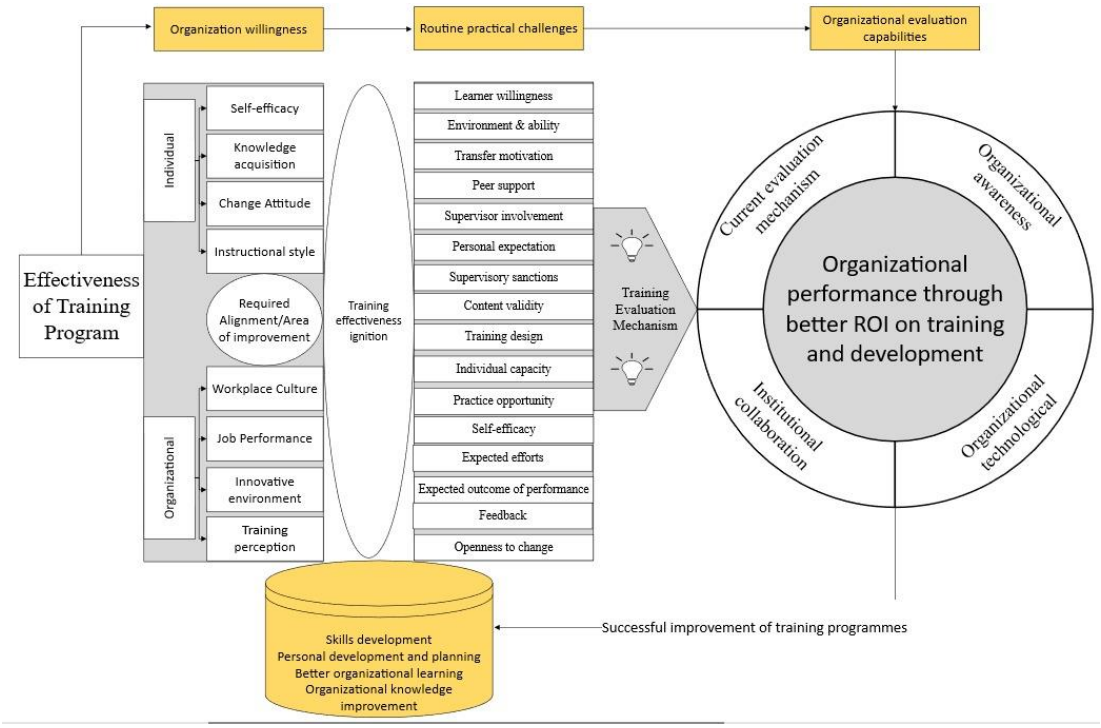


Figure 11 Theoretical Framework of the Study

Research theoretical framework that displays all-purpose representation having relationships amid things in an assumed phenomenon. Moving from left to right, the model hypothesized a schema of individual and organizational variables derived from individual, and organizational characteristics about training. Box 1 is showing individual factors such as self-efficacy, learning acquisition, skill acquisition, change in attitude tendencies, the influence of instructional style is examined on training program characteristics.

Similarly, the impact/relationship of another bundle of organizational factors such as workplace culture scenario perceived organizational support, innovative work behavior, and work-related attitude is examined on/with the workplace environment.

The theoretical framework detailed above exhibits to illustrate that effectiveness of training programs need organizational willingness with a score of factors such as self-efficacy of individuals' tendency to acquire KSA supported by a fabulous instructional style at one side and reflected at workplace by offering a supportive culture, setting high standards of job performance, innovative environment and finally creating a job perception to face practical challenges. An organization faces practical challenges through a number of factors like learner readiness, understanding environment and ability, transfer motivation, peer support, supervisor improvement, personal expectations, supervisory sanctions, content validity, training design, individual capacity, practice opportunity, self-efficacy, expected efforts, expected outcome of performance, feedback, openness to change, utilizing organizational evaluation capabilities through adopting a compact mechanism of training evaluation, enhancing organizational awareness, developing institutional collaboration and organizational technological base. Eventually, this will result in successful improvement in training programs by getting skills development, personal development, and planning, better organizational learning, and organizational knowledge improvement. By far crux of the research study, the study investigated the relationship of certain variables on training effectiveness with the concepts of learning and performance among the public organizations in Pakistan. It takes training program characteristics, and workplace environment characteristics as a construct that presumes to consolidate training effectiveness. By this approach, the proposed study resorted to synthesize literature on training effectiveness and find gaps in theory and practice.

CHAPTER 3 RESEARCH METHODOLOGY

3.1 Introduction

This chapter accentuates the data collection along with statistical analysis methods utilized in the study. The organization of this chapter encompasses the research design, philosophies, methods deployed to collect and analyze data. It targets to explain, select and justify the adoption of the research approach with methods for the thesis. It begins with identifying the research strategy, sampling method, sampling size, and data collection techniques selected for this study. It starts with a debate on methodology seeking justification of executing a philosophical debate while ontology provides culmination point in this philosophical debate (Scott & Usher, 2004). Both the debates on ontology and epistemology are inter-linked with the paradigm. If the argument of Scott & Usher, (2004) is considered valid, questions pertained to ontology and epistemology assume the primary nature of importance than questions relating to method. Therefore, debate on methodology along with its justification starts with ontology as shown in the following figure. It covers the systematic flow of processes articulated by the logic required to conduct a research project, to comprehend the research problem under investigation. It also delineates the research framework developed for this study. Before initiating experimentation on these concepts, the underpinned concepts need to be operationalized to make them measurable to confirm their occurrence.

3.2 Research context

This section concisely deliberates the natural setting of public sector in which training and development activities are conducted. This section offers an overview relating to training evaluation in context of Pakistani public sector and ensues to deliberate the current training practices as well as training evaluation methods.

In wake of increased pressure given by globalization as well as modernization, public sector is in need of organizational effectiveness as well as the competitiveness that requires qualified and competent workers. Public organizations in Pakistan are desirous to bring change that is why these organizations spend more time as well as effort in redesigning plans to meet new adjustments as well as challenges (Kuhry, 2003). Technical as well as management courses belonged to higher education serve to contribute to develop human resources (Iqbal et al., 2011). In spite of the fact that training has been a highly invested area in Pakistan, training organizations in Pakistan could not develop their product in the last five decades from the perspective of efficiency as well as effectiveness (Iqbal et al., 2011). For example, training evaluation is not carried out professionally and authentically (Khalid et al., 2014). The literature on training evaluation speaks of difficulties faced by public sector in training evaluation. For instance, management indifference to HR practices is one of the causes of unsystematic and infrequent evaluation (Imran, Rehman, Aslam & Bilal, 2016). There has been a lack of persistent emphasis to make assessment of the training results (Athari and Zairi (2002). Despite the significance of training, the methods deployed to carry out evaluations remained unsuitable in public organizations of Pakistan (Imran, Rehman, Aslam & Bilal, 2016).

3.3 Research Philosophy

The researchers rely upon the research philosophy through building significant assumptions about the way the world is viewed by them. Based on these assumptions, the research method, as well as strategy, is devised to adopt (Chakrabarti, 2015).

Johnson & Clark (2006) cited Chakrabarti, (2014; 2015) that researchers related to management and business must comprehend the modalities of the philosophical commitments that guide to carry out an investigative research strategy.

A greater part of the conspicuous debates is taking place among philosophers in relation to epistemology as well as ontology (Lapan, et al., 2011). Ontology throws light on the reality and its nature of existence while epistemology signifies the knowledge theory and assists the researcher to conduct the investigation in the best possible manner around its nature of the world (Bikner-Ahsbahs et al., 2015). It is worthwhile to mention here that social and physical scientists take on different epistemological as well as ontological assumptions while developing research methodologies (Woodrow, & Newman, 2015). However, widespread confusion still exists about these terms among researchers (Billig, & Waterman, 2014).

Researchers take stance on the status of knowledge (ontology), how it can be explored (epistemology), values associated with the stance (axiology), how this can be explicated (rhetoric). These lead to compact procedures (methodology) (Creswell, 1994). These claims are referred to as ’paradigms’ (Lincoin and Guba, 2000). Paradigm refers to interlinked assumptions in the form of sets representing a social world provides a philosophical and conceptual framework about the area under research (Filstead, 1979). Paradigm aids the researcher in philosophical assumptions, collection of devices/tools, instruments, type of participants and methods to be used in the study (Dentzin and Lincoin, 2000).

Figure 12 Differences among Ontology, Epistemology, Methodology, and Methods & Techniques:

Ontology	**Presenting philosophical assumptions on reality and its nature**
Epistemology	Presents a set of general assumptions around conducting inquiry into world and its nature.
Methodology	Offers a blend of techniques employed as a whole to conduct inquiry of a particular situation along with its nature.
Methods and techniques	Based on techniques employed separately to collect data and conduct analysis and so on.

Source: Esterby-Smith et al., 2015, (p.47)

On the role of philosophy in research, Birks (2014) sees philosophy as "a view around the world encompassing the questions and mechanisms for finding answers that inform that view" (p.18). Crossan (2003) expands this viewpoint from another angle as an "uncomplicated and innocent way of questioning which produces confusion and instability in assumptions" (p.47). Therefore, philosophy provides the foundation to strengthen the interrogative processes to make the research questions and enlighten the research. Philosophy finds its composition from the womb of ontological and epistemological conceptions. Ontology denotes "the individual's existing assumptions about reality and how they view the world". Epistemology is a belief of an individual how to acquire knowledge. Both the concepts i.e. ontology and epistemology point to the acquisition of knowledge (Denzin and Lincoln, 2011; Howell, 2013). Philosophy provides the lens through which world view is formed to recognize gaps in existing knowledge and devised methods to fill these gaps (Mills and Birks, 2014). Thus research and philosophy are intimately affiliated to generate knowledge.

Table 13 Subjectivity vs Objectivity

Subjectivity	Objectivity
• Based on personal opinion • Essentially internal • Emotive	• Based external facts • True for everyone • More absolutist

Source: (Cohen, et al., 2017).

Ontological philosophy deals with reality and its nature. The researcher draws out the operational line while pursuing a specific line of action that indicates his or her commitment and adherence to a perspective (Cohen, et al., 2017). Ontology unveils objectives as a part of the aspects. Objectivism throws light on reality and its external existence. Ontology reveals another aspect called subjectivism quite reverse of objectivism (Tracy, 2013). Subjectivism is not related to measuring reality like an external entity. Rather it stays on studying those on whom it has left an impact. The subjectivist approach takes into account the social actors and their perceptions and subsequent actions that take towards formulating reality (Quinlan, & Zikmund, 2015). Therefore, the aim of the researcher is not to focus on training data to measure the training data to ascertain training effectiveness. As the concept of training effectiveness is different in different countries that touch relativism as relativist opine that reality does not exist in a solitary form (McNeill, & Chapman, 2005). Based on this, the researcher relied upon different people from different layers of management to get a diversity of opinions.

The philosophy underpins the research position of an individual study, selects the research method and design. The point has been least highlighted in the literature (Crossan, 2003; Mills and Birks, 2014). A researcher has to find answers to the questions on what where and how of tentative philosophy? In any case, the configuration of philosophy to research design is sacred and a researcher has to obey this bond to avoid alienation. By adopting this path, researchers can develop feelings of owning and to look around the world in a novel way. Philosophy is patently a key mainstay behind research design. Embarking on a single individual philosophy, the researcher must present his or her view through which he sees the world. It is a light bulb moment in the research process. It unveils understanding of research methods, philosophical level and presents these distinctly and innovatively (Clarke, 1998).

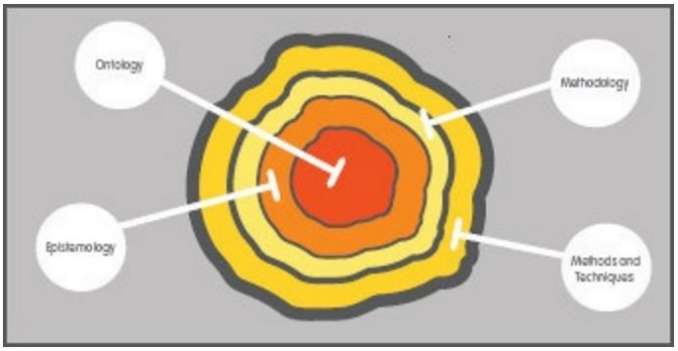
Research advocated generation of knowledge after a social phenomenon that can be quantified and measured in the light of established laws and principles as a result thereof objective truth emerges that becomes the basis for positivism philosophy (McAdam and McCreedy, 2000). My argument is more objectivity can, therefore, be derived with the improvement in existing laws relating to health, human rights, labor laws, and wages to manage human resource development more objectively and gain the objective reality stage.

3.4 Ontology

Ontology presents the culmination point of debates carried out among different philosophers (Glimpse reflected in Appendix-1). The philosophers who belonged to natural, as well as social sciences, have focused debate primarily on internal realism, relativism, and nominalism (Glimpse reflected in Appendix-2). Social sciences find their basis through and around people's behavior rather through inorganic characters.

This raises the question of whether assumptions and methods utilized in natural sciences can be employed in social sciences (Blaikie, 2007). (Esterby-Smith et al., 2015. p, 49) called for the need to know the "the topic of inquiry and the preferences of the individual researcher." This emphasizes the need to select a philosophical stance about the area under inquiry and the researcher. The topic of inquiry is at the top of the discussion agenda (Zikmund, et al., 2013). The below-drawn Figure 1 throws light on the philosophical debates and their concepts:

Figure 14 Philosophical debate



Source: Esterby-Smith (et al. 2015:47)

Philosophy of ontology believes in the existence of an objective reality that can be understood with the help of laws that lead to govern it (Cohen, et al., 2017). Ontology leads to create inquiries to know about the majority of perceptions or world views on specific observations (Crowther, & Lancaster, 2012). In the instance study, the researcher aims to know about employee perceptions on training effectiveness, he is desirous to dig up training program characteristics, workplace environment, learner readiness, training evaluation and return on investment like factors that reflect relativism and presence of relativist ontology (Saunders, et al., 2009), confirmation is required to record as different persons hold different perceptions and experience with regard to their regions or classes or races (Hammond, & Wellington, 2013)

on self-efficacy, skills acquisition, knowledge acquisition tendency during training and application at workplace.

Table 15 Research as Continuum



As there exists no solitary reality that could uncover every aspect, hence a plenty of viewpoints stand out in this connection. The relativist holds the position that different researchers have different stance as Collins (1983) cited by Coolican, (2014) specified that truth differs with regard to places as well as time. As training efficiency varies as per situation so the reality of training effectiveness varies with the prevalent situation, this leads to adopt relativism approach for this study.

3.5 Epistemology

In Greek etiology, epistemology means knowledge. Epistemology utilizes a scientific discourse resulting from the epistemologies driven by positivism as well as realism (Cooksey and McDonald, 2011).

The mainstay of positivists' belief is around that reality should be explored objectively and externally instead of staying on gut feelings, intuition or sensation and there must be objective ways to evaluate features associated with reality (Donley, 2012).

This statement can be evaluated by dint of two assumptions, 1st is led by an epistemological position that knowledge gets importance only if it gets supported by observations based on the external reality. 2nd position held by ontological philosophy is that reality is based on objectivity as well as externality. This does not link to adopt the particular mode of enquiry (Cohen, et al., 2017). The below given research onion indicates a range of designated research philosophies along with methodology for the current research.

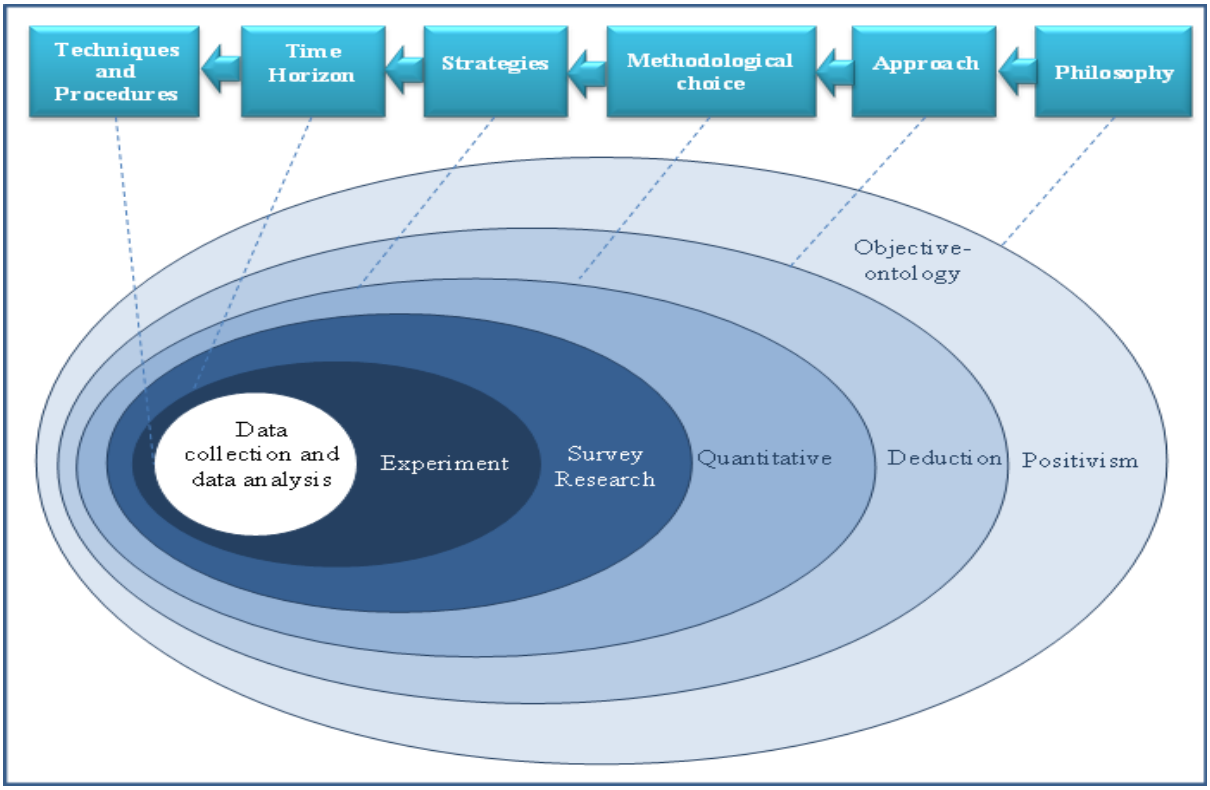


Figure 16 Research onion

Source: (Sunders et al, 2012).

The main idea undertaking positivism indicates the way the world exists externally that takes on its objective measurement along with its properties (Manion, et al., 2002). Positivism represents a form of realism based on philosophical and scientific approach about authorizations granted by knowledge (Bryman, 2004). Positivism does not take into account subjective measurements, predisposition or duplications as well as sensations (Turner, 2005). In other words, the mainstay of this approach relies solely on objectivity and its externality by nature (ontological assumption) further believes that generation of reliable know4ledge is possible on the basis of external observations i.e. empirical verification(epistemological assumption) (Muijs, 2004). Therefore, the question does not relate to the method of inquiry but to look for evidence of inquiry (Vaughn, et al., 1996).

Strong proponents of the positivist approach assume that reality exists as an independent entity i.e. it does not wholly depend upon the observer, the researcher's task is, therefore, to look for theories along with laws that illuminate the reality (Kumar, 2011). This task is achieved primarily through experiments and their design which blocks alternative explanations enabling the researcher to focus on measurable factors precisely to verify hypotheses (Kumar, 2011). According to the other version though considered weak but follows the belief that reality sometimes is not accessible directly, in such cases, surveys are preferred to determine the reality and its true nature (Gray, & Malins, 2004). The data obtained so is likely to be articulated in quantitative form though liable to be complemented on qualitative lines. Subsequent to this, patterns of behaviors are identified through testing propositions and developing new ideas. Despite it, probability still holds its ground that the views collected depict the true picture (Lapan, et al., 2011).

This research aims to test the theory on training effectiveness by testing a number of hypotheses that are likely to produce steady results leading us towards positivism instead of a social continuation that is why philosophical position on positivism has been adopted by the researcher. To sum up, the research developed hypotheses for testing based on knowledge and objectivity enabling to collect data from a large population and results could be generalizable to identify the mediating relationship between training effectiveness and organizational performance. Based on the above discussion diagrammed below indicates that positivism is the best philosophical position selected for this study.

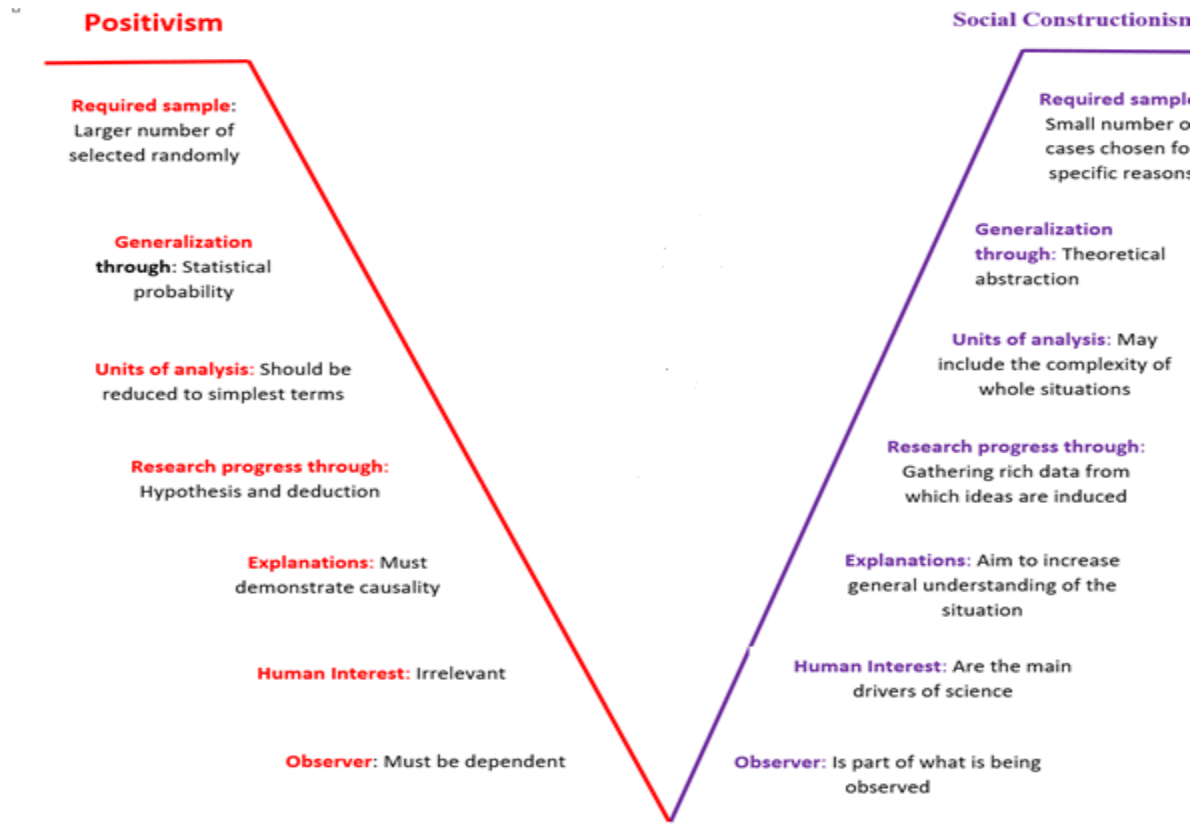


Figure 17 Philosophical Position

Source: Author based on the above discussion

Methodology broadly encompasses the research design, approaches, methods and procedures employed for the purpose of investigating in a planned manner (Walliman, 2018).

Research methodology is a sort of guidelines for resolving the research problem taking it as a science that studies discourse leading to the scientific advancement of research. In this part, the researcher follows certain sequential steps while studying the research problem and logic associated with it. A research study lays down the need to comprehend the research methods along with techniques linked with the methodology selected by the researcher. According to (Wilson, 2010), methodology encompasses the entire approach as well as strategy covering every minute thing from the theoretical framing to the conduct of data.

In the light of above, it is expected from the researchers to understand the application of statistical tests or indices for determining the mean, mode, and median along with standard deviation and chi-square ascertaining the relevance of these methods and techniques with causes to apply. Adoption of an adequate research methodology and an optimal paradigm, therefore, becomes imperative to examine the research environment and the research problem that could explain the framework within this study setting. By research, methodology means to select an investigative approach that could answer the research question in the best possible way and identify the application of an effective instrument to collect and analyze the data. Based on this, it is incumbent upon a researcher to select a suitable design of his or her methodology and suggest an optimum solution to different problems.

The first section elucidates the methodological debate and critical inquiry to make the identification of the research philosophy under consideration for this study. In the capacity of a public manager and trainer, I have tried to examine the selected approach critically and in a professional context. The role of values and researcher reflection is also a part of the discussion. The second section highlights the discussion on research agreements with justification to choose the approach required to meet the current study needs.

This is followed by explaining the conceptual framework conceived for this research, with the formulation of the hypotheses to be tested to get answers to the research problem. A discussion on the procedure of data collection and the rationale of using the instrument as a vehicle to gather data will advance the researcher thought to explain the research techniques further ensuring their reliability.

This research resorts to examine employees training in PSOs of Pakistan and employs survey methods relying on multi-source data from managers and non-managers, training management and organizational management serving in PSOs located in the four big cities of the Punjab province. Research methods always look to create a difference by dint of its unique techniques to undertake research operations. Research always carries an objective specifically in case of applied research to look for an adequate solution concerning a known problem, with the help of the data at hand to unveil unidentified dimensions pertaining to a problem aiming to find the mutual association with each other seeking a possible elucidation.

The mainstay of positivists' belief is around that reality should be explored objectively and externally instead of staying on gut feelings, intuition or sensation and there must be objective ways to evaluate features associated with reality (Donley, 2012). This statement can be evaluated by dint of two assumptions, 1st is led by an epistemological position that knowledge gets importance only if it gets supported by observations based on the external reality 2nd position held by ontological position is that reality is based on objectivity as well as an externality. This does not link to adopt the particular mode of inquiry (Cohen, et al., 2017). Past research studies have explored the objectivity of training effectiveness that urges the researcher to adopt a positivist approach for the extant study.

Constructivism, positivism/post-positivism, and pragmatism are the recognized schools of thought about knowledge claim. Constructivism represents qualitative research where an in-depth understanding is sought by individuals about the world around them.

This understanding is all about varied and mixed views and experiences. The complexity lying beneath these experiences is unfolded to a particular theme or category. Data obtained this method is inductive and subjective in nature (Creswell, 2003). In reverse to this, the other school of thought is positivism represents quantitative research based on empirical science. Positivism represents a form of realism based on philosophical and scientific approach about authorizations granted by knowledge (Bryman, 2004). Being a positivist researcher, I believe in observation-based and numerical acquisition of data to measure the objectivity related to a phenomenon. This method leads to the conduct of numeric measurement by applying the deduction method (Creswell, 2003). The motive is to test the theories and verifies these for further refinement. It involves the collection of observation and explaining the phenomenon in a systematic manner within the aegis of a model or framework or theory, setting up hypotheses, implementing principles to conduct the practical study, testing hypotheses by applying inferential statistics and interpreting these results (Cacioppo et al., 2004). In the last leg, another research approach offers a combination of constructivism and positivism for their simultaneous application on understanding the research problems (Pensiri, 2005). This is particularly based on functional applications of scientific methods with practical solutions to the problems (Creswell, 2003). The selection of an approach depends upon the type of research problem under investigation. If the purpose of the research is based on factor findings and their impact on outcome in the wake of the relationship among these factors, the positivist/quantitative approach will be appropriate (Creswell, 2003).

If there is required to understand an established phenomenon or theory or a low research area, the application of constructivism/qualitative approach will be more suitable.

In case, if there arises a desire to explore some phenomenon for its generalization under prescribed procedures, pragmatic (mixed) approach will be useful to apply (Creswell, 2003). Justification of the use of research design depends very much on the application of these approaches to attain study goals (Neuman and Kreuger, 2003).

Interpretivist highlights an epistemological position based on subjective construction of a social phenomenon by the worldviews of individuals instead of objective as well as external factors (Easterby-Smith et al., 2015; Saunders et al., 2016). On the other hand, the positivist epistemology involves quantifiable measurement of variables, testing of hypothesis, involvement of large sample size and delineating a phenomenon representing a sample from the given population and objectivity to testify, along with the adoption of positivist epistemology suitable for the study.

As evaluation was required it would have done better through quantitative method. It would have been done through qualitative method as well but evaluation refers to as examination that is of quantitative nature. It needed independence to draw true objective meanings. Here positivism epistemology supports so that results could be generalized and positivism works best when generalization is required to align the characteristics. While the role of ontology aims to explore single reality exists independently whether it is effective or not. Moreover, induction aligns towards constructionism ends with model and theory development while deduction with top to bottom approach ends with theory confirmation that is close to positivism. Furthermore, I followed an explanatory research design because motive was to confirm the relationship among variables. Unit of analysis has been training program.

Our research strategy was to develop a case and highlighted an issue in training as a single case study (Saunders et al., 2016).

However, a research conducted by Collis and Hussey (2014) established that a research strategy attributed to quantitative research ought to embrace surveys as well as experimental research. The survey approach was therefore adopted as a technique that helps to identify and explore social factors (Crotty, 1998).

3.6 Procedure for the development of questionnaire

Questionnaire development or a survey is designed to involve decisions concerning format of the questions, relevancy, wording, sequences, choice of response, layout of question with generation of survey in its first round (Bajpai, 2011). The procedure of questionnaire development begins with pre-testing of certain elements in the survey including survey questions, the sampling frame as well as successful monitoring of tools facilitating data collection at first stage (Gray, 2017). The aim is to make sure that the survey works as per researcher intentions, and it reflects the attitudes, behaviors as well as attributes through valid as well as reliable measurements (Blair et al., 2014)

3.6.1 Critical review

At the next stage, the researcher critically reviews survey design as well as planning where necessary adjustments (if deemed necessary) are carried out in the choice as well as size of sample as a part of the sampling frame, the survey embarks on planning data analysis after conducting interviewer training and data coding (Gray, 2017). Accordingly, survey is pre-tested, revised on the basis of results driven by the pre-post, look over the final survey, make its administration and lastly obtain responses (Bajpai, 2011).

The next stage involves collection of pertinent data from the on-field target sample. The researcher tends to monitor the completion of interviews as a result of surveys (Gray, 2017).

3.6.2 Data coding, constructing data file, conducting analysis:

Conversion of raw data is dealt with at this stage that was collected in a specific research context and transformed into data ripe for analysis (Bajpai, 2011). The respondents are assigned a number during the process of coding and constructing data-file from respective survey questions before maintaining a data record including the responses from each participant. Each participant bears an exclusive identity number (Gray, 2017). To conclude, before carrying out data analysis, the data screening and cleaning is conducted to generate the final report (Bajpai, 2011; Gray, 2017).

3.7 Logical stances of explaining the research

3.7.1 Idiographic Description

A case is understood with its in-depth analysis of predictors those influence the phenomenon this makes the explanation a credible idiographic for its legal application.

3.7.2 Nomothetic Description

When a phenomenon is observed with its variation to find new understanding and its constituent elements for generalization. Ideological orientation provides the main impetus in this type of research and no hypotheses are needed to testify. In social research, conditions of correlation, non-spurious nature of relationship and development of cause before inflicting effect installing certain criteria for nomothetic causal relationships.

3.7.3 Correlation-based

When the relationship between variables is empirically based and associated as a result of effect and counter-effect using mutual attribution of each other.

3.7.4 Spurious relationship

The relationship must be non-spurious on the basis of a causal relationship. Some coincidental relationship is attributed by a 3rd variable. The relationship of hot weather with the increased use of ice cream is not spurious but if the use of ice cream is linked with increased crime rates indicates spurious relationship.

3.7.5 Following False Criteria

Aspiring complete causation is like following false criteria for nomothetic causality. The nomothetic explanation is probability-based. It cannot explain every single element involved. However nomothetic causality does not ignore rather approve exceptions to occur. A minority of cases are the subject of nomothetic causality. The majority of cases are out of its purview.

3.7.6 Cause a situation

A cause represents a situation that creates an effect trail. A sufficient cause creates a corresponding effect like skipping training loses winning position.

3.7.7 Fallacy about Unit of analysis

The unit of analysis comes under the grip of faulty reasoning of an assumption in terms of the ecological fallacy about individuals under study. When the label of terrorism is forced upon the Muslims more Muslims due to their Muslim names are allegedly involved in this heinous crime, a demarcating line cannot be drawn that entire Muslims are involved in terrorism, this would be an ecological fallacy.

3.7.8 Reductionism

Reducing concepts to lower orders for explaining the phenomenon on a limited canvass. As an instance, explaining sociobiology in the context of genetic behavior and characteristics inherited by human society.

3.7.9 The Time Horizon

The time dimension of a research setting involved two forms of interacting with the research participants. One is cross-sectional as the collection of data at one time only. A cross-sectional study is known for its rudimentary logic, the arrangement of time order of variables and studies the participants' perspectives (Robson, 2002). Studying a specific phenomenon generally utilizes a cross-sectional type of investigation at a specific time. This is because most of the research projects are carried out for academic purposes that have time limitations. However, the time horizons on such projects permit sufficient time to carry out a longitudinal study. Cross-sectional types of studies mostly adopted survey strategy (Easterby-Smith et al. 2008) where there is required to describe the occurrence of a phenomenon as in the extant study, to delineate the factors that are involved in strengthening training phenomenon or get perceptive views at a particular point of time. Qualitative methods, however, can also be applied (Adams, et al., 2011). Moreover, adopting a survey as a research strategy, a particular context is undertaken for the purpose of exploring and understanding this context by applying a score of variable factors.

Cross sectional research design involves observing subjects at one time. While mediation analysis is applied under known relationship. When we logically and realistically are acquainted with the cause that without training evaluation training success cannot be claimed. This justifies the selection of training evaluation as mediation variable. A cross sectional study aims to measure both the exposure as well as the outcome of interest at the same point in time. Cross-sectional types of studies mostly adopted survey strategy (Easterby-Smith et al. 2008) where there is required to describe the occurrence of a phenomenon as in the extant study, to delineate the factors that are involved in strengthening training phenomenon or get perceptive

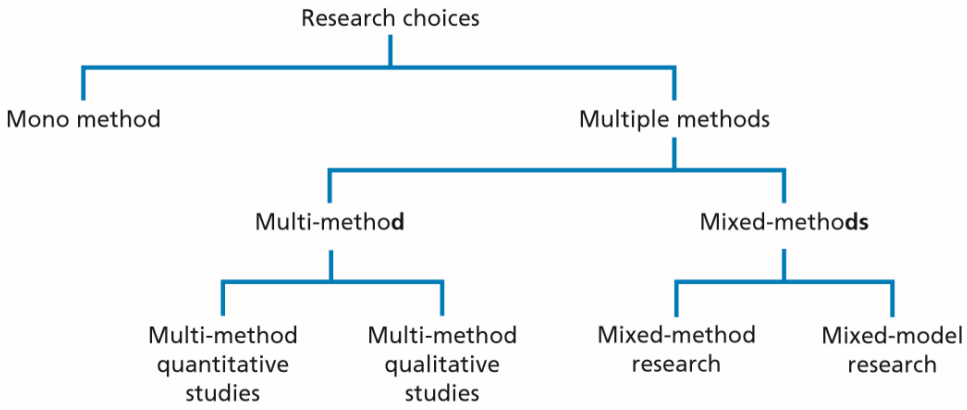
views at a particular point of time. Moreover, the extant study is observational and does not adopt experimental designs with randomized control groups. Therefore, it neither targets to determine causation nor focuses on causal inference. Causality is operationalized in three requirements; correlational that is meant for cross sectional research design, 2nd is temporal precedence while 3rd one is removal of confounding variables. So this study adopted correlational in which predictor at time 1 causing the outcome at time 1 and there is no question of confounding. Furthermore, direction of the causal relationship indicates one single outcome as this prediction analysis ably controls the time point of the outcome. Maxwell and Cole's simulation studies tested the influence of 1) temporal precedence and 2) controlling for previous time points of the mediator and outcome on the influence of two effects: the "a path" and "b path" in mediation."

Advancing the argument, cross sectional mediation in social sciences offer theoretical contribution and new evidences though interpreted with caution (Anna Bugge et al., 2018) besides giving the additional characteristics of time saving and cost effectiveness unlike the longitudinal studies that inflict more time and heavy cost that is consummated through grant which is not available in developing countries. This study draws on the mediation use of training evaluation along with other two variables which was not tested in local context and offers a new conceptualization of mediation to investigate the performance implications of training effectiveness in a new and more meaningful way. My study offers cross section correlation regression as partial correlation which remains within the consistency level and limitations attributed to cross sectional data viz a viz a simple mediation process.

Furthermore, every tool has strength and limitations. In the wake of involvement of additional time and cost restraints, longitudinal research design was recommended for future research. Based on the above, cross section design was preferred over longitudinal design.

Based on this evidence, this study preferred to adopt a cross-sectional design to advance knowledge while undertaking this research. Whereas a longitudinal study finds its involvement when processes are required to study data is to collect at different points and steps extended over different spans of time by involving time order of variables. This kind of study involves trend study (monitoring of a population for its known characteristics), cohort study (a sub-population or cohort is studied over a greater span of time of years but from among a different group of participants) and panel study (studying same population or panel at different points in time).

18 Choice of methods



Source: (Saunders et al., 2009, 152).

When selection of a topic is made for investigation, specification of precise numerical methods is made to pin point the singularity factor with its postulated nature. Emphasis is likely to be on devising a viable strategy to develop a training program that could ensure success as well as effectiveness.

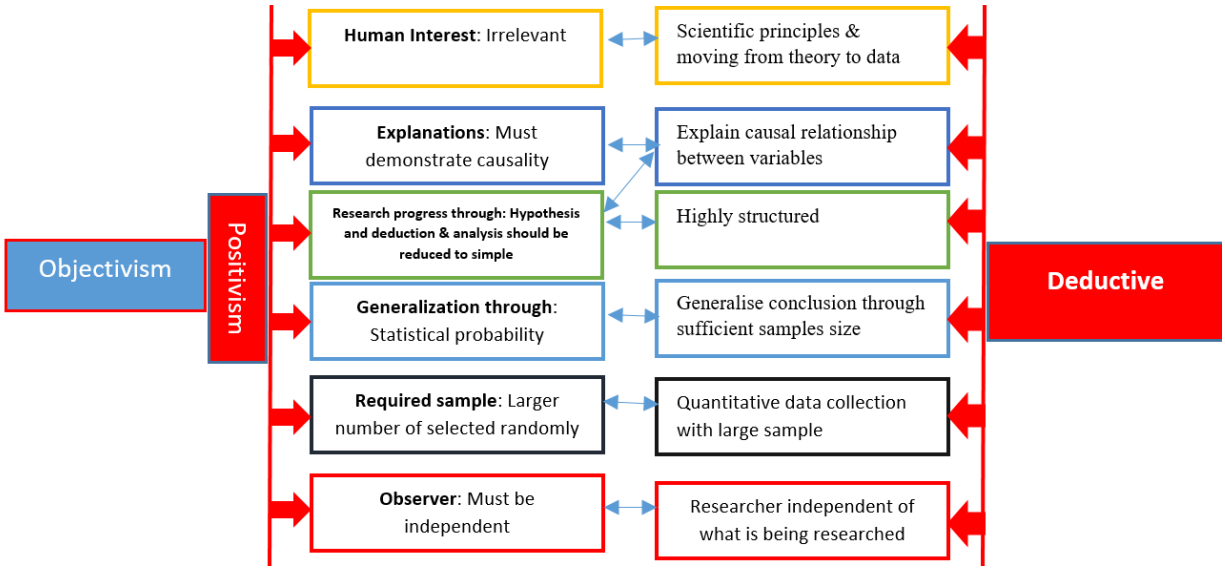
It also requires to look into why some trainees feel prideful after training and some dejected in contextual conditions of developing countries whereas many organizations in developed countries are able to give a successful product in form of the trainee. In this regard, top management has to answer a number of questions that exacerbate the organization for tracing bugs in the current setting and develop potential training programs for the future. To achieve this task, objective understanding built on attitudes, perceptions, and opinions is the foremost need. Based on this, the selection of a quantitative research method is made to initiate data collection and analysis.

3.7.10 Research Approaches

Research at its onset revolves around researcher understanding about the theory to be tested, it also signifies research questions and research design. In other words, a researcher has to make a choice of research design between the deductive or inductive type of design (Merriam, & Tisdell, 2016). Research approach is comprised of deductive as well as deductive approach. Inductive approach refers to as from bottom to up approach that begins with initial observation leading to generate a theory (Weber, 2004).

3.7.11 Deductive approach: Theory testing

Figure 19 Deductive relation with objectivism



Source: (Hennink, et al., 2011).

3.8 Inductive: Developing Theory

Research that relies on the inductive approach finds its linkage with the contextual conditions in which events take place (Bowling, 2014). Such research advances ahead with a small sample even rather relying on a larger sample size (Hanington, & Martin, 2012). In these traditions, researchers go for qualitative data to work with employing several methods to collect qualitative data for instilling different phenomena (Mackey, et al., 2013). Based on the above, it is evident that inductive approach is applicable when there is required deep information from a fewer sample size for theory development for this case this is no requirement, in the instant research, the researcher aimed to test a theory that is why inductive approach does not fit the needs of positivism philosophical stance taken by this study.

On the other side, the inductive approach comes best fit to subjectivism as well as relativism ontological along with social construction epistemological stance which is why the inductive approach is not preferable for current research.

3.9 Deductive: Testing Theory

Linked with the above, the deduction approach deals with the scientific inquiry raised in the matter. This approach focuses on theory development which is tested thoroughly (Habib, et al., 2014). It is recognized as the most widely prevalent research approach in natural sciences whereby natural laws govern the explanation, anticipate the phenomena, and predict the occurrences allowing control (Tisdall, et al., 2009). Blaxter, et al., (2010) lists out five sequential stages through the progression of which the deductive approach of research takes place.

1. Aims to test the operational hypothesis- this research aims to test the relationship between training effectiveness through the intervening of training program characteristics, workplace environment as Independent Variable: organizational performance as dependent Variable: learner readiness, training evaluation and return on investment as mediating variables.
2. Take on strategies- to test hypotheses as key focus set by the research to test training effectiveness.
3. To examine the particular outcomes- following the inquiry.
4. Basis of the examination to confirm or modify the theory.
5. Carrying out modification where deemed necessary.

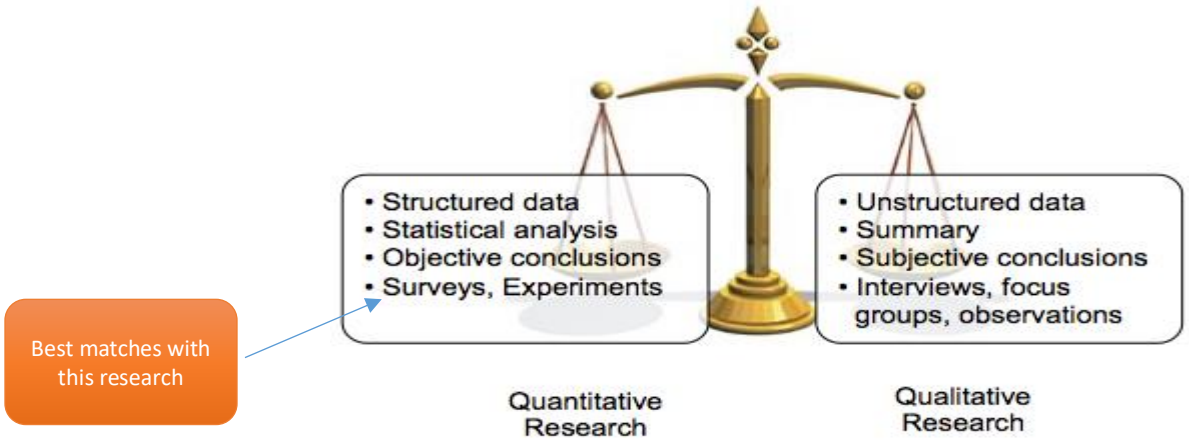
In summary, Saunders et al. (2009) regard these two approaches i.e. inductive as well as deductive two ways to steer reasoning.

The sole motive adopted by this research is to interpret people's behavior for which a quantitative approach is best fitted with the outcome in terms of analyzing perceptual thinking of participants. Quantitative researcher looks into the meanings derived from the research instruments i.e. surveys or questionnaire in contrast to the qualitative researchers those ponder standard behavior along with the organizational culture. Hence both overlay meanings and behaviors derived by both forms of research (Bryman and Bell, 2007, p. 425). Though the applicability of both of the approaches is in vogue with their respective designs to collect data from diverse resources, the researcher decided to adopt the deductive approach.

3.10 Qualitative versus quantitative research methods

Debate on the choice of an appropriate research method is ongoing in the awake of merits and demerits of each of the research methods (Khine, 2013). On the question of selecting a method, if the research area under investigation needs numerical evidence to answer the investigated question, quantitative research provides the best solution in the said case (Menter, 2011). In case, if the area under investigation demands further probe of knowing the causes and involvement of factors, then Qualitative research offers the best solution (Scruggs, & Mastropieri, 2006). Deployment of quantitative research carries the major aim to quantify the problems confronted from time to time that could be resolved by applying numerical data. By notifying the opinions, behaviors, and attitudes, the quantification of other variables becomes possible (Zikmund, et al. 2013). Numerical data is liable to transform into usable statistics deployed to quantify opinions, behaviors, and attitudes, along with other variables for defining further (Bray, et al., 2014). This research has the main premise based on measurement which takes it away from a qualitative investigation that requires deep dive to get an insight.

The quantitative research method revolves around the belief system of positivism (Polit et al., 2001). Both quantitative and qualitative have equal application with its singularity. It is prerogative of a researcher to make utilization of any of the techniques separately, the method referred to as the "mono method". With the application of both the approaches including other techniques identified as "multiple methods". (Wallman, 2011) considered this technique pertinent to business as well as management. A researcher may apply either mono or use multiple methods, for collection of primary or secondary level data or a blend of both. Based on the above, the research proceeds on scientific lines getting inspiration from the following characteristics:



Source: Khine, (2013)

Figure 20 Qualitative versus quantitative methods

For executing this research, a quantitative type of research method was employed as quantitative research follows objective understanding regarding the matter with no condition of intimacy with the subject matter as the same reality involves in this research owing to objectivism-based reality with the involvement of numeric nature of this research.

3.11 Justification for adopting the quantitative research method

Quantitative methods assume that reality is objective and free of research interference. It embarks on the objective nature of reality. Research is mostly on deductive methods of logic as well as theories thereby testing of hypotheses is carried out in a cause-effect manner. Based on this objective-based approach, the quantitative approach resorts to measure as well as analyze the target concepts precisely to deliver solutions to the inquired issues (Adams, et al., 2011). A number of ground breaking features justify the adaptability of quantitative research approach for the current study. Firstly, quantitative research adopts the deductive approach that enables the testing of 14 hypotheses for their acceptance or rejection. Moreover, it is considered suitable to test a theory by conducting the empirical investigation. Secondly, this research exhibits epistemological orientation as positivist by utilizing quantitative research methods, to explore the causes of deficient training evaluation in the public organizations in Pakistan. Therefore, exploring the effects of training program characteristics and workplace environment characteristics on training effectiveness was predominantly embarked on. Thirdly, it has been an inherent desire of this research to replace or extend theories pertaining to training evaluation, for developing hypotheses and examine the association of the independent variables with dependent variable. Thus, this research study started with broad synthesis of the current training literature (see Chapter 2) to identify gaps. Fourthly, this research conceived priori fixed relationship that gave birth to a conceptual framework to ascertain the data coherence with the research hypotheses; therefore, the quantitative approach was considered suitable for this research. Fifthly, this empirical enquiry resorted to test the hypotheses as enunciated in Chapter 2 (Section).

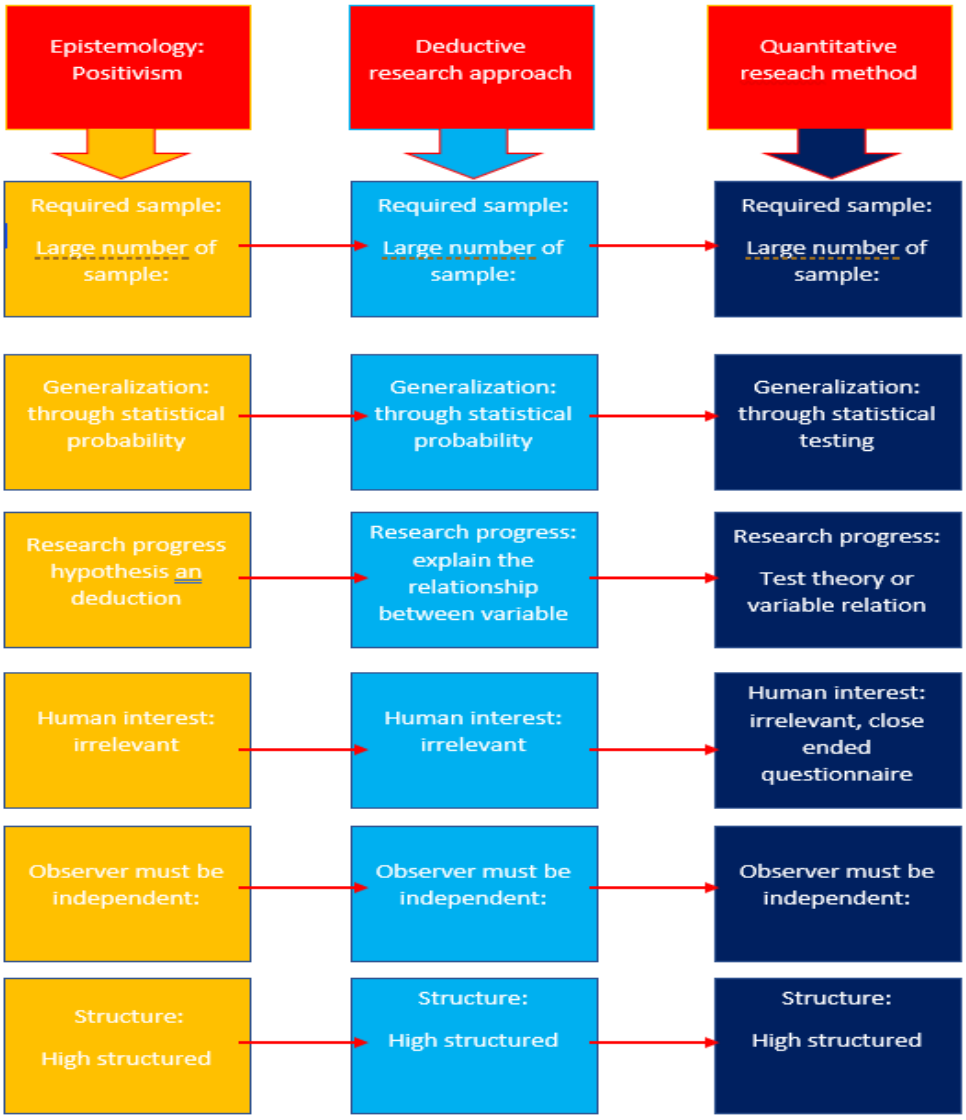


Figure 21 Research Methods

Source: Based on Author Discussion

3.12 Questionnaire

The questionnaire and its design get great effects from the rate of response that raises the question mark on validity as well as reliability of the data collection carried out by the researcher. Several measures are advised to take care of to enhance the response rate along with the reliability of the research process (McNiff, 2002) these involve:

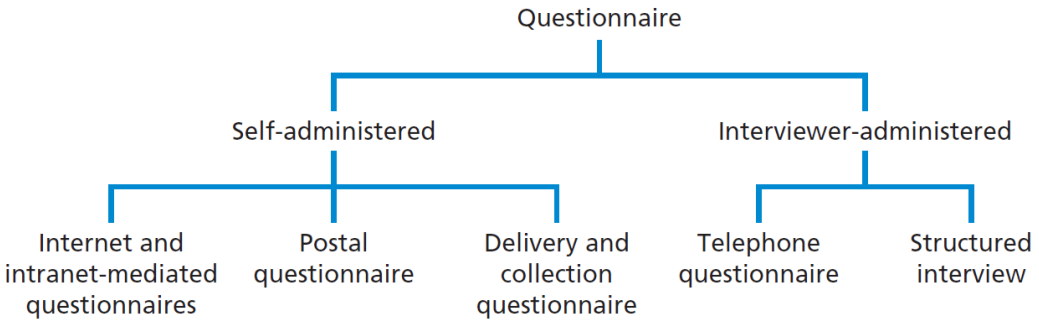
- To design the individual questions carefully.
- Building an attractive and lucid plan for the questionnaire
- To elucidate the reasons to seek responses through a questionnaire
- To conduct pilot testing
- Plan and execution carefully

Questionnaires are widely deployed while conducting explanatory as well as descriptive researches. Descriptive researches rely on opinions as well as attitudes about variables covered in the questionnaire and identified for showing variance in different phenomenon (Turner, 2005). The other side presents researches based on analytical as well as explanatory types that examine the existence of causal association among variables. Different research designs fulfill the needs of two different purposes (Kumar, 2011). The following figure illustrates the suitability of the questionnaire as the most viable data collection tool following the principles of the inductive approach as well as a quantitative approach that is why the questionnaire is utilized for this research.

3.12.1 Questionnaire types

The questionnaire is designed keeping given its administration towards the respondents and the degree of interaction of the researcher with the respondents; self-administered type of questionnaires are generally distributed electronically among the respondents and return after completion to the researcher accordingly (Gray, & Malins, 2004). Postal types of questionnaires are sent by post and the respondents are required to post these back along with their responses. Another type of questionnaire based on delivery and collection is adopted thereby the researcher delivers the questionnaire to the participants by hand and collects it later by hand (Lapan, et al., 2011). We adopted that type of questionnaire for this research study.

Figure 22 Type of questionnaire



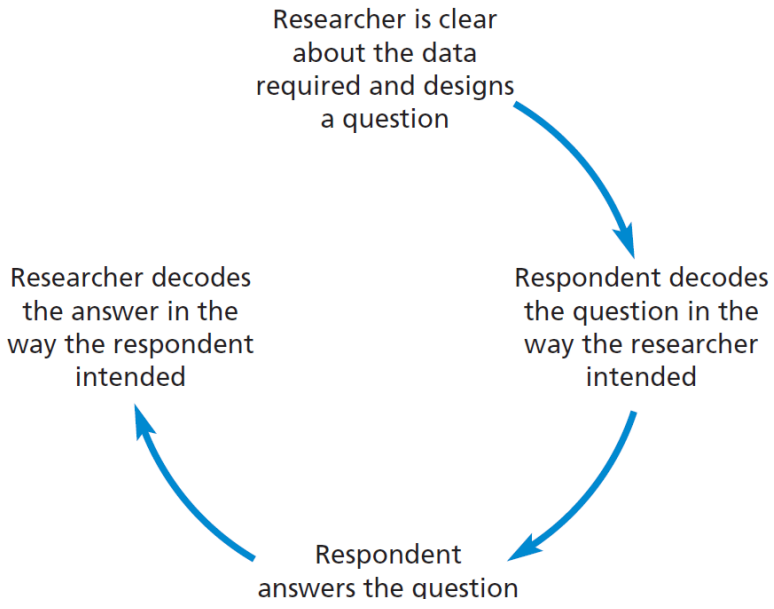
Source: (Saunders et al., 2009).

There is another type of questionnaire that is administered via telephone referred to as a telephone questionnaire. Interview based questionnaire is executed on face to face basis by the researcher and responses are recorded accordingly (Hancké, 2009). In this connection, structured interviews are conducted by the researcher asking a set of questions and responses are recorded (Hancké, 2009). A meeting was conducted with the training management one day before this study for educational purpose and to know the number of participants in the session. Seeing the participants' enthusiasm helped the researcher to get their consent willingly.

3.12.2 Designing the questionnaire

The researcher focuses to collect data taking care of internal reliability along with validity and acquisition of standard response rate grossly depends upon the questions and their design, structure, and degree of pilot testing. A questionnaire is considered valid when it is successfully employed to collect accurate data (Walliman, 2018). Earlier research found that questions & answers enunciated in the questionnaire must make a sense as evidence of validity as well as reliability (Foddy 1994). To confirm a questionnaire as valid as well as reliable, respondents must comprehend the questionnaire effectively (Walliman, 2018). Furthermore, the answer ought to be comprehensible for the researcher (Galletta, 2013). This indicates that four stages are involved in making a questionnaire valid as well as reliable. Also to include a prolonged design stage to ensure accuracy when designing of the questionnaire is underway (Habib, et al., 2014).

Figure 23 Research Process



Source: (Saunders et al., 2009).

3.12.3 Assessing Internal Validity:

By assessing internal validity means ascertaining the questionnaire's ability to measure what a researcher indents to measure. In other words, there is required to know whether the researcher found what he is intended to find. By validity means validity carried by content, by criteria and by construct (Tisdall, et al., 2009).

3.12.4 Content Validity:

Content validity indicates the extent of measurement for instance: the phenomena under investigation are covered through questions. This is likely to be judged in numerous ways for instance: extensive literature review broad-based discussion with seniors. A panel comprising individuals who are entrusted to ascertain anything "essential", "not necessary" and "useful but not essential" (Blaxter, et al., 2010).

3.12.5 Criterion-related Validity:

Also termed as per predictive validity. This reflects the capacity to measure the questions to generate accurate predictions (May, & Holmes, 2012). Means to say that based on measurement questions from within the questionnaire, future prediction on prospective behavior can be made thereby test leads to guide the extent of accurate prediction to be made (Bowling, 2014). While assessing validity regarding criteria, the researcher intends to make a comparison of data acquired from the questionnaire with specifically built criteria. Statistical analyses like correlation are employed to undertake this (Hanington, & Martin, 2012).

3.12.6 Construct validity

This type of validity resorts to ascertain the extent of measuring the questions that take off to evaluate the constructs manifested for measurement (Seale, 2013). For a researcher, to ensure the presence of construct validity, constructed items must have lucid association among them so that formal decision to intervene and deployment of measures may be taken to validate the construct (Matthews, & Ross, 2010). Furthermore, numerous constructs must reflect a clear difference between these (Ross, 2012). Construct validity refers to an all-embracing term that covers the assessment regarding validity linked with measurement process for example utilization of questionnaire to measure a specific construct like depression, commitment, trust, etc (Muijs, 2004). As discussed above, validity about the construct, criterion, and content along with internal validity represent the whole validity required from the questionnaire, in the coming part of the thesis, the application of all of the validity types will be seen. Convergent as well as discriminate validity are utilized to test validity of the construct (Hair, et al, 2014). This study adopted convergent as well as discriminate validity to make sure that the unobserved measures are accurately measured.

3.13 Pilot Study

Researchers adopt one approach to settle the limits about the application of measures along with methods and here pilot study is believed to implement. Study at pilot level finalizes the adoption of chosen measures along with methods for small scale research about their effectiveness (Macnee and McCabe, 2008). Sporadically, the utilization of this type of study is made to select a particular factor with raged to a research problem. More or less, it is launched to exhibit the reliability and validity reflected by chosen measures in a specific research setting (Thomas et al., 2015).

The pilot study reflects the researcher's capability to apply a study. As knowledge development about a specific concept as well as identifying the gap in knowledge is a time taking process and requires multiple level studies, pilot studies lead to lay the foundation to build a viable research program. The maiden trial is run with the help of colleagues, associates, or consultants to speak about the questionnaire (Blessing and Chakrabarti, 2009). These people are best to offer valuable critiques on the effectiveness of format, content, manifestation, and items' significance and viability of questions with addition or deletion.

To conduct pilot testing of a questionnaire for strengthening the validity, the researcher waited for a training session thereby suitable respondents were expected those have a broader understanding of organizational structure and training system. Moreover, it was likely to serve objectivity, credibility, and reliability in the line of study objectives. I got the opportunity to get feedback from these esteemed respondents that proved to help to bring improvement in content for delivering correct meaning as I was aspiring. Based on these observations, we made further clarification and amended the content for the actual respondent. Linked with the above, the researcher piloted a study to test the instrument adapted for the study and delineate the procedures for data collection evidently and to discover the suitability of the methodology under contextual conditions of the public sector in which methods find ways for utilization. Before initiating the empirical research with the research instrument and other formal introductory material, a pilot study was carried out with an initial batch of participants.

3.14 Data Collection Methods

These methods include observation, secondary data, interviews, questionnaires, sampling. A researcher's main focus is to obtain employee perspectives of public sector employees about factors about training effectiveness. As employee perspectives help the researcher to select the best approach to apply in the training realm of PSOs. The researcher gets immense information through employee perspectives in developing relevant questions on each factor of training effectiveness.

A questionnaire was designed to collect primary data based on the closed-ended type of questions. Such questions are found best to carry out numeric analysis using spreadsheet software. In the case of quantitative analysis, open-ended types of questions are found meaningless to give required results where meaningfulness of the answers may become omitted (Quinlan, 2011). The closed-ended form of questions is proved slightly easy to control this limitation by including more facts (Quinlan, 2011). This study on PSOs hence chose closed-ended questions for collecting primary data. A questionnaire survey is preferred to employ for data collection and advance the research project. The survey technique is specifically popular to get data about an identified research problem from the target population (Zikmund, 2003).

3.14.1 Data Collection Procedure

1. The researcher reached the Directorate of Training & Research and came across the Director who happened to lead the Directorate. The main agenda of the meeting was based on key preparations for the study and managed to conduct the research study.
2. Study material including a cover letter with the questionnaire was displayed and disseminated among the training management in which the aim of the study, with research significance, and contact details of the researcher was apprised.
3. The researcher managed to meet the potential participants with the view to judge their eligibility those were showing enthusiasm for participating in the study. The responses were managed to collect and put in a sealed box placed near rostrum.
4. Primary research began data collection in June 2017. A small study was done as a pilot study. The purpose was to judge the authenticity and clarity of the instrument (questionnaire) and its application in the same conditions of this study.
5. The researcher had to wait for every training session that occurred as per the training calendar (every month or three months). We looked for suitable respondents those must-have a broader understanding of organizational structure and training system. This took us eight months to complete data collection.

3.15 Research Design

Research design looks to implement the study fittingly and proceeds with the solution of the clinical inquiry that is critical to generate the paramount evidence. An appropriate research design helps to consider the research question along with its allied evidence required. For this purpose, a model is applied to test a theory or examine a research question (Oleske, 2009). Research offers a reflection of several study designs.

Events are categorized about their respective value and volatility that provides major kind of evidence. Randomized controlled trials provide evidence at an authentic level (Marshall, 2007). This provides a methodical design to determine the cause and effect relationship between an intervention and outcome. Segregation of study participants is made on a random basis in the experimental group as well as a control group respectively. In case of the requirement of implementing an intervention or program over a certain period, an observational study offers the best fitting design (Carlson and Morrison, 2009). Observational types of study designs involve the cross-sectional type of studies, cohort and case-control type of studies. Out of these choices, an approach is required to select that could best explain the association between variables and provide a piece of strong evidence using a particular design. This study resorted to implementing an experimental design that provides an opportunity to implement empirical research. An experimental design enables the researcher to test an idea or practice or even procedure to ascertain the influence of predictor on the outcome. The research design guided to operationalize principles hooked on a protocol laying to adopt a methodical method to collect data. This study adopted a positivist philosophy that looks for (objective reality to assess individual attitudes and behaviors using this approach.

3.16 Study Setting and Locale

The study proceedings occurred at the in-house training campuses of public organizations in the three cities Lahore, Faisalabad, and Gujranwala. These stations were assigned to study locale to undertake a research study and select participants for distributing the survey questionnaire evenly to maintain equilibrium among the field offices among participants.

3.17 Sample and sampling method

Social science research is known for exceptional use of the entire population, but mostly, every subject cannot be included considering the limited nature of the population. This is the underlying principle behind utilizing sampling techniques. Sampling finds its basis from among the elements that constitute the whole population to realize knowledge as well as pertinent information (Gerrish and Lacey, 2010). It is a critical part of the research procedure and it is expected to be highly appropriate for a particular research topic as well as the research question.

3.17.1 Sampling procedure for criteria setting

Criteria set for the study were that the participant must have attended at least five training in his or her service tenure. He or she must show willingness and availability to participate and geographical proximity (functional distance) to the researcher. He should have an understanding of training, and organizational structure.

It may give my research objectives more credibility and reliability. By these criteria, homogeneity of the target population i.e. public sector employees became the major assumption. Homogeneity means to carry the same characteristics as a whole. In so doing, no substantial difference is likely to come out of the research findings as a result of a random sample, a cooperative sample or a proximate sample or an unreachable sample from the target population (Mackey and Gass, 2005).

3.17.2 Complication about sampling technique

Ab initio, we were desirous to go with purposive sampling but by using purposive sampling technique, we were required to meet the participant for the purpose of screening at two stages. This had immense involvement of researcher mostly based on judgement that was against the principles of positivism epistemology and not aligned with my philosophical position. Furthermore, in this scenario, it is difficult for the researcher to remain impartial and unbiased. Based on these ground, purposive sampling was not adopted. So we decided to go with random sampling due to reasons stated below.

We, therefore, finalized simple random sampling based on the rationale of having prior knowledge about the demographic profile of the participants. In the briefing session, criteria fulfillment was observed with assuring the suitability of study participants. Response rate remained low and we had to exert extra effort. We had to wait for every training session that approaches with a gap of every two or three months. We looked for suitable respondents those must-have a broader understanding of organizational structure and training system. This took us eight months to complete data collection. We did not opt for a convenience sampling method. By using this technique, we were able to know about the willingness of the participant but unaware of his or her knowledge of the area under investigation.

This may lead to creating biasness in respondents' selection. Moreover, it proves more viable in case of investigating a specific issue like the use of a consumer related product i.e. Shampoo or a particular brand of perfume.

3.18 Research Strategies

Research strategies encompass within the domain of research methodology a general plan to seek answers to the research questions (Saunders et al. 2009; p. 90). The research method is defined by Sarantakos, (2012) representing “the theory of methods” and illuminates the way a researcher shapes to conduct an object inquiry (Sarantakos 2012; p. 465).

Seven types constitute research strategy i.e. experiments, surveys, case studies, ethnography, grounded theory, action research, and archival research.

3.18.1 Research strategies using the inductive approach

Research strategies driven by the inductive approach include action research and ethnography.

3.18.2 Action research

Action research does involve four main themes the first theme takes into account the purpose of research, for instance, studying the implications that lead to bringing change in an organization. 2ndly the researcher takes on a critical role in the research work. Therefore, it is incumbent upon the researcher to follow the principles of change management in the organization under research. 3rdly the strategy involves a cycle of diagnosing, making plans and taking tangible actions accordingly. At the stage of 4th and final theme, action research must reflect implications following the execution of the extant research.

3.18.3 Ethnography

The inductive approach provides deep roots to ethnography. This involves the strategy to delineate the subjects under research with adequate depiction or narrative. The subject strategy is rated time-consuming, that is why this strategy is adopted rarely. For instance, ethnography is applied when there is required to comprehend relevant people’s perspectives and interpret these to clarify the process.

3.19 Research strategies using a deductive approach

3.19.1 Experiment

The experiment is applied in the domain of natural sciences initially when there is required to understand the causal links. Hence, the purpose of conducting examination is to know the effect of a probable change independent variable as a result of a change in independent variables. In the classical form of experiment, two or above groups are selected wherein each group represents an experimental group. For instance, an experiment is conducted to ascertain customer satisfaction about a product for this purpose satisfaction level of different groups will be evaluated. This is possible by trying the product to members of each group after defining satisfaction on pre-defined parameters.

The deductive approach is marked by a survey strategy that is widely followed in business as well as management research. By adopting a survey, the researcher can gather large data from a vast target population. This data is liable to be analyzed through descriptive as well as inferential analysis techniques. That is why the questionnaire was preferred to employ when required to know for this study the employee perceptions in service-oriented public organizations. Generally, any issue that is required to quantify through statistical data analysis, the researcher prefers to utilize a quantitative method of research. It is utilized to study behaviors, attitudes, observations like variables for generalization of outcomes from a large sample size (Donley, 2012). This kind of research method finds reliance on numerical data specifically for the generation of facts and to obtain the most accurate and precise results (Walliman, 2010). As the extant study aims to generalize the results, hence we vigorously pursued the quantitative method for this research.

The other side presents a qualitative type of research method that is required to explore employee viewpoints under the aegis of relevant theories and approaches (Walliman, 2018) that was out of the research premise of this study. This research study aims to test a theory and hypotheses, therefore deductive approach was preferred to use.

3.20 Research strategies using a deductive and inductive approach

3.20.1 Case study

A case study encompasses an empirical investigation that is carried out to study existing phenomena based on a score of evidence (Robson, 2000). A case study differentiates from an experimental strategy that does not require linkage with any particular context. It is applied where there is required to probe into the research context. For instance, when there is required to know the causes behind Nokia's decline, the case study strategy is best to adopt for probing into the contextual conditions.

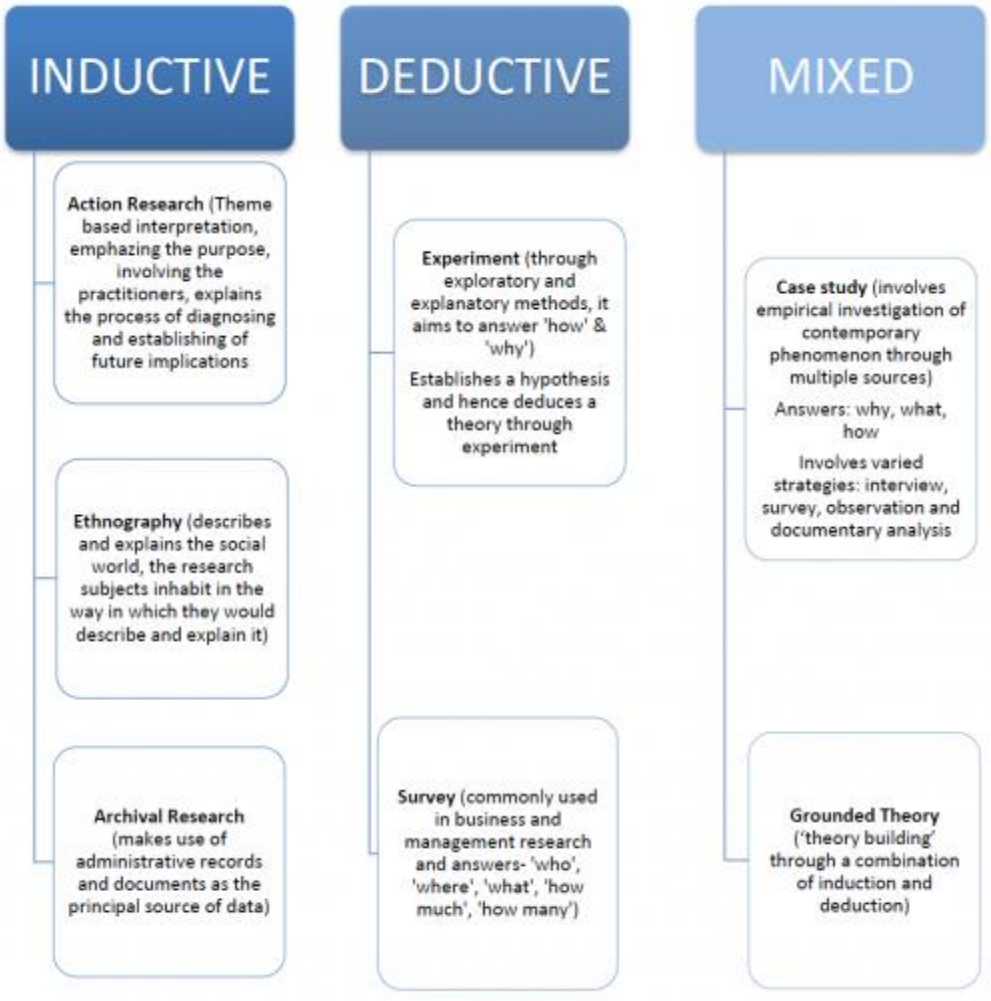
3.20.2 Grounded theory

When there is required to proceed with theory building, the mixed approach can deliver good results. The adoption of this strategy helps to predict and to explain behavior. Ab initio, a theoretical framework is developed at the initial stage of the research under this strategy that leads to developing new theories. In other words, theoretical underpinnings enable the researcher to study the impact of one variable over the other in a particular setting. Finally, the research strategy helps the research to seek answers to the research questions. Research questions, as well as objectives, guide the selection of research strategy. But the presence of current knowledge, time available along with philosophical underpinnings carry equal importance (Saunders et al. 2009).

3.21 Selecting research strategy using research approach

A methodology finds its basis from three types of approaches to reasoning those help to formulate a strategy. Some of these find their application to research that derives its basis from the inductive strategy. On selecting a certain reasoning approach, one can select an optimal strategy.

Figure 24 Research Methods



To make a knowledge claim, a researcher is under obligation to define the procedures to prove or disprove assumptions concerning inquiry of work conducted by him or her (Creswell, 2003).

Research design finds its emergence from the worldview, or paradigm, that the researcher perceives. This research study considers a score of the research paradigms scientific, positivism, post-positivism, and constructivism and seeks an optimum structure to execute this study. In a study conducted by Kuhn 1962, (1996), paradigms are not comparable as their origin is not the same. The 1st paradigm defined by Kuhn refers scientifically acknowledged outcome that provides the basis for the prospective research. The worldview adopted by the researcher takes on the data required to provide a solution to the research problem and builds his research investigation to analyze the results in the best possible manner. According to the formulation of the scientific paradigm, knowledge is based on observation, experience-based and verification; the research method adopted is, therefore, quantitative. The positivist paradigm believes in the acquisition of scientific knowledge through empirical means, instead of argument-driven. The positivist approach involves the collection of data, its analysis, hypotheses testing with statistical modeling at the universal level (Hawkesworth, 1988).

The post-positivist paradigm describes that the existence of a world view is a reality but it is difficult for humans to adopt a real world view based perception (Denzin & Lincoln 1994; Denzin 2000). Thus, post positivists follow the linguistic approach to ponder the research limitations before starting collecting data, with analysis and findings (Clark 1998; Guba & Lincoln 1989; Habermas & McCarthy 1985).

The researcher continues to reconnoiter the selection of theories out of the available range. The confounding problem is a multitude of theoretical perspectives and methodologies that confuse the researcher often. A Frenchman Auguste Comte (1853: 3) unveiled in the 19th century from the conventional line of thought prevalent on account of Bacon times that real knowledge needs support from the tangible observable facts.

This account leads to generate two assumptions: according to the ontological perspective, reality should be objective and external whereas epistemology belief finds basis from observations regarding external reality providing empirical confirmation. It does not confine to a specific inquiry or method (Aiken, 1956). When some knowledge claim is made by a researcher, he or she is required to determine the procedures involved in research operations finding a basis on specific assumptions about an investigative inquiry. The researcher's knowledge claims are made on what of knowledge (ontology), how it is developed (epistemology), the values associated with it (axiology), the way of transcribing on paper (rhetoric) and procedures to study the phenomena (methodology) (Creswel, 1994).

Assumptions follow the way the popular world views move (Crowther, & Lancaster, 2012).

3.22 Development of construct scales

By definition, a Likert scale is summation based rating scale in accordance of which an individual rates responses on the scale amid the multiple items (Warmbrod, 2014, p. 31). The scaled/rating based questions are asked through the Likert scale thereby reflects how far the participants are agreed with the given statements (Collis and Hussey, 2014). Five categories based Likert scale was utilized with rational categorization of topic and logic wise distribution of questions; the funnel approach was followed by including common questions with narrow down the scope with progression of the survey (Churchill, 1987). The rationalization of using the Likert scale lies in its capacity of having techniques for assessing the psychological attitudes based on the Rensis Likert invention of the Likert scale in the year 1931.

While designing the questionnaire, it was particularly taken care of that questions put in a particular context must not deviate from the probable context under consideration for research. Where the effect of an anticipated context was felt undesirable, the order of the questions was altered or a few questions were omitted for putting an undesirable impact to change the context. Moreover, the crucial questions were put in the first place.

Open-ended questions were preferred over closed questions to eliminate order effects developed as a result of undesirable responses (Hague, P, 1993). The forced-choice strategy was aimed, instead of limiting to agree-not agreed attitude questions (Converse & Presser, 1982). To get assimilation and contrast effects, both general and specific questions were developed. The structure of the questionnaire was organized in such a way that "it makes sense to respondents and avoids leaving the choice of the order in which questions get answered up to the respondents" (Jenkins & Dillman, 1973).

Questions are arranged in a logical sequence helping the respondents for self-completion (Hague, 1993). It was, therefore, take due care that the questionnaire first addresses the respondent's needs and then the researcher's needs for data analysis.

3.21.1 Justification of adapting survey instrument

In accordance with the positivist approach, a Likert scale is widely used to measure the individuals' attitudes (Miller and Brewer, 2003) through the survey. Oppenheim (1992) establishes that Likert scale is good on reliability due to its flexibility to absorb a variety of answers allowed through this format. Therefore, Likert scales were followed to execute survey for this study. Division of the scale was made through 1-5 positions including (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree. These scales result in the summation of 15 while their average results in 15/3= 3. According to Joshi et al.,

(2015), Likert scale provides a matter of debate for analysis & inclusion of points and given more reliability and validity. Though 7-9 points scale raise reliability and validity yet 5 points do not reduce response rate. To Dawes, (2007), same mean scores were noticed with the use of 5 and 11 points scale. Nonetheless, Mertler (2009) endorses that a five-point scale is suitable particularly for an attitudinal study that was adopted for this study.

3.21.2 Development of the survey for this study

Focus of this research aimed to evaluate the training effectiveness, thereby influenced by diverse variables that impact training outcomes. Hence, this leads to develop a conceptual framework to investigating the factors that influence training effectiveness. More precisely, this research examines the influence of training program characteristics and workplace environment on training effectiveness in terms of organizational performance. Finally, the current study scrutinizes the mediating effects of certain factors on the association among the training outcomes.

3.23 Process of Data Collection

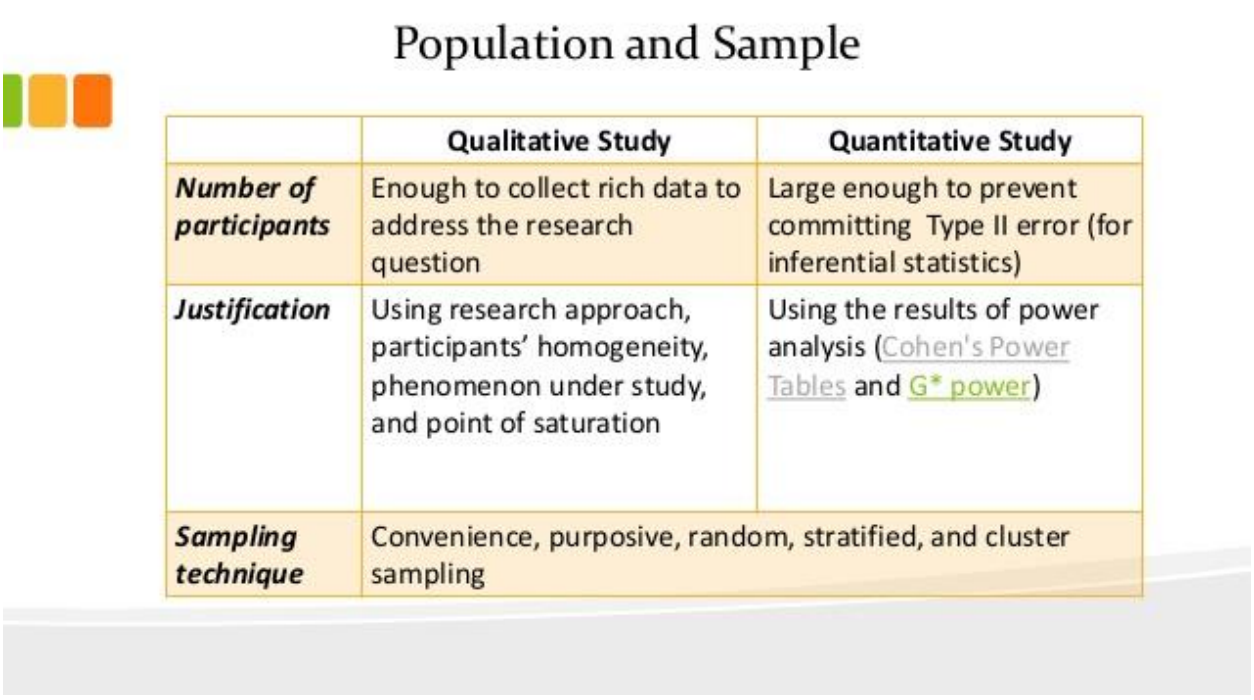
In quantitative research, data collection is based on a structured method of data collection in the face of qualitative researches (Waterman, 2003). However, the philosophical stance taken by the research is indicative of adopting a specific research design along with research methodologies (Tight, & Huisman, 2013). Various forms of surveys such as online surveys, paper surveys, kiosk surveys, interviews, mobile surveys, face-to-face interviews, longitudinal studies, systematic observations along online polls are utilized to collect data in quantitative researches (Tight, & Huisman, 2013). Training program characteristics and workplace environment were measured based on a 15 items scale for each employing five-point Likert scale ranging from 1-5 (Hinkle and Oliver, 1983).

3.23.1 Rationalization of using multi-level survey technique

Multi-level survey technique was employed during the course of data collection among managers, training management and supervisors that improves the sample representation without affecting the other results (Yun and Trumbo, 2000).

The research study adopted the cross-sectional technique of collecting data. As the study delineates the research problem, highlights sample characteristics, problem identified, the study is, therefore, quantitative (Creswell, 2003). As stated above, we draw on positivism to conceptualize management development training and take on managerial perspectives to measure training effectiveness using individual and category discursive factors extracted by "logical automatism" instead of "Intuitionism". In this way, we may be able to shift the theoretical paradigm by adopting a different grammar of inquiry.

Figure 25 Population and sample



3.24 Sample population

A population is represented by a band of individuals that has one characteristic makes it distinct from the other groups (Creswell, 2012). For this study, training program remains the unit of analysis, and the subject is individuals, not organizations conducted in public organizations of Pakistan. Public sector employees included managers, non-managers, supervisors, and training managers who are the target population for this research study.

Estimation of the total population involved in this study is 35,000 heads; the sample size recommended by experts (Carvalho, 1984) is up to 500 employees covering different layers of employment. 1000 copies of questionnaires were distributed in set forms to the target respondents selected to participate by way of 95% confidence level leaving a +/-5% margin of error to lessen the prevalence of unused data.

3.24.1 Sampling Frame and Sampling Location

A questionnaire adapted for this study was distributed in the three training public organizations of Lahore, Gujranwala and Faisalabad. Multi-source data collection was made from different layers i.e. public managers, non-managers, supervisors and training managers who are linked with training enforcement and locations of management observing cross-sectional needs of the study. The extant research embarks on hypotheses testing due to which deductive approach was adopted. Moreover, the deductive approach is more aligned towards objectivism required for measuring the reality through testing a theory (Hennink, 2011).

Moreover, training evaluation questionnaire presented by Kirkpatrick was considered in the commencement of this research but according to experts, KP model (1959) could not evaluate the factors like workplace environment, many individual factors, training program characteristics, and their effects on training effectiveness.

After Kirkpatrick model, model presented by LTSI holds its unique popularity for testing training effectiveness in context of western world. It was also tested in Asia (see section 3.20.3). Seeing its success, the researcher decided to adapt LTSI model to test in our environment. Adoption was not feasible due to difference in contextual conditions of East & West, therefore adaption was logical to acclimatize it with local context.

This study had the objective to investigate the mediation relationship of training program characteristics and workplace environment with training effectiveness. As per objective of this study, target was to identify certain training variables that gave best results while tested by Holton, Bates and Ruona, (2000) this resulted in adoption of final questionnaire for the extant study.

3.24.2 Sampling technique

Random sampling technique was adopted for data collection from among public employees as it is a non-probability sampling that provides a basis to collect data from among the diverse members of the population accessible (Walker, 2010). Due to the busy schedule of public employees at the workplace and home place, this sampling method enabled the researcher to get to the willing and available employees, therefore, the researcher selected the public offices because the researcher being a part of the organization had liaison with authorities of these public offices. But to avoid biasness, the researcher hide his identity and remained independent as laid down under positivism epistemology. That is why random sampling was adopted to apply. The rationale for selecting this sampling method is the effectiveness of this method and the limitation of financial resources and time constraints (Matthews, & Ross, 2010). This supported the researcher to gather a diversity of responses in the area of investigation. As mentioned above, a self-administered questionnaire was used to gather the data among the participants those were mostly voluntary.

Moreover, this study employed expediency sampling for this kind of non-probability sampling in which selection of subjects is made on convenient, proximity and access basis for the researcher. In other words, this kind of sampling is applied where the researcher has straight and unhindered access to the research participant and there is involved no additional limit or criteria for selecting participants (Saunders, et al., 2016). Moreover, acquiring data from public managers, non-managers, supervisors and training managers was a difficult task because of the sensitivity and peculiar beauracratic nature of public organizations.

3.24.3 Sample Size

Selecting a sample size that is composed of the respondents selected by the researcher for the research purpose. The current research sets the aim to comprehend the role of different individual and organizational factors with their respective contributions to training effectiveness that makes it imperative to gather primary data from among the employees. Hence, a specific sample selection of six hundred employees was made as respondents respectively from multi-sourcing. As the researcher has a career job of working with the public organizations under research, he faced no issue in getting access to the target population and seeking formal permission from the competent authority to gather data. For determining valid sample size, a certain methodology is vital to follow despite the involvement of time and financial constraints (Carvalho, 1984). As stated by (Krejcie & Morgan, 1970), 382 employees are the equivalent size of the sample for an employees' number of population of 56,988 in the public sector. Table 14 illustrates sample size lay out in different population scenarios.

Table 13 Determining Sample Size

Population size	Small	Medium	Large
10,001-35,000	125	315	500
35001-150,000	200	500	800

Source: Carvalho (1984)

3.24.4 Justification of sample size

Patton quoted the "known sponsor approach" as a strategy to gain secure access in the target organization. To determine a valid sample size, methodology given by Carvalho, (1984) was followed due to avoiding time as well as financial constraints. Carvalho, (1984) recommends that out of population N 281-500 sample size (n) is 50 (Carvalho, 1984). Furthermore, according to another formula given by Hair, Hult, Ringle, & Sarstedt, 2013), sample size was determined using rule of thumb in which the total numbers of constructs were multiplied with the 10. This method is used by many researchers for calculating sample size for their study especially when they used PLS-SEM as data analysis tool. The '10-times rule' has been a favorite because of its simplicity of application (Kock, Ned, Hadaya, & Pierre, 2016). By using this rule, the total number of sample size emerged as 300.

n = Total No of Constructs*10

n ¬= 30*10, n = 300

By using this rule of thumb the total sample size was 300 which was also supported by (Awang, 2015). A research found that in view of population size as four hundred, the same size with a confidence interval of +5% may be counted as 196 as minimum Saunders, Lewis, and Thornhill (2009, p. 219). According to Comrey and Lee (1992) and Tabachnich and Fidell (2001), a sample size around 100 falls in the category of poor, 200 becomes reasonable, 300 remains good, 500 becomes very good, while greater than 1000 remains excellent.

The above evidences provided this study ample justification to look for an excellent sample i.e. 1000 (n) but it remained within 500 (n) which falls in the category of very good.

3.25 Data Collection Instrument

A questionnaire was adopted as the study instrument for data collection. The questionnaire was comprised of 6 parts. The first part dealt with the demographic factors of the respondents, two independent variables such as Training program characteristics and workplace environment was used along with learner readiness, training evaluation & ROI as mediating variables. While training effectiveness was dependent variable for this study that eventually influences organizational performance. While organizing the survey instrument, the questionnaire was segmented into six sections:

The construct 1 has 15 questions for TPC, construct 2 has 15 questions for WPE, construct 3 has 05 questions for learner readiness, construct 4 has 05 questions for training evaluation and construct 4 has 05 questions for return on investment while construct 5 has 15 questions for training effectiveness. A 5-point Likert scale was used to measure all variables thereby 5 symbolized strongly agree and 1 signified strongly disagree.

3.25.1 Instrument Employed for Data Collection

Linked with section 3.20.1, a questionnaire was adapted to employ as an instrument to be used for the data collection in conjure with the objectives of this research project. Survey strategy was adopted after identifying the management at different levels of PSOs and to apply among public managers, non-managers, supervisors and training management to be acquainted with their perception of training effectiveness in Pakistan.

3.25.2 Measures

The survey instrument i.e. questionnaire that was designed keeping given the past research contributed to the body of knowledge, was segregated into four sections.

i). Training Program Characteristics the section has 15 questions.

ii). Workplace Environment the section has 15 questions.

iii). Learning readiness

iv). Training evaluation

v). Return on investment

This section has 15 questions in total representing 5 questions for each item.

iv). Training effectiveness the section has 15 questions.

3.26 Reliability and Validity of Scales

Reliability indicates the extent of consistency of an instrument that it aims to measure. Measurement of the quality of the measures and authenticity of its consistency or repeatability is known by reliability. Repeatability of results shows that measurement is reliable if it is repeated in the application (Fraenkel and Wallen, 2000). By reliability, it is desirable to know whether two independent raters give similar scores (inter-rater reliability) if carried out in two different conditions. Computerized scales have more reliability because it involves less chance to affect the responses (Kroll, & Harper, 2013). Reliability results tell whether test items are consistent. These consistencies provide the reliability of a measuring scale or instrument. For the current study, internal reliability needs to check the consistency of a single respondent on multiple indicators (Bryman and Bell, 2003). Cronbach's Alpha is the most popular method to check internal reliability. Its value ranges from 0 (no reliability) to 1(perfect internal reliability).

An escalating value close to 1 is considered an adequate level of internal reliability (Bryman and Bell, 2003). Cronbach's Alpha test was applied to test internal reliability for the current study. By reliability, we need to know to what extent data collected and analyzed develops dependable results. Kroll, & Harper, (2013) presented three questions as a guide:

1. Whether the same measures bring the same results when adopted on other occasions?
2. Whether similar observations were reached by the other observers?
3. Whether the research process and the results have been transparent?

The other side, validity means to get validation of the measures applied to gauge a concept that measures (Bryman & Bell, 2003). Research needs to comprehend whether a scale or a set of measures represents the concept of interest accurately (Heir, 1998). The field of research recognizes several types of validity, following this trend, this research study made it sure that the instrument designed for the study has face, content and construct validity. According to Schwab, (1980), validity represents "the correspondence between a construct (conceptual definition of a variable) and the operational procedure to measure the construct." In other words, "does the theoretical concept matches up with a specific measurement/scale used in the research".

Construct validity leads to knowing whether a construct (construct is a kind of mental map or an idea that has to understand) has adequately measured by a scale or test. In other words, construct validity "measures the extent to which a test measures a target construct" (Kroll, & Harper, 2013).

3.27 Pilot Testing

It is obligatory upon a researcher to test the survey instrument as pilot testing and contemplate its construct validity and reliability (Dikko, 2016) with the refinement of errors and removal of anomalies and inconsistencies, data collection becomes more appropriate. Moreover covering letter, questionnaire design, appearance and layout with the narration of questionnaire completion time required are a prerequisite for pilot testing. The questionnaire must be sent to the homogeneous but smallest sample to be used in the final survey (Dikko, 2016). Researchers must ensure that the questionnaire contains instructions clearly understood by the respondent and there exists no ambiguity about the contents of the questionnaire (Turner, 2010).

Ensuing this, the first draft of the questionnaire was distributed to a small sample of public managers and non-managers working in public organizations. Employees both managers and non-managers selected as participants for this study were required to fulfill the criteria set for this study. The rationale of including employees both managers and non-managers is to make sure that socioeconomic, status and ethnic orientation of participants must not affect their perceptions about training programs. Cronbach's alpha test is applied as a measure of assessing the reliability and internal consistency of a set of scale or its items. Reliability coefficient value associated with Cronbach's alpha involves the range from 0 to 1 without involving any lower limit with the coefficient.

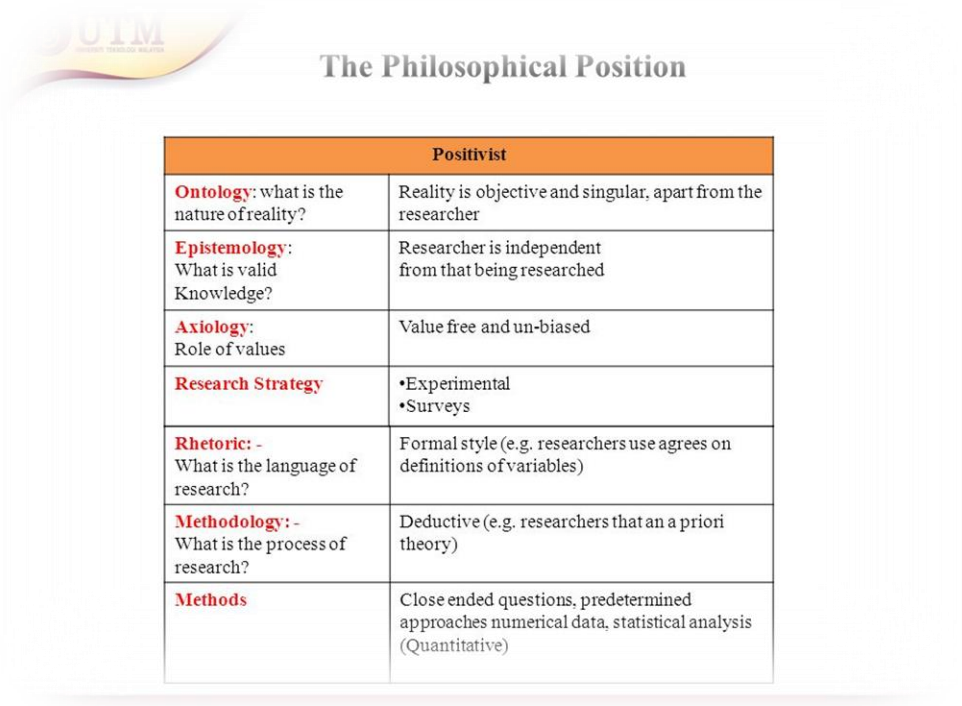
The nearest value to 1.0 shows the max internal consistency among the items relevant to the scale. This value satisfies the reliability as well as validity criterion of the TE questionnaire to ensue forward for data collection.

As narrated above, the reliability as well as validity of the research instrument can be deduced by estimating the Cronbach Alpha coefficient of reliability using inter-item correlations. The Cronbach Alpha more or less estimation of reliability around .886 is sufficiently valid and reliable scale-wise to start formal data collection (Punch, 2010; Hair et.al, 2010). The questionnaire developed by the researcher was pretested on 50 public managers and non-managers. The pre-testing showed results around .886. This value satisfies the reliability and validity criterion of the training effectiveness (TE) questionnaire to move forward for data collection. Acknowledged as an effective tool to collect data, questionnaires serve as a vehicle to ascertain participants' responses (Dawson, 2013). The questionnaire provides a robust and cost-effective means to collect responses from among the greater population targeted for this study. That makes it easy for the researcher to launch the adapted instrument among public managers, non-managers, supervisors and training managers' views on training effectiveness. Moreover, the researcher is not required to attend each participant personally while in case of an interview, the researcher interacts with each participant individually (Miller, 2013).

It is also imperative that language used in the questions of the questionnaire is fairly understandable to every participant as English is not the mother tongue in these sampled offices, however, as a medium of correspondence used in public offices is English therefore, no language barrier was confronted what so ever.

Among thousands of employees, the researcher couldn't approach each participant individually because of a shortage of time therefore, it was convenience both for researcher and participant to respond conveniently in the choice of their own time that is why questionnaires were preferred to collect data from among the employees of selected public offices. To save the researcher and participants' time, a closed-ended questionnaire was employed for collecting data and analyzing it for the sake of this research. The closed-ended questionnaire encompasses a range of questions carrying a probability of multiple answers already on board and the respondent is supposed to choose from among the best answer (Halfpenny & Procter, 2015). Past research has explored the objectivity of training effectiveness that urges the researcher to adopt a positivism approach for the extant study.

Figure 26 Philosophical Position



Sourced: Based on above development

Chapter 4: Analysis and Interpretation of Data

4.1 Chapter Overview

In this chapter, the results of the current research are presented in four sections. The 1st section delineates the results of the univariate data analysis i.e. social demographics of the study. The 2nd section underpins the results of the bivariate data analysis i.e. correlations to assess the relative statistical significance of the relationships of the three independent variables with training effectiveness as the dependent variable. For this purpose, the development and interpretation of a robust multiple linear regression model (MLR) of independent variables with training effectiveness in the 3rd section. The rationale for applying MLR is to comprehend the interpretative and predictive significance of independent variables in the relative context of the study setting. The 4th section highlights the results of both Pearson and the regression analysis model to underpin their operational significance with ecological implications for the future picture of the training scenario within the public organizations. The conclusion is made with possible generalizations in the context of PSOs in Pakistan. Preliminary data analysis was made through SPSS version 21 for determining the Cronbach alpha reliability test.

Public organizations in Pakistan are in perplex for having no mechanism to evaluate the effectiveness of their immensely invested training and development programs since there seem no returns in the form of improved employee performance through a change in KSA. This situation is creating an adverse impact on organizational performance and assertiveness that ultimately demotivates affecting individual performance (IP). The deficiency may be attributed to setting at a training venue or workplace scenario.

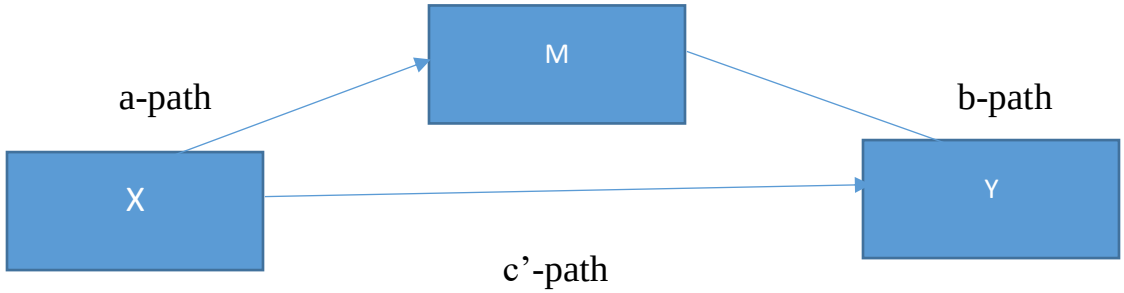
Here training evaluation can play an important role to measure the training transfer in the post-training scenario by testing the effects of TPC, WPE through their properties on training effectiveness in the mediation of applying potential variables such as learner readiness, training evaluation and return on investment. Training effectiveness has been a mediocrely researched area of investigation in developing countries like Pakistan in the last decades. These contextual conditions urged the researcher to launch a study to fill the existing gap in the literature and seek an answer to the research questions set for this study.

4.2 Quantitative results of the survey

The results acquired through the questionnaire survey are described at length in this part of the chapter. Taking into account the objectives of the study, the relationship between the proposed dependent variable (DV) and independent variables (IVs) are discovered and elucidated. Standardized statistical tools are applied to comprehend and analyze the tentative relationships. Hypotheses defined in the preceding chapter are put to test in the coming sections to find answers to the three main research questions (RQ 1, RQ 2 and RQ 3) and interpretation is made employing statistical median analyses derived from Statistical package for social sciences (SPSS)

Mediation in training research involves the kind of statistical tests exclusively found suitable to get a clear picture of the effects of a predictor variable on the outcome variable. Predictors in the extant study are training program characteristics (TPC) and workplace environment (WPE) represented by X1 and X2. In other words, the question to know whether X1 or X2 predicts M which in turn predicts Y that is training effectiveness. Mediation starts with X that leads to Y as a part of linear regression with path diagram C called “total effects”.

With the influx of 3rd party mediating variable (M) between training program characteristics (X) and training effectiveness (Y), X leads to M that in reverse leads to (Y). As mediator is added, the C path (direct effect) ought to get smaller. The intent of the research is to know if C path-C' path shows significant statistical value. According to Preacher and Hayes (2008), if A path *B path (the indirect effect) shows statistical significant value, this indicates mediation has taken place. By diagram, it looks as under:



By far significance of indirect effect (a*b), three methods such as a test of joint significance, Sobel test and bootstrapped confidence intervals are used. Out of these, bootstrapping is popularly used (Hayes & Scharkow, 2003). Barren and Kaney, (1986) present a test of joint significance. Joint significance represents the significance of a & b path. If a-path and b-path are significant then a*b is also significant. Results acquired through this liberal method is called high type I error applied in addition to other methods. Sobel test is applied as an alternative to estimate the indirect effect and its significance (Sobel, 1982). Results acquired through on-line calculator http://quantpsy.org/sobel/sobel.htm or by installing process macro in SPSS are referred to as high type II error.

4.3 Demographic profile of the respondents

Table 14 Age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 30	75	17.6	17.6	17.6
	30-39	140	34.0	27.1	44.7
	40-49	145	34.2	34.1	78.8
	50-59	90	14.2	14.2	100.0
	Total	450	100.0	100.0	

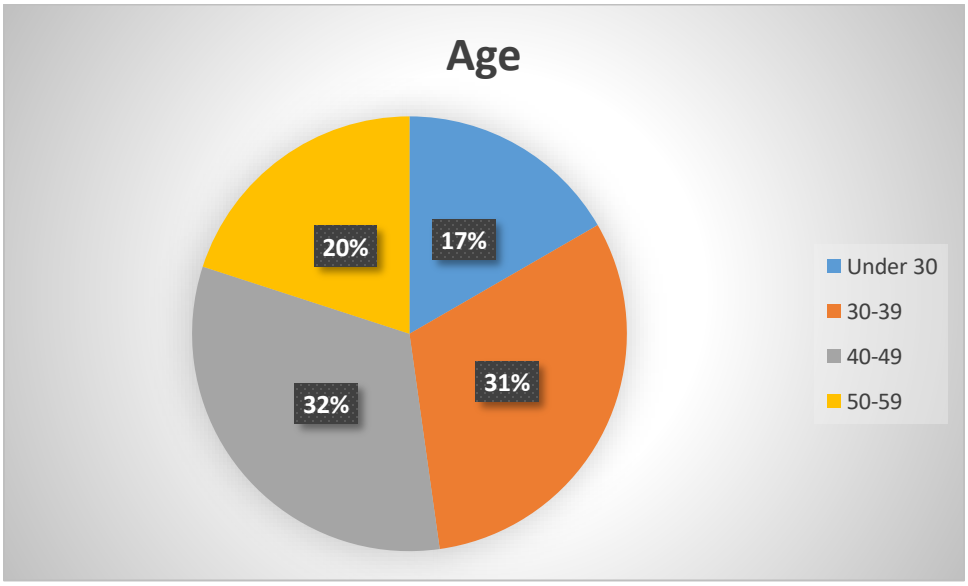


Table 1-4 shows demographics results for demographic profile of participants those took part in the research proceedings. Out of sample N=450, sample consists of 60.2% male and 39.8% female population, including age groups U/30 (17.6%), 30-39(34%), 40-49 (34.2%), 50-59 (21.1%), with job position and respective participation i.e. senior management (44.4%), middle management (27.3%), and line management (28.2%).

Table 15 Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	271	60.2	60.2	60.2
	Female	179	39.8	39.8	100.0
	Total	450	100.0	100.0	

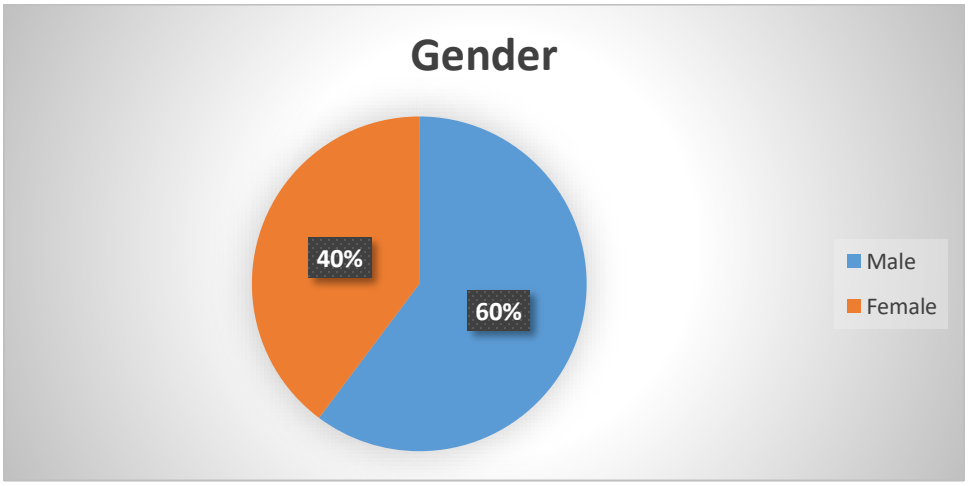


Table 16 Qualification

Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Graduation	375	83.3	83.3	96.0
	M. Phil	57	12.7	12.7	12.7
	PHD	18	4.0	4.0	100.0
	Total	450	100.0	100.0	

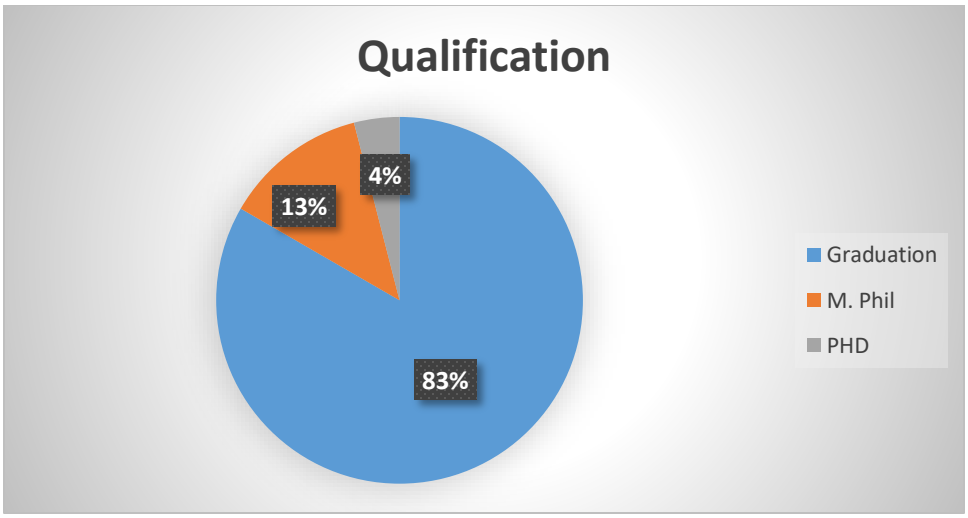
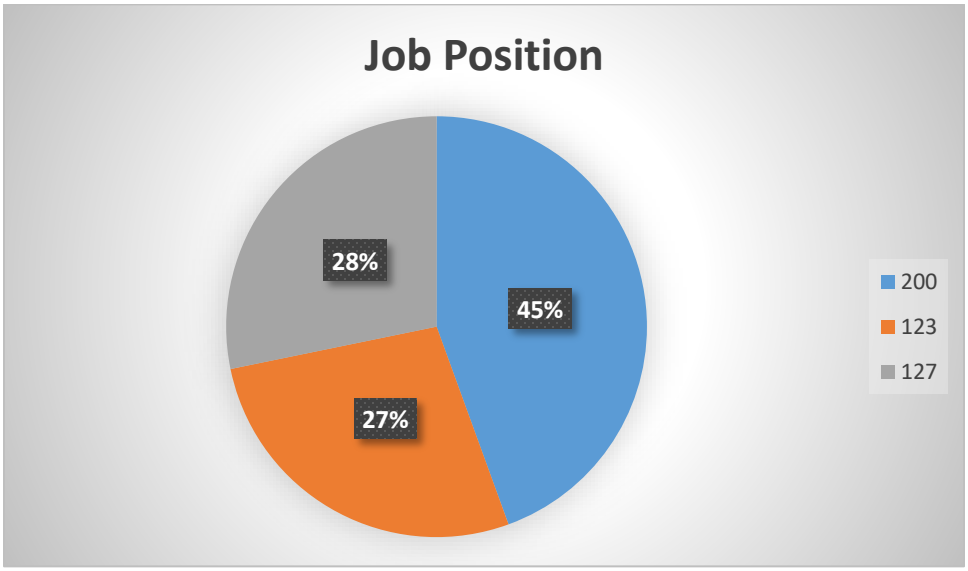


Table 17 Job Position

Job Position

	Frequency	Percent	Valid Percent	Cumulative Percent
Senior management	200	44.4	44.4	100
Middle management	123	27.3	27.3	55.6
Line management	127	28.2	28.2	28.2
Total	450	100	100	



4.4 Descriptive Statistics

Table 18 Descriptive Statistics

Item	N	Minimum	Maximum	Mean	Std. Deviation
SE1	450	1	5	3.8244	1.03085
SE2	450	1	5	3.9600	0.98912
SE3	450	1	5	3.7911	1.02134
KA1	450	1	5	3.2111	1.04353
KA2	450	1	5	4.0444	0.95688
KA3	450	1	5	4.0467	0.97407
SA1	450	1	5	3.9400	0.93019
SA2	450	1	5	3.9556	1.04158
SA3	450	1	5	3.7644	0.99781
CIA1	450	2	5	3.9156	0.90874
CIA2	450	1	5	3.3822	1.11705
CIA3	450	1	5	3.8800	1.10427
IS1	450	1	5	3.7022	1.19212
IS2	450	1	5	3.5000	1.27377
IS3	450	1	5	3.4556	1.27997
WPSC1	450	2	5	4.2956	0.68339
WPSC2	450	2	5	4.0978	0.77502
WPSC3	450	2	5	4.2622	0.69208
JP1	450	2	5	4.2933	0.67286

JP2	450	2	5	4.3333	0.66741
JP3	450	1	5	4.1867	0.74367
POS1	450	1	5	4.1200	0.75142
POS2	450	2	5	4.2867	0.67077
POS3	450	2	5	4.1467	0.72241
IWB1	450	2	5	4.0867	0.79478
IWB2	450	2	5	3.9000	0.77042
IWB3	450	2	5	4.1867	0.70049
WRA1	450	1	5	3.4200	1.31939
WRA2	450	1	5	3.5422	1.10041
WRA3	450	1	5	3.3644	1.08053
LR1	450	1	5	3.8556	1.03137
LR2	450	1	5	4.1156	0.93674
LR3	450	2	5	4.0956	0.86105
LR4	450	1	5	3.9022	0.99184
LR5	450	1	5	3.9911	0.97401
Te1	450	1	5	3.8822	0.89885
Te2	450	2	5	4.0067	0.8455
Te3	450	1	5	4.0444	0.80797
Te4	450	1	5	3.8800	0.85668
Te5	450	1	5	3.7111	0.89099
ROI1	450	1	5	3.8467	0.94435

RO12	450	1	5	3.9178	0.82278
ROI3	450	1	5	3.7489	0.97705
ROI4	450	1	5	3.6667	0.98089
ROI5	450	1	5	3.4733	1.02114
TEFF1	450	2	5	3.9711	0.76479
TEFF2	450	1	5	3.5956	1.24001
TEEF3	450	1	5	3.8822	0.91845
TEFF4	450	2	5	3.9467	0.77073
TEFF5	450	2	5	3.8844	0.77831
TEEF6	450	3	5	4.2311	0.61163
TEEF7	450	1	5	3.0733	1.4943
TEEF8	450	2	5	4.0556	0.73356
TEEF9	450	1	5	3.2911	1.15103
TEEF10	450	1	5	3.46	0.93172
TEEF11	450	1	5	3.2178	1.17382
TEEF12	450	1	5	3.5956	0.83678
TEEF13	450	2	5	4.0378	0.76149
TEEF14	450	1	5	3.6889	1.03227
TEEF15	450	2	5	4.2711	0.68864

Table 5 presents means and standard deviations employing a survey of 60 items, the majority of responses varied from 1-5 on the Likert scale. Range of different items recorded different mean scores from 3.07 (for training effectiveness7) to 4.27(for training effectiveness15). The standard deviation value showed deviations from 0.68339 to 1.27377 range.

4.5 Correlation

Table 19 Correlation

	Y	**X1**	**X2**	**LR**	**Te**	**ROI**
Y TE	1					
X1 TPC	.262**	1				
X2 WPE	.591**	.310**	1			
LR	.115*	.485**	.316**	1		
Te	.520**	.310**	.616**	.375**	1	
ROI	.665**	.233**	.363**	0.051	.332**	1

Notes: Scale = 1 “strongly disagree” to 5 “strongly agree”, all values show $p < 0.01$

Y= training effectiveness; X1= training program characteristics; X2= Workplace environment; LR= Learner readiness; Te= Training evaluation; ROI= Return on investment.

Considering the correlation scores, the variable X1 was positively and significantly correlated with all the variables ranging from values .310 (X2, workplace environment), .485 (Learner readiness), .310(training evaluation) to .233 (Return on Investment). The variable X2 was positively and significantly correlated with all the variables ranging from values .485 (Learner readiness), .310(training evaluation) to .233 (Return on Investment).

4.6 Reliability Statistics

The reliability analysis is indicative of the fact reflected by a scale that gives consistent measurement of the construct. It has to make sure that same results repeat in measurements when carried out in the similar situations (Thomas A. Wright, 2015). The current study adopted 5-point Likert scale for quantitative data, while Cronbach' Alpha determines to demonstrate reliability analysis for its standard values (Hair et al. 2006). The threshold of least acceptable value for current type of social sciences research is 0.70 while the questionnaire adapted for this study; got accepted value at 0.60 (Hair et al. 2006). Furthermore, According to Bonett, Douglas G., and Thomas A. Wright (2015), the "Cronbach's t Alpha" is considered admirable starting from a base estimation of 0.6 falling within (.60/.80) demonstrates a decent outcome. It can be deduced that the tried elements prove their consistency and inter-relationship keeping the information steady and reliable to advance for further examination. The Cronbach's Alpha value carried by each variable is given in the Table 21:

Table 20 Reliability statistics

Construct	N	Number of items	Cronbach Alpha
Training Program Characteristics	450	15	0.907
Workplace Environment	450	15	0.667
Learner Readiness	450	5	0.773
Training Evaluation	450	5	0.734
Return on Investment	450	5	0.744
Training Effectiveness	450	15	0.722

The above table shows that the value of Cronbach's Alpha above 0.60 and close to 0.70 for all variables, which indicates that our collected data is reliable and internally consistent. The table presents the estimated values of Cronbach coefficient alpha indicating the reliability and internal consistency of the measures. Cronbach Alpha value ranges from 0 to 1. For the current study, the values of Cronbach Alpha vary from 0.6579 (median) to .907 (very high). According to Thorndike, (1989), academic literature reports coefficients ranging from 0.61 to 0.80. Similarly criterion leads to develop a threshold ranging from 0.81 to 1.00 (very high), 0.61 to 0.80 (high), 0.41 to 0.60 (median), 0.21 to 0.41 (low), 0.01 to 0.20 (very low). On the criterion, the results given in the above table present the minimum acceptable value for Cronbach' Alpha is 0.907.

4.7 Confirmatory Factor Analysis

Table 21 Model Estimates of CFA

C	Parameter Estimate	S. Error	T-Test	P Value
(X1)-1->[SE1]	0.693	0.044	15.703	0.000
(X1)-2->[SE2]	0.746	0.041	18.364	0.000
(X1)-3->[SE3]	0.717	0.043	16.635	0.000
(X1)-4->[KA1]	0.385	0.049	7.801	0.000
(X1)-5->[KA2]	0.632	0.041	15.334	0.000
(X1)-6->[KA3]	0.685	0.041	16.668	0.000
(X1)-7->[SA1]	0.695	0.038	18.126	0.000
(X1)-8->[SA2]	0.767	0.043	17.529	0.000
(X1)-9->[SA3]	0.489	0.046	10.689	0.000
(X1)-10->[CIA1]	0.248	0.044	5.68	0.000
(X1)-11->[CIA2]	0.473	0.052	9.009	0.000
(X1)-12->[CIA3]	0.856	0.045	19.12	0.000
(X1)-13->[IS1]	0.885	0.049	17.956	0.000
(X1)-14->[IS2]	0.873	0.054	16.104	0.000
(X1)-15->[IS3]	0.882	0.054	16.229	0.000
(X2)-16->[WPSC1]	0.186	0.038	4.842	0.000
(X2)-17->[WPSC2]	0.236	0.043	5.457	0.000
(X2)-18->[WPSC3]	0.222	0.039	5.754	0.000
(X2)-19->[JP1]	0.228	0.037	6.085	0.000

(X2)-20->[JP2]	0.251	0.037	6.792	0.000
(X2)-21->[JP3]	0.384	0.04	9.53	0.000
(X2)-22->[POS1]	0.254	0.042	6.081	0.000
(X2)-23->[POS2]	0.215	0.037	5.752	0.000
(X2)-24->[POS3]	0.322	0.04	8.148	0.000
(X2)-25->[IWB1]	0.388	0.043	8.972	0.000
(X2)-26->[IWB2]	0.336	0.042	7.948	0.000
(X2)-27->[IWB3]	0.204	0.039	5.192	0.000
(X2)-28->[WRA1]	0.246	0.075	3.302	0.001
(X2)-29->[WRA2]	0.265	0.062	3.207	0.001
(X2)-30->[WRA3]	0.174	0.061	2.837	0.005
(LR)-31->[LR1]	0.62	0.05	12.527	0.000
(LR)-32->[LR2]	0.713	0.043	16.623	0.000
(LR)-33->[LR3]	0.603	0.04	15.049	0.000
(LR)-34->[LR4]	0.571	0.048	11.886	0.000
(LR)-35->[LR5]	0.566	0.047	12.041	0.000
(TE)-36->[TE1]	0.483	0.045	10.69	0.000
(TE)-37->[TE2]	0.645	0.04	16.045	0.000
(TE)-38->[TE3]	0.537	0.039	13.723	0.000
(TE)-39->[TE4]	0.496	0.042	11.73	0.000
(TE)-40->[TE5]	0.442	0.045	9.849	0.000
(ROI)-41->[ROI1]	0.483	0.047	10.305	0.000

(ROI)-42->[RO12]	0.406	0.041	9.897	0.000
(ROI)-43->[ROI3]	0.789	0.046	17.198	0.000
(ROI)-44->[ROI4]	0.682	0.047	14.597	0.000
(ROI)-45->[ROI5]	0.507	0.051	9.96	0.000
(Y)-46->[TEFF1]	0.094	0.037	2.514	0.012
(Y)-47->[TEFF2]	-0.154	0.061	-2.541	0.011
(Y)-48->[TEEF3]	-0.281	0.044	-6.38	0.000
(Y)-49->[TEFF4]	0.076	0.038	2.005	0.045
(Y)-50->[TEFF5]	0.075	0.038	1.964	0.05
(Y)-51->[TEEF6]	-0.072	0.034	-2.323	0.02
(Y)-52->[TEEF7]	-1.243	0.059	-21.137	0.000
(Y)-53->[TEEF8]	-0.182	0.035	-5.122	0.000
(Y)-54->[TEEF9]	-0.928	0.046	-20.17	0.000
(Y)-55->[TEEF10]	-0.582	0.041	-14.255	0.000
(Y)-56->[TEEF11]	-1.074	0.044	-24.632	0.000
(Y)-57->[TEEF12]	-0.647	0.034	-18.978	0.000
(Y)-58->[TEEF13]	-0.078	0.037	-2.079	0.038
(Y)-59->[TEEF14]	-0.164	0.05	-3.243	0.001
(Y)-60->[TEEF15]	-0.087	0.034	-2.581	0.01

Research questions set for this study are indicative of the need for use of structural modeling including the CFA test as it is of confirmatory nature. In multivariate statistics, CFA refers to a statistical method and technique that serves to simplify the underlying structure based on the comparatively large collection of variables and make identification of stated association among measured variables within the domain of factor analysis.

4.8 Convergent validity

Convergent validity that points to the degree of involvement of a great deal of variance among observable variables (Hair, et al, 2014). Three tests like factor loading, AVE and composite reliability are deployed to conduct estimation of the eligible volume of convergent validity (Hair, et al, 2014). Hair et al. (2006) endorsed ideal and standardized loading estimations of 0.7 or greater, AVE estimates of 0.5 or high with reliability estimates at 0.7 or upper indicating acceptable convergent validity. The researcher opted to employ the recommendations made by Hair et al., (2006) and the convergent validity results are presented in Chapter 4 Factor loading has the least cut off value at <0.5, for AVE, it is <0.5, along with for composite reliability at >0.6. Hence, all the numerals indicate high convergent validity.

Table 22 Convergent Validity

Convergent Validity

Construct	Measurement Items	Factor Loading (t-value)	CR	AVE	Cronbach's Alpha
TPC	TPC1	0.693	0.928	0.481	0.907
	TPC2	0.746			
	TPC3	0.717			
	TPC4	0.385			
	TPC5	0.632			
	TPC6	0.685			
	TPC7	0.695			
	TPC8	0.767			
	TPC9	0.489			
	TPC10	0.248			
	TPC11	0.473			
	TPC12	0.856			
	TPC13	0.885			
	TPC14	0.873			
	TPC15	0.882			
WPE	WPE1	0.186	0.523	0.202	0.657
	WPE2	0.236			
	WPE3	0.222			
	WPE4	0.228			
	WPE5	0.251			
	WPE6	0.384			
	WPE7	0.254			
	WPE8	0.215			
	WPE9	0.322			
	WPE10	0.388			
	WPE11	0.336			
	WPE12	0.204			
	WPE13	0.246			
	WPE14	0.265			
	WPE15	0.174			
LR	LR1	0.624	0.753	0.382	0.773
	LR2	0.713			
	LR3	0.603			

	LR4	0.571			
	LR5	0.566			
	TE1	0.483			
	TE2	0.645			
TE	TE3	0.537	0.651	0.275	0.734
	TE4	0.496			
	TE5	0.442			
	ROI1	0.483			
	ROI2	0.406			
ROI	ROI3	0.789	0.716	0.348	0.7444
	ROI4	0.682			
	ROI5	0.507			
	TEEF1	0.094			
	TEEF2	-0.154			
	TEEF3	-0.281			
	TEEF4	0.076			
	TEEF5	0.075			
	TEEF6	-0.072			
	TEEF7	-1.243			
TEEF	TEEF8	-0.182	0.724	0.304	0.722
	TEEF9	-0.928			
	TEEF10	-0.582			
	TEEF11	-1.074			
	TEEF12	-0.647			
	TEEF13	-0.078			
	TEEF14	-0.164			
	TEEF15	-0.087			

Note: TPC= Training program characteristics, SE= Self-efficacy, KA= Knowledge acquisition, SA=skill acquisition CIA= change in attitude, IS=Instructional style, WPE= workplace environment, WPSC= workplace culture scenario, JP=job performance, POS=Perceived organizational support, IWB=Innovative work behavior, WRA=work related attitude, LR= learner readiness 1-5, Te= Training evaluation 1-5, TE= Training effectiveness1-5

The results assigned with the measurement model pertaining to the Survey, as displayed in Table 9, reflect the standardized factor loadings weighing standard regression were higher the minimum threshold value at (0.05), and the lowest value equating 0.646. The pertinent composite reliability found significant higher 0.6 ($p < 0.001$), while the average variance extracted (AVE) showed higher than 0.05. Henceforth, these figures reflect high degree convergent validity relating to the latent constructs utilized in the model during survey for this study.

4.9 Discriminant validity

Contrasting value for the average variance extracted (AE) enabler to evaluate discriminant validity taking into account any two constructs along with the square estimation of the correlation (Hair et al., 2014). Discriminant validity indicates significance if the AVE regarding any construct remains higher as compared to the squared correlation. The reported results pertaining to this study indicate estimation of all the constructs indicate the AVE values at higher side comparing with the squared correlation covering all the pertinent constructs, showing significant discriminant validity for this study, see Table 10). Hence, Table 10 exhibits the discriminant validity pertaining to the survey questionnaires.

Table 23 Discriminant validity (Fornell-Larcker Criterion)

	AVE	X1	X2	LR	TE	ROI
X1	0.48	1.000				
X2	0.20	.306	1.000			
LR	0.38	.494	.356	1.000		
TE	0.27	.305	.592	.414	1.000	
ROI	0.34	.228	.298	.096	.271	1.000

N.B: The average variance extracted must be 0.5 or more than 0.5. (Fornell and Larcker, 1981)

4.10 Results of absolute fit measures

Absolute Model Fit are reflected by Chi Square and probability value $p>0.05$, Root Mean Square and Error of Approximation (RMSEA) <0.08 with Goodness of Fit Index (GFI) > 0.9. Incremental fit Index include adjusted Goodness of Fit Index (AGFI), comparative Fit Index (CFI), normed Fit Index (NFI) and Tucker Lewis Index (TLI). Please see Appendix-I for CFA models.

Table 24 Model fit Indices

Model Fit Category	Model Fit Indices	Model 1	Model 2	Acceptable fit indices
Absolute Fit	RMSEA	0.058	0.056	Less than 0.08
Absolute Fit	GFI	0.847	0.875	More than 0.9
Absolute Fit	P-Close	0.000	0.000	Less than 0.05
Incremental Fit	AGFI	0.764	0.798	0.5 (Acceptable)
Incremental Fit	CFI	0.96	0.94	1.0 (Excellent)
Parsimonious Fit	Chi-Square/df	3.673	3.457	Less than 3

Table 25 KMO & Bartlett's

Construct	N	KMO	Bartlett's Test	P-Value
Training Program Characteristics	15	0.930	3159.66	0.000
Workplace Environment	15	0.702	1072.45	0.000
Learner Readiness	5	0.799	566.21	0.000
Training Evaluation	5	0.723	558.64	0.000
Return on Investment	5	0.699	537.61	0.000
Training Effectiveness	15	0.782	1965.18	0.000

Table 12 shows that both Kaiser Meyer Olkin and Bartlett's test indicates the adequacy and reliability of data and sample size for performing confirmatory factor analysis. Results given above assure us to use principal component analysis. While KMO is the Measure of Sampling Adequacy. If the value of KMO is greater than 0.60 then we can use the Principal Component Analysis technique. All of the KMO values given in the above table indicate that data is reliable.

26 Analyses: Model 1

R	R Square	Adj. R Sq	S.E of Estimate	Durbin-Watson	F-test	P-value
.740	0.547	0.543	0.292	1.581	134.54	0.000

a. Predictors: (Constant), ROI, LR, TE, X1

b. Dependent Variable: Y

The above table shows the model summary, assumptions diagnosis, and parameter estimates. The value R-square is 0.547; Durbin Watson values are 1.58 which shows there is no severe problem of autocorrelation. The value of F-statistics is 134.54 with p-value 0.000 which is statistically significant and it shows the model is jointly significant.

4.11 Normality & Multi-collinearity among independent variables:

The strong correlation between independent variable creates big problems for research and compelled the researcher to change the variables in the research model. To examine this issue multi-collinearity problem analysis was applied to find multi-collinearity problem. Problems of multi-collinearity arise when one explanatory variable affects another independent variable that may lead to produce spurious results. It is therefore, cardinal for research model to include only those variables those are free of that issue. The values of VIF are less than 5, so there is no problem of severe multi-Collinearity faced by this study.

Table 27 Coefficient Estimate of Model 1

Variables	Unstandardized		Standardized	t-test	P-value	Collinearity	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.509	0.118		12.774	0.000		
X1 (TPC)	0.04	0.023	0.065	1.726	0.085	0.716	1.396
LR	-0.047	0.024	-0.075	-1.953	0.051	0.691	1.448
Te	0.25	0.026	0.35	9.53	0.000	0.756	1.323
ROI	0.347	0.022	0.537	15.526	0.000	0.849	1.178

The result of the regression coefficient shows that TE and ROI were statistically significant as their p-values were less than 0.05; whereas X1 and LR were non-significant. The values of VIF are less than 5, so there is no problem with severe multi-Collinearity**.** The results of the table present the coefficient of regression analysis. The purpose of this study is to find such an equation that could be used to investigate the joint effect and extent of size in respect of TPC (X1), LR, Te, and ROI on training effectiveness. The specified regression equation takes the following form:

$Y = a - bX1 + cX2 + dX3 - eX4 + fX5 + gX6 + E$

Training effectiveness =1.509 - 0.04 (TPC) - .047 (LR) + .25 (Te) + 0.347 (ROI) + E

According to the threshold set, the correlation coefficients confirm the results of the TOL and VIF. These results indicate that there exists no prospective problem of multicollinearity in the data at hand.

Figure 1 Graphical display of relationships

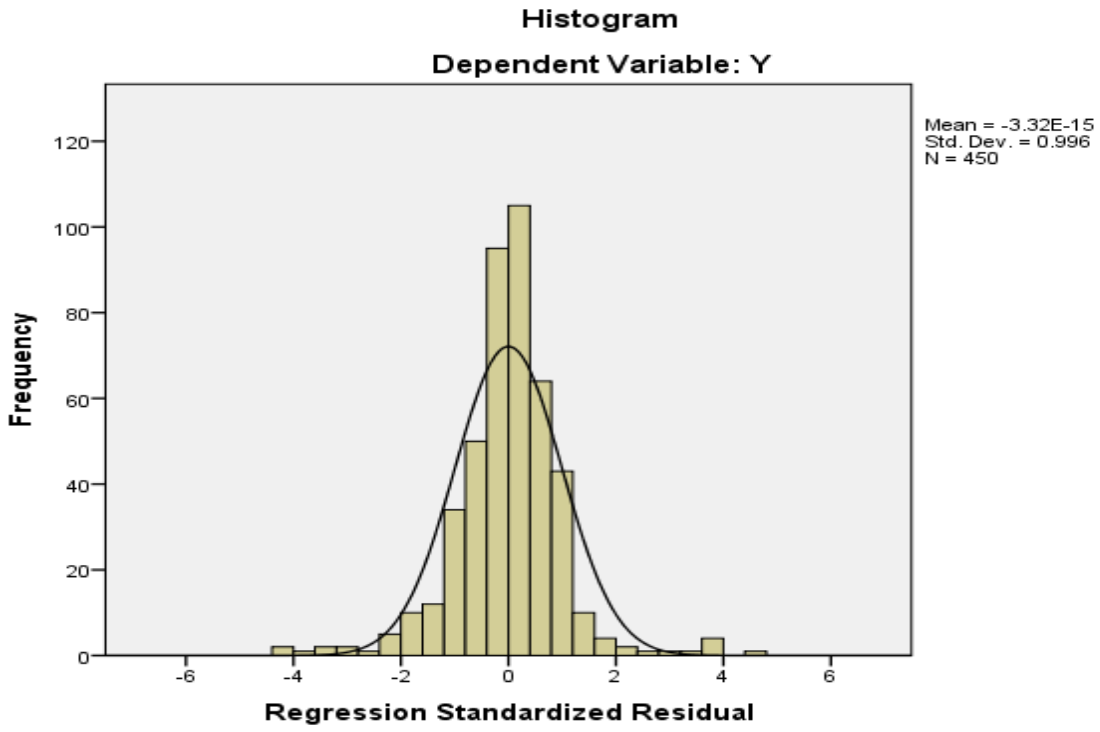


Figure 2

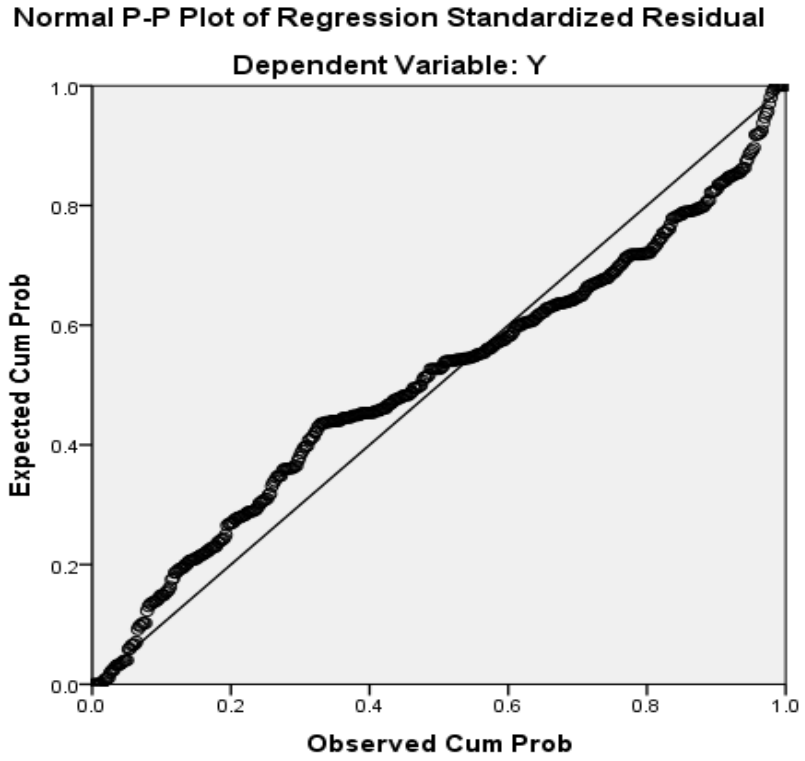


Table 28 Model 2

R	R Square	Adj. R Sq	S.E of Estimate	Durbin-Watson	F-test	P-value
.778	0.605	0.6	0.27	1.6	170.45	0.000

a. Predictors: (Constant), ROI, LR, X2, TE

b. Dependent Variable: Y

The above table shows the model summary, assumptions diagnosis, and parameter estimates. The value R-square is 0.605; Durbin Watson values is 1.6 which shows there is no severe problem of autocorrelation. The value of F-statistics is 170.45 with p-value 0.000 which is statistically significant and it shows the model is jointly significant.

29 Coefficient Estimate of Model 1

Variables	Unstandardized		Standardized Beta	t-test	P-value	Collinearity	
	B	Std. Error				Tolerance	VIF
(Constant)	0.612	0.157		3.909	0.000		
X2 (WPE)	0.404	0.049	0.323	8.264	0.000	0.581	1.721
LR	-0.052	0.02	-0.083	-2.548	0.011	0.837	1.195
Te	0.136	0.028	0.19	4.798	0.000	0.567	1.764
ROI	0.316	0.021	0.489	15.03	0.000	0.839	1.192

The results of the table present the coefficient of regression analysis. The purpose of this study is to find such an equation that could be used to investigate the joint effect and extent of size in respect of WPE (X1), LR, Te, and ROI on training effectiveness. The result of the regression coefficient shows that Te and ROI were statistically significant as their p-values were less than 0.05; whereas X1 and LR were non-significant.

The values of VIF are less than 5, so there is no problem with severe multi-Collinearity**.** According to the threshold, the correlation coefficients confirm the results of the TOL and VIF. These results indicate that there exists no prospective problem of multicollinearity in the data at hand.

The specified regression equation takes the following form:

Y = a - bX1 + cX2 + dX3 - eX4 + fX5 + gX6 +E

Training effectiveness =0.612 - 0.404 (WPE) - 0.052 (LR) + 0.136 (Te) + 0.316 (ROI) + E

Figure 3 Graphical display of relationships

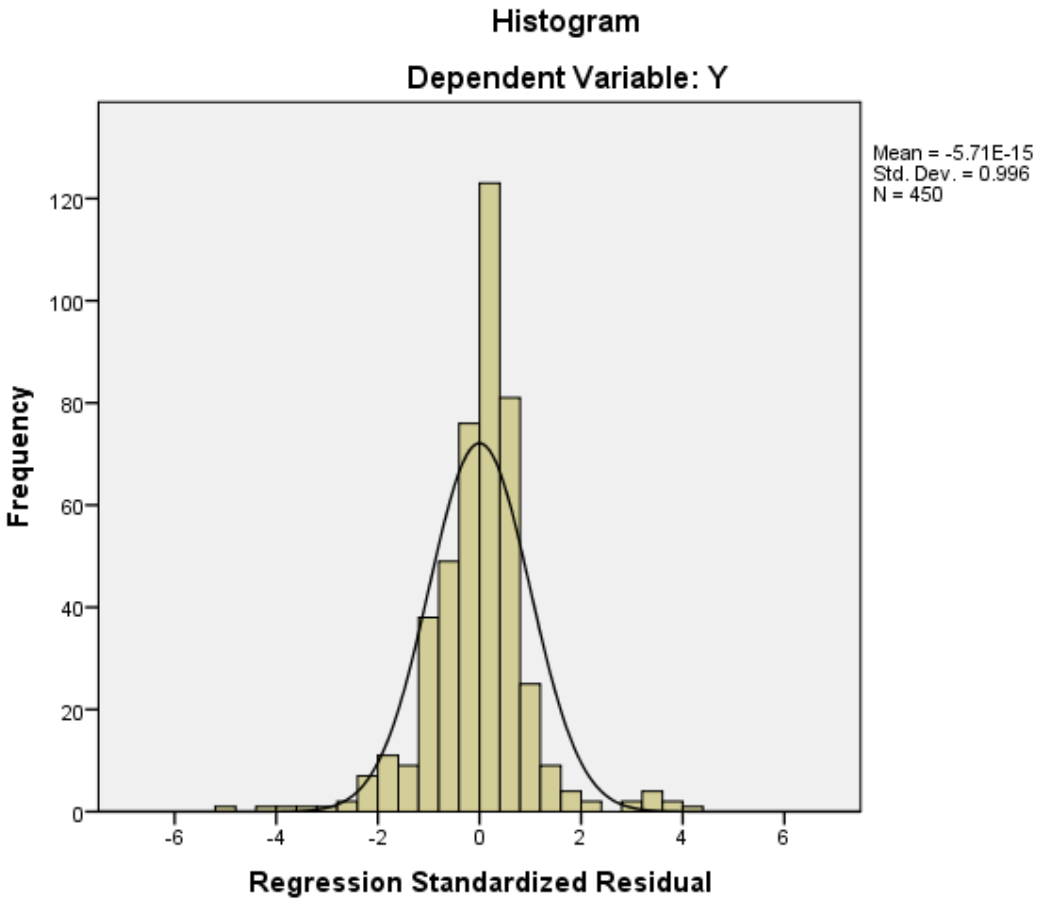
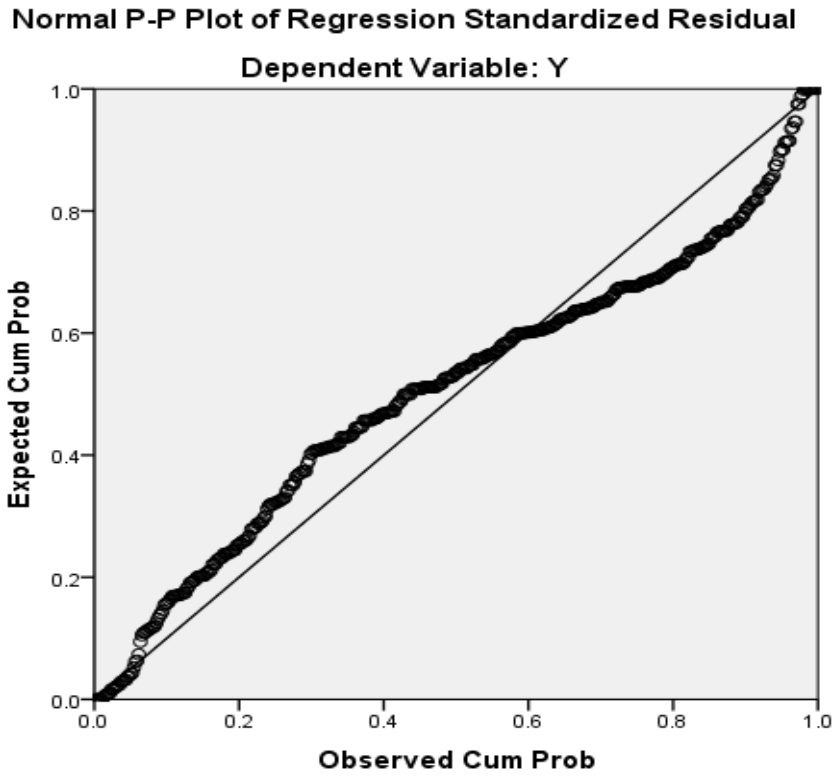


Figure 4



4.12 Mediation in training research

It was assumed earlier in this study that there exists a positive and significant relationship between training program characteristics (TPCs) and workplace environment (WPE) with/on training effectiveness (TE) in public organizations of Pakistan. Subsequently, it was assumed that these relationships are mediated by learner readiness, training evaluation and return on investment. To test this hypothesis, mediation analysis was carried out using PROCESS in SPSS created by Preacher and Hayes' Process Macro code in SPSS. PROCESS is the advanced methodology used to examine mediating effects. A mediation package involving multiple mediation models was tested through the SEM framework (path analysis). According to a famous statistician Field, (2013), the adopted procedure must ensure the linearity assurance, non-presence of multicollinearity, homoscedasticity, random residual variables with expected

zero values, independence of random residual variables and normal distribution of random residual variables.

Self-administered questionnaires were distributed internally and in-person among public employees (managers and non-managers) in public training organizations of Lahore, Gujranwala, and Faisalabad for primary data collection. The training effectiveness questionnaire was split into three sections- section I had information on the demographic profile of the study respondents concerning their gender, age, qualification, experience, and organizational position. Section II had information about two independent variables (TPC & WPE), three mediation variables (LR, Te & ROI) and one dependent variable (TE) in sub-section (i) has TPC 15 questions), sub-section (ii) has 15 questions, sub-sections (iii, iv, v) has 5 questions each for each category LR, Te & ROI respectively. Whilst Section III has 15 questions for training effectiveness. A total number of questionnaires were distributed as 550 out of which returned were approved as 450. The response rate remained 450/550 (82%). The respondents were requested to give their best and honest opinion about each statement enunciated in the questionnaire using their judgment and experience.

Matrix

Run MATRIX procedure:

Model = 4

Y = Y

X = X1

M1 = LR

M2 = TE

M3 = ROI

Sample size

450

Template of model 4 was selected for Process in SPSS according to our conceptual framework.

Outcome: LR

Model Summary

R	R-sq	MSE	F	df1	df2	p
.4847	.2349	.3709	37.5514	1.0000	448.0000	.0000

Model

	COEFF	SE	t	p	LLCI	ULCI
Constant	2.1848	.1567	13.9383	.0000	1.8767	2.4928
X1	.4812	.0410	11.7282	.0000	.4006	.5619

Coeff: Slope; SE: standard error; t= t-Statistic; p=p value; LLCI&ULCI: lower and upper levels for confidence interval

The first model with LR as the outcome provides path a (.4812) and a test of statistical significance, t = 11.7282, p = .0000. X1 is coded as training program characteristics that have a positive correlation with learner readiness. In table II, Model 1 aims to test the relationship between independent variable training program characteristics (X1) with learner readiness as a mediating variable (MV1). The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator learner readiness has a mediation effect on the predictable variable i.e. training program characteristics.

Outcome: Training evaluation (Te)

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3100	.0961	.3300	47.6151	1.0000	448.0000	.0000

Model

	COEFF	SE	t	p	LLCI	ULCI
Constant	2.9020	.1478	19.6288	.0000	2.6114	3.1925
X1	.2670	.0387	6.9004	.0000	.1910	.3431

The first model with Te (training evaluation) as the outcome provides path a (.2670) and a test of statistical significance, t = 6.9004, p = .0000. X1 is coded as training program characteristics that have a positive correlation with training evaluation (Te). The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator training evaluation has a mediation effect on the predictable variable i.e. training program characteristics.

Outcome: ROI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2329	.0542	.4239	25.6969	1.0000	448.0000	.0000

Model

	COEFF	SE	t	p	LLCI	ULCI
Constant	2.8956	.1676	17.2796	.0000	2.5663	3.2249
X1	.2224	.0439	5.0692	.0000	.1362	.3086

The first model with ROI as the outcome provides path a (.2224) and a test of statistical significance, t = 5.0692, p = .0000. X1 is coded as training program characteristics that have a positive correlation with return on investment. The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator return on investment has a mediation effect on the predictable variable i.e. training program characteristics.

Outcome: Y (TE)

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7399	.5475	.0853	134.6045	4.0000	445.0000	.0000

Model Estimate

	Coeff	se	t	p	LLCI	ULCI
Constant	1.5087	.1181	12.7737	.0000	1.2766	1.7409
LR	-.0466	.0238	-1.9526	.0515	-.0934	.0003
Te	.2503	.0263	9.5303	.0000	.1987	.3020
ROI	.3473	.0224	15.5258	.0000	.3034	.3913
X1	.0401	.0232	1.7257	.0851	-.0056	.0858

The 2nd model with Y training effectiveness as the dependent variable for this study and three of the mediating variables LR, Te & ROI and X1 as predictors provides path b (-.0466), (.2503), (.3473) and c' (.0401). The 95% confidence intervals for these four parameters are created through bootstrapping, where LLCI is the lower limit confidence interval and ULCI is the upper limit confidence interval.

TOTAL EFFECT MODEL

Outcome: Y (TE)

Model Summary

R	R-sq	MSE	F	df1	df2	p
.2622	.0688	.1743	33.0857	1.0000	448.0000	.0000

Model

	COEFF	SE	t	p	LLCI	ULCI
Constant	3.1392	.1075	29.2146	.0000	2.9280	3.3504
X1	.1618	.0281	5.7520	.0000	.1065	.2171

The 3rd model is the TOTAL EFFECT MODEL, where X1 is the only predictor of Y. This model provides path c (.1618) along with a test of statistical significance.

The focus of this analysis is likely to be on the mediation effect (also called the indirect effect), which can be computed as the difference between c & c' {.1618-(.0401)} = 0.1217, or as the product of paths a & b (.2224*-.0466*.2503*.3473) = 0.009

TOTAL, DIRECT, AND INDIRECT EFFECTS

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.1618	.0281	5.7520	.0000	.1065	.2171

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.0401	.0232	1.7257	.0851	-.0056	.0858

Indirect effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.1217	.0295	.0616	.1775
LR	-.0224	.0125	-.0511	-.0010
TE	.0669	.0149	.0414	.0993
ROI	.0772	.0212	.0394	.1223
(C1)	-.0893	.0195	-.1338	-.0565
(C2)	-.0996	.0204	-.1403	-.0609
(C3)	-.0104	.0286	-.0677	.0443

Partially standardized indirect effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.2816	.0667	.1422	.4053
LR	-.0518	.0290	-.1185	-.0026
TE	.1547	.0333	.0979	.2288
ROI	.1787	.0488	.0906	.2800

← It shows the bootstrapped confidence interval for the indirect effect.

Completely standardized indirect effect of X on Y

Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.1972	.0467	.0996	.2836
LR	-.0363	.0201	-.0812	-.0014
TE	.1084	.0234	.0679	.1600
ROI	.1252	.0339	.0634	.1957

Ratio of indirect to total effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.7521	.1630	.4225	1.0738
LR	-.1385	.0875	-.3739	-.0070
TE	.4132	.0923	.2679	.6269
ROI	.4773	.1287	.2535	.7452

Ratio of indirect to direct effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	3.0335	291.9179	-14.3264	53.5040
LR	-.5586	10.3849	-5.5980	.5732
TE	1.6667	100.6991	-5.6609	25.4224
ROI	1.9254	199.9770	-9.3879	33.1346

Normal theory tests for specific indirect effects

	Effect	se	Z	p
LR	-.0224	.0117	-1.9193	.0549
TE	.0669	.0120	5.5691	.0000
ROI	.0772	.0161	4.8099	.0000

Specific indirect effect contrast definitions

(C1) LR minus TE

(C2) LR minus ROI

(C3) TE minus ROI

Number of bootstrap samples for bias-corrected bootstrap confidence intervals: 5000

Level of confidence for all confidence intervals in the output: 95.00. For this study, the bootstrapping method is used to test the Indirect Effect, we then need to find a significant ab-path.

Run MATRIX procedure:

Model = 4

Y = Y

X = X2

M1 = LR

M2 = TE

M3 = ROI

Sample size

450

Outcome: LR

Model Summary

R	R-sq	MSE	F	df1	df2	p
3157	.0997	.4364	49.6052	1.0000	448.0000	.0000

Model

	COEFF	se	t	p	LLCI	ULCI
Constant	1.4263	.3656	3.9010	.0001	.7077	2.1448
X2	.6359	.0903	7.0431	.0000	.4585	.8133

The first model with LR as the outcome provides path a (.6359) and a test of statistical significance, t = 7.0431, p = .0000. X2 is coded as a workplace environment that has a positive correlation with learner readiness. In table II, Model 1 aims to test the relationship between independent variable X1, workplace environment with learner readiness as a mediating variable.

The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator learner readiness affects the predictable variable i.e. workplace environment.

Outcome: Te

Model Summary

R	R-sq	MSE	F	df1	df2	p
.6163	.3798	.2264	274.3271	1.0000	448.0000	.0000

Model

	COEFF	se	t	p	LLCI	ULCI
Constant	-.4407	.2633	-1.6738	.0949	-.9583	.0768
X2	1.0770	.0650	16.5628	.0000	.9492	1.2048

The first model with Te (training evaluation) as the outcome provides path a (1.0770) and a test of statistical significance, t = 16.5628, p = .0000. X2 is coded as a workplace environment that has a positive correlation with training evaluation. The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator training evaluation affects the predictable variable i.e. workplace environment.

Outcome: ROI

Model Summary

R	R-sq	MSE	F	df1	df2	p
.3627	.1316	.3892	67.8618	1.0000	448.0000	.0000

Model

	COEFF	SE	t	p	LLCI	ULCI
Constant	.8966	.3453	2.5966	.0097	.2180	1.5752
X2	.7024	.0853	8.2378	.0000	.5348	.8700

The first model with ROI as the outcome provides path a (.7024) and a test of statistical significance, t = 8.2378 p = 0.0000.

X2 is coded as a workplace environment that has a positive correlation with return on investment. The path from predictor towards mediator is significant at p=.000 that indicates the presence of the mediation effect. The mediator learner readiness has an effect on the predictable variable i.e. return on investment.

Outcome: Y

Model Summary

R	R-sq	MSE	F	df1	df2	p
.7779	.6051	.0744	170.4533	4.0000	445.0000	.0000

Model

	COEFF	se	t	p	LLCI	ULCI
Constant	.6122	.1566	3.9092	.0001	.3044	.9200
LR	-.0516	.0202	-2.5478	.0112	-.0913	-.0118
Te	.1359	.0283	4.7984	.0000	.0803	.1916
ROI	.3159	.0210	15.0295	.0000	.2746	.3572
X2	.4042	.0489	8.2643	.0000	.3081	.5004

The 2nd model with Y training effectiveness as the dependent variable for this study and three of the mediating variables LR, Te & ROI and X2 as predictors provides path b (-.0516), (.1359), (.3159) and c' (.4042). The 95% confidence intervals for these four parameters are created through bootstrapping, where LLCI is the lower limit confidence interval and ULCI is the upper limit confidence interval.

TOTAL EFFECT MODEL

Outcome: Y

Model Summary

R	R-sq	MSE	F	df1	df2	p
.5911	.3494	.1218	240.6208	1.0000	448.0000	.0000

Model

	Coeff	se	t	p	LLCI	ULCI

Constant	.7620	.1931	3.9456	.0001	.3824	1.1415
X2	.7398	.0477	15.5120	.0000	.6460	.8335

The 3rd model is the TOTAL EFFECT MODEL, where X2 is the only predictor of Y. this model provides path c (.7398) along with tests of statistical significance. The focus of this analysis is likely to be on the mediation effect (also called the indirect effect), which can be computed as the difference between c & c' {.7398-(.4042)} = .3356, or as the product of paths a & b (.6359* -.0516*.1359*.3159) = 0.0140.

TOTAL, DIRECT, AND INDIRECT EFFECTS SCENARIO

Total effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.7398	.0477	15.5120	.0000	.6460	.8335

Direct effect of X on Y

Effect	SE	t	p	LLCI	ULCI
.4042	.0489	8.2643	.0000	.3081	.5004

Indirect effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.3355	.0558	.2326	.4561
LR	-.0328	.0160	-.0716	-.0082
Te	.1464	.0389	.0783	.2322
ROI	.2219	.0526	.1300	.3370
(C1)	-.1792	.0396	-.2707	-.1127
(C2)	-.2547	.0546	-.3685	-.1555
(C3)	-.0755	.0771	-.2277	.0757

Partially standardized indirect effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.7764	.1286	.5359	1.0502
LR	-.0759	.0372	-.1663	-.0187
Te	.3388	.0890	.1818	.5318
ROI	.5135	.1230	.3014	.7825

Completely standardized indirect effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.2681	.0444	.1823	.3556
LR	-.0262	.0125	-.0555	-.0068
Te	.1170	.0320	.0600	.1868
ROI	.1773	.0401	.1064	.2646

Ratio of indirect to total effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.4536	.0891	.2776	.6308
LR	-.0443	.0202	-.0896	-.0113
Te	.1979	.0606	.0923	.3285
ROI	.2999	.0697	.1808	.4554

Ratio of indirect to direct effect of X on Y

	Effect	Boot SE	Boot LLCI	Boot ULCI
TOTAL	.8300	.3317	.3843	1.7086
LR	-.0811	.0335	-.1554	-.0222
Te	.3622	1598	.1319	.7724
ROI	.5489	.2279	.2755	1.1705

Normal theory tests for specific indirect effects

	Effect	se	Z	p
LR	-.0328	.0138	-2.3748	.0176
Te	.1464	.0318	4.6012	.0000
ROI	.2219	.0308	7.2116	.0000

Specific indirect effect contrast definitions

(C1)	LR	minus	Te
(C2)	LR	minus	ROI
(C3)	Te	minus	ROI

Several bootstrap samples for bias-corrected bootstrap confidence intervals: 5000 Level of confidence for all confidence intervals in the output: 95.00. For this study, the bootstrapping method is used to test the indirect effect and find a significant ab-path. The above results indicate that the questionnaire is confirmed, data collected is reliable, and mediating is existing as assumed by the researcher.

Table 30 Model Summary

Model	R	R Square	MSE	Change Statistics			
				F Change	df 1	df 2	P
1. (TPC-LR)	.4847	.2349	.3709	37.5514	1.0000	448.0000	.0000
2. (TPC-Te)	.3100	.0961	.3300	47.6151	1.0000	448.0000	.0000
3. (TPC-ROI)	.2329	.0542	.4239	25.6969	1.0000	448.0000	.0000
4. (TPC-TEEEF)	.2622	.0688	.1743	33.0857	1.0000	448.0000	.0000
5. (TPC-LR-Te-ROI-TEEF)	.7399	.5475	.0853	134.6045	4.0000	445.0000	.0000
6. (WPE-LR)	.3157	.0997	.4346	49.6052	1.0000	448.0000	.0000
7. (WPE-Te)	.6163	.3798	.2264	274.3271	1.0000	448.0000	.0000
8. (WPE-ROI)	.3627	.1316	.3892	67.8618	1.0000	448.0000	.0000
9. (WPE-TEEF)	.5911	.3494	.1218	240.6208	1.0000	448.0000	.0000
10. (WPE-LR-Te-ROI-TEEF)	.7779	.6051	.0744	170.4533	4.0000	445.0000	.0000

Predictors for Model a & b: training program characteristics (TPC), learner readiness (LR), training evaluation (Te), return on investment (ROI), workplace environment (WPE). And dependent variable training effectiveness (TE),

This research resorts to find that there exists a significant relationship between the independent variables and the dependent variable, this indicates the existence of partial mediation with decreased magnitude among relationship. The mediation analysis demonstrates results as under:

The following table illustrates the results about mediation analysis for this study:

Table 31 Mediation regression analyses Through Preacher and Hayes Method

Relationship	Total Effect	Direct Effect	Indirect Effect	P-VALUE
TPC → LR → TEEF	-.0466	.0238	-1.9526	.0515
TPC → Te → TEEF	.2503	.0263	9.5303	.0000
TPC → ROI → TEEF	.3473	.0224	15.5258	.0000
WPE → LR → TEEF	-.0516	.0202	-2.5478	.0112
WPE → Te → TEEF	.1359	.0283	4.7984	.0000
ROI → ROI → TEEF	.3159	.0210	15.0295	.0000

N.B: TPC=Training program characteristics, LR=Learner readiness, Te=training evaluation, TEEF= Training effectiveness, WPE=Workplace environment

Table 32 Multiple linear regression to explain training effectiveness

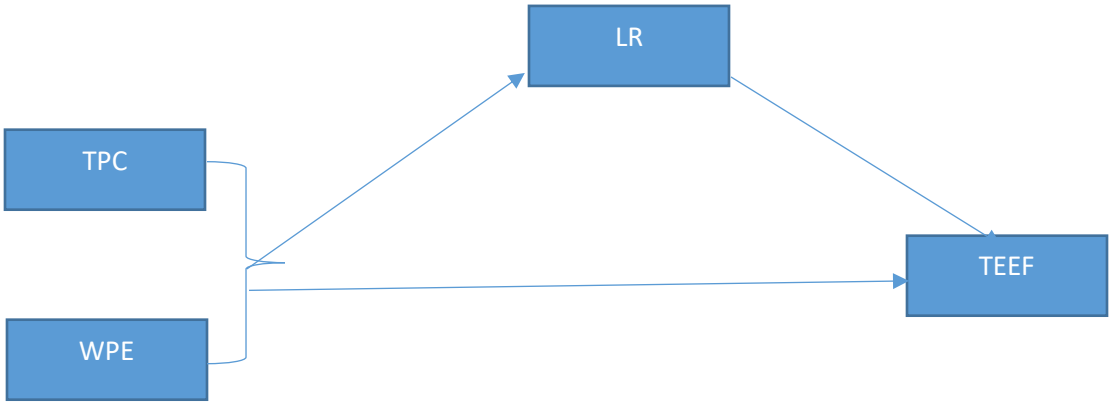
Coefficients

Dependent Variable: Training effectiveness Model A	Unstandardized Coefficients				Collinearity Statistics	
	B	Std. Error	Standardized Coefficients	Sig.	Tolerance	VIF
(Constant)	1.509	0.118		0.000		
TPC	0.04	0.023	0.065	0.085	0.716	1.396
LR	-0.047	0.024	-0.075	0.051	0.691	1.448
Te	0.25	0.026	0.537	0.000	0.756	1.323
ROI	0.347	0.022	0.537	0.000	0.849	1.178
Model B						
(Constant)	0.612	0.157		0.000		
WPE (X2)	0.404	0.049	0.323	0.000	0.581	1.721
LR	-0.052	0.02	-0.083	0.011	0.837	1.195
Te	0.136	0.028	0.19	0.000	0.567	1.764
ROI	0.316	0.021	0.489	0.000	0.839	1.192

The Model A examines as to whether independent variables (IV) affects mediators, the unstandardized coefficient emerges is 0.065 with p-value 0.000 that holds the model statistically significant. The Model B examines as to whether independent variables effects mediators, the unstandardized coefficient emerges is 0.323 with p-value 0.000 that holds the model statistically significant. The values of VIF being less than 5 indicates no problem of severe multi-collinearity (Hair et al., 2006).

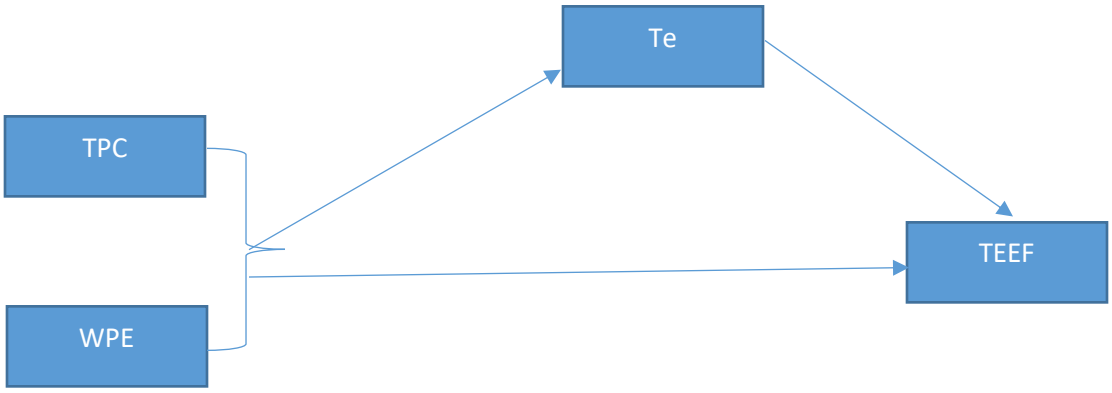
4.13 Multiple Mediation in training research

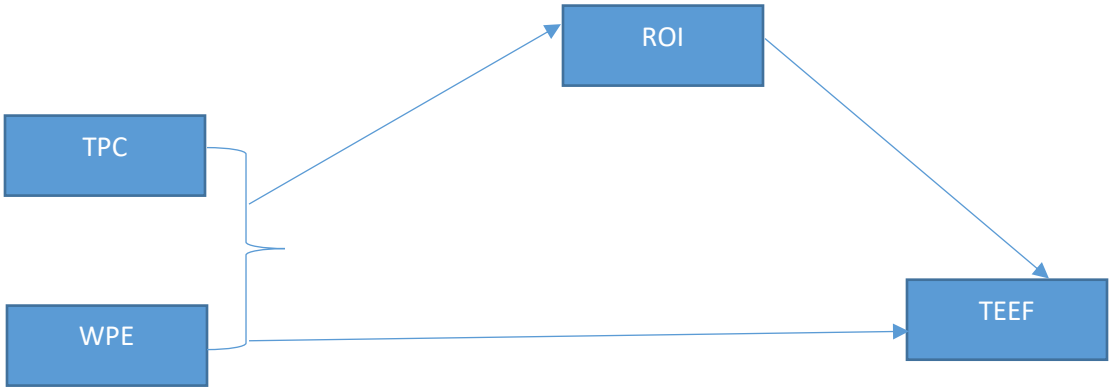
It was assumed earlier in this study that there exists a positive and significant relationship between training program characteristics (TPCs) and workplace environment (WPE) with/on training effectiveness (TE) in public organizations of Pakistan. Subsequently, it was assumed that these relationships are mediated by learner readiness, training evaluation and return on investment.



Standardized regression coefficient for the relationship between TPC and WPE and TE in getting effectiveness as mediated by learner readiness (MV1).

We have TPC as predictor 1 and WPE as predictor 2. We need to know which of the predictor is controlling the path. A mediator must be in the model otherwise impact of one IV on DV cannot be 100%. Significant beta score at -0.83 confirms LR not mediating between TPC-TEEF & WPE-TEEF.





We have TPC as predictor 1 and WPE as predictor 2. We need to know which of the predictor is controlling the path. A mediator must be in the model otherwise impact of one IV on DV cannot be 100%. Significant beta score at β=1.509 confirms ROI is capacitated to mediate between TPC-TEEF & WPE-TEEF.

Path c: Bivariate regression predicting DV from IV.

Path a: Bivariate regression predicting MV from IV.

Path b&c: Bivariate regression predicting DV from MV & IV.

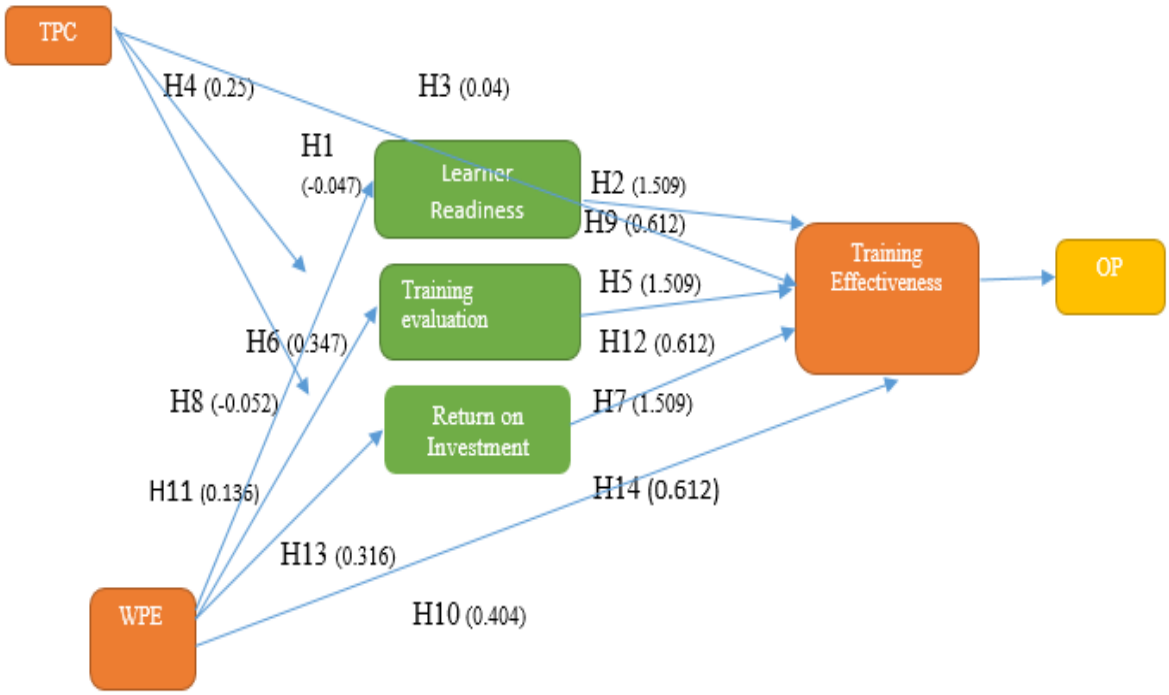
Table 33 Path coefficients estimates in the final model

Paths	Direct effect	Indirect Effect
TPC - LR- TEEF	.0238	-1.9526
TPC- Te- TEEF	.0263	9.5303
TPC- ROI-TEEF	.0224	15.5258
WPE- LR- TEEF	.0202	-2.5478
WPE- Te- TEEF	.0283	4.7984
ROI- ROI- TEEF	.0210	15.0295

Table 34 Path coefficients estimates in the Alternative model

Paths	Direct effect	Indirect Effect
TPC- Te- TEEF	.0263	9.5303
TPC- ROI-TEEF	.0224	15.5258
WPE- Te- TEEF	.0283	4.7984
ROI- ROI- TEEF	.0210	15.0295

Figure 27 A conceptual model of training effectiveness



4.14 Hypothesis Testing

In model A, hypothesis 1 assumed that TPC positively relates to LR. A non-significant negative relationship ($\beta = -0.047$) was found between TPC and learner readiness. The results did not confirm this hypothesis. H2 assumed the relationship between learner readiness and training effectiveness. The results confirmed that both have a significant relationship (B=1.509). H3 postulated that training program characteristics relate to training effectiveness. Results supported this hypothesis (B=1.509). Results confirmed hypothesis H3 that TPC is positively and significantly correlated with training effectiveness ($B = 0.04$, $P < 0.01$).

This indicates that where new knowledge and skills are imparted, trainees will attach high expectations from the training that makes sure that training will be implemented successfully. We find our results consistent with the findings of (Hansen, 2001; Klein, H.J., Noe, R.A. and Wang, C.W., 2006; Tai, 2006; Bell and Ford, 2007). Other studies found TPCs as a potential contributor to foster training effectiveness (Seyler et al., 1998; Tharenou, 2001; Tsai and Tai, 2003; Tellis, 2004; Rowold, 2007; Gegenfurtner, Festner, Gallenberger, Lehtinen and Gruber, 2009).

H4 assumed that TPC relates to Te. Results confirmed the hypothesis (B=0.25). It was hypothesized in H5 that Te carries an association with training effectiveness. The results supported the hypothesis (B=1.509).

H6 assumed that TPC relates to ROI. Results confirmed the hypothesis (B=0.347). It was hypothesized in H7 that ROI is associated with training effectiveness. The results supported the hypothesis (B=1.509).

In model B, hypothesis 8 assumed that WPE positively relates to LR. A non-significant negative relationship (β = -0.052) was found between WPE and learner readiness. The results did not confirm this hypothesis. These results are in the line of other studies like Tracey et al., 2001; Baldwin et al., 2000; Noe, (1986) that the work environment impacts training transfer well before and after training and in this way contributes to training effectiveness. To ascertain the effects of LR on Training effectiveness, assumption pronounced in hypothesis 9 were supported by the results (B=0.612). While looking for mediation, it was assumed in hypotheses 8 and 9 that learner readiness mediates between training program characteristics and training effectiveness and the results are in a line of that of past research conducted by Kirwan and Birchall, 2006; Payne et al. 2008. H10 postulated that WPE relates to training effectiveness. Results supported this hypothesis (B=0.612). Results confirmed hypothesis H10 that WPE is positively and significantly correlated with training effectiveness (path c) ($B = 0.404$, $P < 0.01$). H11 assumed that WPE relates to Training evaluation. Results confirmed the hypothesis (B=0.136). It was hypothesized in H12 (path b) that training evaluation is associated with training effectiveness. The results supported the hypothesis (B=0.612). H13 assumed that WPE relates to ROI. Results positively confirmed the hypothesis (B=0.316). It was hypothesized in H14 that ROI is correlated with training effectiveness. The results supported the hypothesis (B=0.612). The results find consistency with Awais and Sharan, (2010); Kirwan and Birchall, 2006; Payne et al. 2008, Imran, Rehman, Aslam & Bilal, 2016).

4.15 Hypotheses Development

The predicted relationships between the variables shown in the conceptual model helped to develop a set of hypotheses regarding the influence of a certain combination of individual and category factors on training effectiveness as the main focus and then empirically examine the impact on the organization performance (Fig 4.)

Table 35 Hypothesis Decision

Hypotheses	Hypothesis Statement	Decision
H1	A positive and significant relationship exists between training program characteristics and learner readiness in PSOs.	Accepted
H2	A positive and significant relationship exists between training program characteristics and training effectiveness in PSOs.	Accepted
H3	Learner readiness mediates the relationship between training program characteristics and training effectiveness in PSOs.	Not Accepted
H4	A positive and significant relationship exists between training program characteristics and training evaluation in PSOs.	Accepted
H5	Training evaluation mediates the relationship between training program characteristics and training effectiveness in PSOs.	Accepted
H6	A positive and significant relationship exists between training program characteristics and return on investment in PSOs.	Accepted
H7	Return on investment mediates the relationship between training program characteristics and training effectiveness in PSOs.	Accepted
H8	A positive and significant relationship exists between Workplace environment and learner readiness in PSOs.	Not accepted
H9	A positive and significant relationship exists between workplace environment and training effectiveness in PSOs.	Accepted

H10	Learner readiness mediates the relationship between workplace environment and training effectiveness in PSOs.	Accepted
H11	A positive and significant relationship exists between workplace environment and training evaluation in PSOs.	Accepted
H12	Training evaluation mediates the relationship between workplace environment and training effectiveness in PSOs.	Accepted
H13	A positive and significant relationship exists between workplace environment and return on investment in PSOs.	Accepted
H14	Return on investment mediates the relationship between workplace environment and training effectiveness in PSOs	Accepted

CHAPTER 5

CONCLUSION

Before conclusion, this chapter attempts to summarize the expanded research on elucidating the role of certain individual and organizational factors behind training effectiveness and provide evidence on association of these factors with training in mediating environment to get training effectiveness and their emerging relationship with organizational performance in public organizations of a developing country. For this purpose, the chapter is bifurcated into different segments in accordance of the research objectives.

5.1 Discussion

Because of local institutional convolution and volatility, Training effectiveness has been a blur idea in Pakistan. In spite of the fact that the public organizations invest a lot in training but training evaluation is seldom conducted which hampers these organizations in determining the training effectiveness. Raising investment in training without measuring its effectiveness is a major gap that necessitated to conduct empirical investigation. Besides, there is not much research on the effects of training characteristics on the training effectiveness in the local context. Moreover, less focus is drawn on job-ready people that reflected another somber gap. The previous notable models presented by Kirkpatrick, Stufflebeam (CIPP), TVS and others focus on training outcomes exclusively, suffer from an acute weakness in form of ignoring critical evaluation related factors. Moreover, these models are unmatched with our conditions on peculiar situational and contextual aspects. There was a culture of taxonomy or classification based outcome. The purpose of the extant research study was to extend earlier research on the precursors of training effectiveness. This research has positivist as its epistemological orientation.

The selection of LTSI was made as a diagnostic kit to guide evaluators and HRD practioners to assess gaps in performance of training system in public sector to offer competent recommendations for bringing improvement in training as well as learner transfer. The purpose of the extant research study was to extend earlier research on the precursors of training effectiveness. We take the stance that training is considered effective only if it is applied at the workplace. In order to fill this gap, this research aimed to test Learning Transfer System Inventory (LTSI) in context of public organizations in Pakistan. As identified by (Holton, Bates and Ruona, 2000), Holton's Learning Transfer System Inventory (LTSI) is popularly utilized instrument to measure direct transfer of learning and so knowledge to support the existing professional competency. This study is focused to evaluate and improve LTSI theory. This research study resorted to investigate how certain variables like training program characteristics and workplace environment characteristics impact training effectiveness in public organizations along with examining the role of learner readiness, training evaluation and return on investment as mediators on this relationship. This is a cross sectional study in which trainees from management development training program in the tax organizations in Pakistan were selected for data collection.

5.1.1 Rationalization of applying mediation

1. To extend the existing theory.
2. To get a better understanding of the phenomenon

Limited empirical research was conducted on the impact of training program characteristics and workplace characteristics on training effectiveness by testing learning transfer theory (Holton, 2000) in local context. Most of the previous studies were conducted on the moderating effects of training characteristics on the relationships between reaction, learning, behavior and results. Therefore, an investigation on the mediating effects of training characteristics is necessary (e.g. Iqbal et al., 2011).

Many studies have focused on the effects of training characteristics after a lapse of certain period of time after training program had been completed or pre-post (Pineda, 2010), therefore a study was needed to capture trainees' reactions during the training program either individually or in relationship between two discrete levels (Baldwin and Ford, 1988; Bates et al., 2007; Ghosh et al., 2011; Iqbal et al., 2011). This study has contributed to the literature by showing that certain training program characteristics & workplace environment characteristics affect trainees' behavior that further contributes to training effectiveness and eventually affects organization performance.

The finding pertaining to the past studies indicate that training content, trainer performance & behavior, training environment emerged as the potential factors supporting the transfer of new learning towards the job (e.g. Bates et al., 2007; Lim and Johnson, 2002). This study is able to contribute to the literature by highlighting the training objectives as potent factor influencing human behavior. The above gap in literature necessitates the need to conduct an empirical research evaluating factors relating to training effectiveness.

5.2 Theoretical contributions

From theoretical perspective, the study is able to contribute to the arena of training evaluation by extending a framework that is destined to examine the influence of training program characteristics & workplace environment characteristics on training effectiveness in the eastern context of PSOs in Pakistan. For Pakistan, where research in the area of training effectiveness is dearth, this makes it a novel contribution.

Most previous research has worked on the common criterions used by organizations to measure and evaluate the effectiveness of training, but few studies have examined training evaluation at the reaction level (Alliger and Janak, 1989; Arthur et al., 2003). The study was conducted in the context of socialization and exposure of trainees.

In the contemporary age, learning and technology move hand in glove with each other. With the acceleration of high-tech innovations, the necessity of creating better corporate training along with training effectiveness goes higher. What we require is to monitor and measure training efficiency comparing the capital investment made in the training. Also to know the applicability of the training knowledge to the workplace being applied by the employees. The main premise set for this research finds its basis on the fact that training effectiveness is measurable on the people who are trained. Moreover, training effectiveness helps to control the training program. Increased uncertainty is the outcome of the current global competition (Warner, 2004). This has raised the need to augment managerial responsibility by learning new skills and competencies to look for organizational autonomy (Wang et al., 2009).

China's economy provides an evident example of transformation under which managers have shed the role of bureaucratic administrators to assume the role of strategic decision-makers (Wang et al., 2009). Despite government initiatives on developing managerial skills at all levels, there seems no international vision among public employees to foster organizational talent.

5.2.1 Research aim and objectives

This section deals with the research aim, and objectives identified in Chapter 1(Introduction), Section 1.9, 1.10 and exhibits the accomplishment of these objectives in the current thesis.

Research objective 1 and question 1

Research objective 1	Research question 1
To examine the role of training and development with regard to training effectiveness in public organizations of Pakistan.	What is the role of training and development with regard to training effectiveness in public organizations of Pakistan?

For this research question, answer has been sought by browsing through the literature review and the discussion built around this objective is concisely figured below:

Research objective 2 and question 2

Research objective 2	Research question 2
To examine the role of training and development with regard to training evaluation in public organizations of Pakistan.	What is the role of training and development with regard to training evaluation in public organizations of Pakistan?

Empirical literature helped to conduct an investigation and a score of factors was identified as related to training effectiveness, these factors center around TPC & WPE by including sub-items running in parallel with the findings given by the past research.

Research objective 3 and question 3

Research objective 3	Research question 3
To test the existence of relationship between training program characteristics and workplace environment with training effectiveness in public organizations of Pakistan.	How to test the effectiveness of relationship between training program characteristics and workplace environment with training effectiveness in public organizations of Pakistan.

Following the critical review of the empirical literature, two major factors including training program characteristics and workplace environment directly relate to training were unfolded and identified as having linked with training effectiveness.

According to literature, training effectiveness is liable to get measured through evaluating numerous facets inside the training domain, that includes training design, trainee' tendency to acquire knowledge and subsequent variations in trainee's performance as well as behavior. The acquisition represents trainees' learning retention after the training process (Yunchen, Lesley, Kari, Shaheen, and Arash, 2014). In general, expansion in knowledge and skills acquired as a result of the instructional experience during training. According to (Hill,1999), signpost of an effective training is its problem-solving capacity within organizations further linked with importance of characteristics such as delivery methods, trainees' attributes, characteristics, training efficacy (Bartel, 2000), and transferability (the ease with which users can switch their expertise to handle a task (Yunchen, Lesley, Kari, Shaheen, and Arash, 2014). The individual processes involved in training phenomenon provide predictors of training effectiveness (R. Grossman & Salas, 2011).

Determination of training effectiveness takes place through making assessment of the criteria conceived by KP hierarchical model (1967) about training outcomes (Broad & Newstrom, 1992). Trainees' positive reactions are indicative of an ingenious as well as well-administered training programs. Moreover, trainee attitudes as well as expectations may highlight training effectiveness. This study, therefore, focused to explore trainees' attitudes to assess the effectivity of a suitable combination of the criteria towards training effectiveness in public organizations as 3rd objective of the extant research. Objective 3 was realized as well through justifying the research philosophies enunciated in Chapter 3 paving way for data collection, analysis as well as presenting.

Research objective 4 and question 4

Research objective 4	Research question 4
To examine the impact of training program characteristics and workplace environment as individual factors on training effectiveness through the effects of mediating variables such as learner readiness, training evaluation and return on investment as category factors.	What is the impact of training program characteristics and workplace environment (as individual factors) on training effectiveness through the effects of mediating variables such as learner readiness, training evaluation and return on investment as category factors?

This research study looked for empirical and qualitative evidence that could predict the mediation role of category factors such as learner readiness, training evaluation and return on investment. By evaluation learning, we need to know that learners need to deepen and reinforce their learning on the job. Moreover, training does not alone get the job done. On the business side, the application of learning matters. Two biggest missing links between training to performance are remembering and application to the job. Training intervention is to create training understanding. We need to do to create remembering. The other missing link is all by forgetting the application to the job. We need to persuade or motivate the trainees to apply what they have learned. Performing poorly or below the standards may not be due to the absence of knowledge, skills, and attitude; it may be attributed to some situational factors or due to the inappropriateness of pro-mechanism. Training is nothing to do if the KSAs of some individuals exceeds the requisite standards. In many organizations, the common assumption of the performance gap is linked with training issues.

That is not always the case. Need analysis is what to identify we expect from the people to do and what to identify the people achieved and then finding shortfall is due to KSA, we might be able to redress it through training.

Objective 4 was got fulfilled by collecting primary data from among public sector employees via a self- administered questionnaire survey. Analysis of data collection was entailed in chapter 4 thereby reviewing pertinent literature for building questionnaires with adequate justification provided in Chapter 6.

Research objective 5 and question 5

Research objective 1	Research question 1
To assist public organizations and management in developing justification for making investment in human development programs. Objective 5	How to assist organizations and management in developing justification for making investment in human development program.

Objective 5 was realized by inserting mediation through training evaluation and return on investment among main variables such as training program characteristics and workplace environment and present an analysis of empirical data to assist public organizations as well as management for investing in human development that is likely to expedite training effectiveness

As mentioned earlier that training program is not coming up to its expectations and time and resource investment come under risk of wastage in Pakistan. There are scanty research on this area, this study tried to investigate the concept of training effectiveness for its characteristics on one on one basis.

Past research has given evidence that only 20% of benefits were transferred to the organization as ROI. This reflects that trainees lose their training momentum at the workplace after returning from training. Moreover, in the absence of an ever-expanding training budget and lack of accountability or evaluation mechanism, the spotlight is much on conducting regular training and its expenditure instead of a system approach. Tasks performed by PSOs are not appreciated in our social context. No office bearer is held accountable which negatively impacts the organizational performance. Research is direly needed to work on training effectiveness and unveil the myths engulfing successful reflection of training efficiency on organization performance.

The review reflects that training programs by its salient characteristics, adequate evaluation at right time and right way supported by a feasible workplace environment can expedite the extent of transfer of training bounties to the workplace. The past research focused on training design and delivery. The focal point of later research was learning principles embedded in training design and delivery. Later research involved the workplace environment as the most attractive factor about variation in training transfer. This makes it clear that the occurrence of events before, during and after training is equally important as the other dimensions of training.

Training serves as a strategic tool to counter business competition. It depends upon the capacity of the organization to measure training effectiveness. The public sector in Pakistan offers training programs to its managers to learn new skills and knowledge at in-house training centers and renowned educational institutions to enhance their performance on the job. But public organizations failed to evaluate the effectiveness of training (Bryman, 2003). In the western context, tools like perceptive assessment, reporting results and acquiring feedback from trainees were found effective in measuring training effectiveness.

Perceptive Assessment refers to the process in which trainees' perceptions are taken through observation, interview and survey to evaluate post-training change. Acquiring feedback through a post-training test or quiz can provide learner satisfaction and transfer application after training. Reports developed after training help to know about increased results in different areas (Bryman, 2003).

There are key leverage points in training to performance (T2P). Training begins with learners' engagement and relevant thinking, understanding concepts, remembering (realistic practice), motivation (to apply). On account of the job support scenario for the application of learning, learners remember very little and so perform poorly.

At this stage, if they are motivated and resourced, their performance remains below standard. With the enhancement in learners' practice, learners remember sufficiently subsequently learners perform at standard. As their motivation level increases, they perform above standard.

Design and evaluation make the model useful. This means that we are moving beyond the conventional smile sheets. This is because we need to find out whether trainees can make decisions and do realistic tasks on the job. We need to assess their remembering. We need to assess the full causal chain from training to performance because this causal chain provides a full road map.

TPC is perceived as a multi-dimensional object, WPE has a considerable depth as a dimension. Training evaluation manages to unveil all the known properties of training activity at the stated point. Learner readiness to learn and ascertaining return on investment point to plot the object i.e. training effectiveness significance. This makes the construct to develop into six dimensions framework in existing learning transfer theory.

As a positivist, this research relied on one theory adopted positivist stance and made use of the theory of learning transfer as theoretic lens, it led to identify that certain individual and category factors protract within or outside the training context to build a viable criteria to adjudge training effectiveness (Tracey, & Cardenas, 1996).

Given above, this study feels the need to take multiple perspectives to propose a framework and conduct empirical investigations through a more refined context-related methodology. What was my job to explore white and black and grey areas as well as social meanings attached to the outcome; based on this, the findings are being referred to the interpretive. Future research may look to explore training and development issues to develop or present a theory for future generation to test as a way forward for justification. As a positivist, I am giving direction to the interprevisits.

A number of theories such as TET, CLT, and TLT were discussed at length and found these unrelated to my research premise on the grounds of the dissimilar situational and cultural contexts. On these grounds, I castoff these theories being unfit to test in local conditions. However, LTSI presented by (Holton, 2000) fit to test in our environment since replicated in Asia (Thailand and Taiwan) and in the Middle East (Jordan) by (Colquitt et al., 2000; Smith-Jensch et al., 2001) and found useful to operationalize training practices and measure direct transfer of learning. Moreover, 16 factors tested through learning transfer theory was further recommended by (e.g. Colquitt et al., 2000; Smith-Jensch et al., 2001) that these variables could have tested through moderation or mediation effects. The existing scales were adopted for this study from the learning transfer theory presented by Holton, Bates and Ruona, (2000). The ontological imagination presented by western theories is found reverse to the historical as well as sociological experiences found in the on-western environment (Shibashis Chatterjee,

2014). Experiential learning of factors that provided the basis to formulate LTSI is found close to the ontological imagination of the non-western conditions prevailing in Pakistan that is why certain individual factors like learning self-efficacy, acquisition of knowledge, acquisition of learning, etc were selected for testing in the local context. Based on the ontological position of LTSI, certain category factors like training program characteristics and workplace environments were selected to test in a local environment.

5.3 Justification of adopting LTSI system

There are certain points that serve as leverage points that facilitate or block training evaluation, this research uses the evaluation tool of LTSI that has the potential to identify leverage point to notice change on account of learning transfer and improvement in performance. According to Holton, (2003), two approaches come to interpret these leverage points those needs to be examined in future practice with their respective contexts. The fist approach suggests to identify factors, examine their allied functions, absolute level gained and resilience in a specific culture. In an organization culture where team orientation prevails, peers as well as co-workers extend support to variables embarks on more importance. The 2nd approach namely the multiple configuration approach does not believe in criticality of one or two factors rather it pleads for a quality system that could ensure learning transfer. From this perspective, the transfer factors are seen as operating as a system to support training effectiveness. In this view, weak elements may be offset or compensated by stronger elements.

The research approaches presented in the last decades necessitated the need to develop a new approach to training that puts attention to lean towards knowledge as well as skills that could resolve organizational problems. Experience and observation reveal that long term orientation of our society is weak due to which the development of our society is weak.

We focus much on training and less on development. Hofstede (2001) maintains that culture differentiates one group from another. The culture significantly impacts the operational functioning of public organizations (Bouckaert, 2007; Deal and Kennedy, 2000). Peters (2010) argued that culture thrives on three discrete levels: Societal, political as well as administrative. All happen to impact public administration. Hofstede describes the cultural impact on training and gives long term value at .66.

This is what positivism says objectivity and realism lead to the reality that can be measured. Training involves a lot of behavioral and cognitive activities that lead to developing the intellectual competence of individuals. The low tendency of intellectual competence in public organizations warrants the need to decode real behavior and control it in an organizational setting. The knowledge that is deeply rooted in the brains of people can be tracked through their behaviors and actions (Al-Alawi et al., 2007).

In developing countries like Pakistan, for ignoring the understanding of learners' experience at the individual level. In this way, a development made through research and theory in training was not incorporated in the system. If training is to be evaluated for efficiency and effectiveness, an individual learner's experience is required to understand. Works of psychologists and behaviorists along with taxonomies presented by them should be appreciated and can be used for evaluation of training effectiveness. To carry out an exhaustive discussion on the psychology of training and its evaluation of training effectiveness, the reader is recommended with important references entailed above.

Training takes on a pivotal position in organizational life. Before this, Holton et al.'s (2000) posited that the transfer climate is vital but the availability of certain factors is imperative to get desirable training transfer. Moreover, their connectivity with training design and delivery

and learner readiness and personal efficacy beliefs can bring additional benefits. Positivism was adopted to unveil new facets of knowledge. The survey method was employed as the strategy of inquiry. The study type was adopted as cross-sectional. As the study delineates the research problem, highlights sample characteristics, problem identified, the study is, therefore, quantitative and descriptive (Creswell, 2003).

I draw on positivism to conceptualize management development training and take on managerial perspectives to measure training effectiveness using individual and category discursive factors extracted by "logical automatism" instead of "intuitionism". In this way, we may be able to shift the theoretical paradigm by adopting a different grammar of inquiry. Future research may include smaller cities to analyze the factors affecting training effectiveness. The past research focused on participants' cognitive perceptions at one or two points, this provides a static and imprecise snapshot of training effectiveness analysis. This mode ignores the time to time emergence of different processes that could strengthen training effectiveness. The other side takes into account the perceptions of employees extended over a course of time but failed to take into account the stage through which performance has played out to gain this stage.

This viewpoint offers a deficient perception of training effectiveness analysis at different levels. It neither takes into account the learning architecture needs of trainees nor the magnitude of cognitive load required to engage the employee.

Training transfer remains a highly pervasive area after training evaluation in HRD literature. A score of studies worked in this direction and advanced measuring and examining training transfer (Taylor, Russ-Eft, & Taylor, 2010). There is a shortage of published materials on training effectiveness in Pakistan that has stimulated to conduct this research project.

Due to the paucity of baseline information blocked the training evaluation from the angle of transfer of learning. This incited the researcher to carry out an empirical investigation. The research project resorted to evaluate the perceptual effects acquired from multi-source level i.e. managers and non-managers, training management and trainers. Training when it does not deliver success story of results warrants the need for evaluation (Bjerregaard, Haslam and Morton, 2016).

Researchers are agreed that evaluation is a needful part of training phenomenon following the constant involvement of invested funds (Mackay, 2007; Miller, 2012; Kodwani, 2017). It presents an embodiment of evaluation tools and methodologies aiming to determine the effectiveness of a training program. Regardless of weight given to evaluation vocally, practical evaluation of training programs is constantly missing as not a solitary trainee was declared fail after professional training in the last decades.

The contemporary approaches often stress on a solitary dimension of training (Kraiger et al., 1993). Some intend to measure the learning outcomes (Kraiger et al., 1993; Tamkin et al., 2002), many focus the learning transfer associated with training (Holton et al., 2003), while many focused to examine the system and assess its achievement of training objectives (Kirkpatrick, 1994; McClelland, 1994; Phillips, 2003; Lien et al., 2007). Furthermore, the design of the current evaluation models pertinent to the organizational setting (Wang et al., 2002; Nanda, 2009; Tamkin et al., 2002). Yet, the framework proposed is presented to address the needs of diverse stakeholders about multi-layered objectives as well as impacts in a wider context. Thus, contemporary approaches seem limited in addressing the needs of diverse stakeholders. Moreover, majority studies in the domain of training effectiveness derive their outlook from the Anglo-Saxon background.

This makes it difficult to apply the proposed models and frameworks in non-western environments (Peretz, Levi, & Fried, 2015). Variant study designs provided insufficient evidence for organizations (Kulik & Roberson, 2008).

The studies that emphasized excessively on description instead of practical outcomes. This study takes into account those studies that considered learning transfer theory. The rationale of adopting learning theory is to expand awareness about transfer concepts. The training supposes to miss its goals until and unless the transfer does not occur.

Transfer occurs not in a jiffy rather it takes place positively by adopting positive strategies. Successful and positive training transfer makes it imperative to mitigate the effects of those factors that inhibit the flow of transfer. In the whole drive of behaviorism, it was established that the work environment controls human behavior and intrapersonal forces fail to give any input from within. This principle ignored the presence of emotion, feelings or perceptions based effects. The majority of the studies indulge in extreme repetition scaffolding (supporting) taxonomy culture and level creating. Training needs implementation proof in terms of the quality rather thriving on trainees' reactions.

A score of training and support strategies were unveiled. The contemporary approaches often stress on a solitary dimension of training (Kraiger et al., 1993). Some intend to measure the learning outcomes (Kraiger et al., 1993; Tamkin et al., 2002), many focus the learning transfer associated with training (Holton et al., 2003), while many focused to examine the system and assess its achievement of training objectives (Kirkpatrick, 1994; McClelland, 1994; Phillips, 2003; Lien et al., 2007). Furthermore, the design of the current evaluation models pertinent to the organizational setting (Wang et al., 2002; Nanda, 2009; Tamkin et al., 2002).

Yet, the framework proposed is presented to address the needs of diverse stakeholders to multi-layered objectives as well as impacts in a wider context. Thus, contemporary approaches seem limited in addressing the needs of diverse stakeholders. I did not agree with any of the theory, nature of knowledge, thinking as a positivist researcher.

Though training programs prove costly financially like a stitch in time saves nine, a timely conducted training proves its worth. Therefore, training needs to be evaluated for improvement or alignment.

Here it creates a snag when most of the training programs are evaluated based on measuring employee reactions to the training, mostly at the time of finalizing the training program. From their reactions, their satisfaction levels are ascertained. Positive reactions from trainees may be important and necessary but such reactions are not sufficient enough to conduct an evaluation or find the latent link of training with learning transfer and improved organizational performance (Herman Steensma Karin Groeneveld, 2010). This scenario warrants the need for more information to bring targeted improvement in training.

To ascertain the internal validity of training, reactions based on learning measures provide a useful outcome. Research conducted by (Berry, 1998) established that the 3rd and 4th levels of Kirkpatrick aims to measure the external validity of training results liable to apply to the job as a result of transfer after generalization. Practice as well as knowledge is the epitome of human resource development (Frank Nana Kweku Otoo et al., 2018). HRD assumed importance in the wake of traditional management supposition that considered time and money as absolutely legitimate vital assets while another commanding resource had developed in form of knowledge (Delahaye, 2003; Stacey, 2003).

Development of such resources intended to target labor-intensive sectors such as public sector healthcare delivery, mitigation, cure, treatment and pharmaceuticals (Bumpas and Ekkehard, 2009). There is required conscientious thought to strengthen processes through people to gain a competitive edge that sways human resources (Otoo, et al., 2019). HRD practices are designed as programs that are destined to implement for improving employee capabilities enabling them to perform effectively and bump into performance expectations (Indradevi, 2010). Evaluation of a training program is vital but it is not considered easy due to the presence of multiple criteria based on subjective perceptions (Mueller & Strohmeier, 2011; Tzeng et al., 2007).

KP proposed four stages or aspects of evaluating a training program. Learner's reactions can, therefore, be seen as the first condition of its basis of evaluation. Learners' satisfaction, quality of content and institutional repute served as a driving factor to learn and re-learn (Jenkins, Browne, & Walker, 2005). Learners' satisfaction provides 2nd reflection of program evaluation (Sun et al., 2008). Learners' perceived usefulness emerges as a critical variable that reflects learners' readiness to attend training and get the maximum out of it. This may affect the "cognitive arsenal of skills, perspectives, and ways of representing the world" (p. 11). The outcome indicates a level of mastery or understanding a topic can be a good reference point for learners. Fulfillment of a learning quest affects learners' "self-efficacy beliefs and other psychological dimensions" (Bandura, 1977). Pertinent that self- efficacy beliefs are strong predictors of behavior and result in the strong application of new knowledge, skills, and behaviors learned.

Constructive feedback, contribute to increased abilities and the results of research. In the taxonomy of psychomotor outcomes, feedback comes at level 3 with relation to compensatory movements. Feedback is provided as a part of cognitive strategies pointing creativity and originality beneath the strategy. The future learning environment (Atkinson, 2002) will attract trainees' attention through "animated pedagogical agents or computerized characters (either humanlike or otherwise)" facilitate learning through feedback (Craig, Gholson, & Driscoll, 2002, p. 428). Morrison et al. offered instructional design based on a blend of three instructional methods including presentation, demonstration, and exhibition to teach cognitive ability. All of these three methods are applied in a sequence order with different strategies to teach concepts, principles, and complex phenomenon. All type of training either led by instructor or video or multi-media pertain to these strategies, these training aim to teach "interpersonal skills" and "attitudes" individually.

Interpersonal skills include the expansion of communication skills. Attitudes deal with individual beliefs and allied behaviors or reactions. According to Reid's scientific attitude taxonomy, attitudes address logic-based methods and methodology and targeted curiosity (131). Interpersonal skills cover: "creative ingenuity", "objectivity", and "integrity" as the three levels. An instructional design based on these eight methods teaches interpersonal skills and attitudes together. "Learner-focused instructional designs can actively engage the trainee and stimulate curiosity" (Bonk & Wisher, 2000). It still requires the trainee to make effort in acquiring information from multiple sources.

The existing training evaluation models are found hard to implement in alien conditions and prove complex mostly. A new and well encompassing model is required to deal with local contextual conditions and serve as a tool to gauge any change in performance after training.

a. The previous research studies were conducted in different cultural and economic contexts b. The studies conducted in learning and its transfer context

c. Existing studies were conducted with their own methodological limitations

e. There is diversity in research publications in journals of HRD, HRM, education, psychology, health care, and organizational behavior.

The training programs are facing a dilemma in developing countries for under-performing in getting the required outcomes by designing a viable and result oriented training program. Why training lag and could not make their mark. According to research conducted by Healy, (2001), most of the training programs conducted in PSOs of developing countries proved ineffective for being theoretical and lacked practicality to achieve some specific objectives.

Employee needs were ignored and weaknesses were not addressed. Stakeholders lacked coordination among themselves. Resultantly, precious time and investment in training wasted and shortfall in knowledge and skills of employees could not be bridged.

The research suggested many years ago that training content, training processes, and organizational environment are the three elements that can maximize the effectiveness of the training programs (Binstead and Stuart, 1979). If these three elements are watchfully examined at the design phase and aligned with the organization context, a particular area of development could be pointed out to strengthen. The building training strategy is the next to be attended by the training managers.

While designing a coherent training strategy, the planning is a significant step at the outset the training managers require to adopt. By dint of focusing the planning, managers understand the objectives and cause to invest in training. Employees' expectations and prospective needs must be taken care of in framing training strategy (Altschuld, 2003).

Technology can facilitate learning through the effective delivery of training content. The development comes in the next phase. Development involves training performance and cost involved. In the next phase, the implementation of the training programs and control of their performance operation is focused (Ramirez, 2008). A study conducted in Dubai public sector found that a lucid training strategy reflected a positive impact on training effectiveness. 91.6% of respondents concurred that training was measured as effective as a result of the implementation of thoughtful training strategies, 85.7% of the survey participants pointed toward training methods as vital in ascertaining the effectiveness of the training. A response rate of 89.8% held the availability of training budget sufficient for delivering excellent programs.

Hence, three components such as a lucid strategy, a focused training scheme with the availability of sufficient training budget make sure that training is significantly effective and, so, the organizational performance (Sabrine, Dawood, Mahantesh, 2018).

5.4 Contributions made by research

5.4.1 Theoretical contribution of our study

Keeping given importance of training, this study has attempted to check the relationship between TPC and WPE with training effectiveness that was a less focused area in the literature. The extant study offers considerable theoretical contribution by extending the literature on training effectiveness and examined a range of category factors such as training program characteristics, training evaluation, and workplace environment.

Organizations are increasingly feeling the need to ensure training effectiveness by offering a unique set of the module. However, relative research on training effectiveness has a lot of research scope.

Past research has shown a significant correlation between different factors and training effectiveness. This study conducts a deep probe into the relationship of category factors about training in contrast to the previous organizational studies that considered situational factors about people's general behavior and attitude at the workplace (Christian et al. 2009). Furthermore, our study worked to develop a model that aims to test by explaining the role and impact of training program characteristics, training evaluation and workplace environment on training effectiveness. The study presents a comprehensive picture of the role of category factors on TE by providing empirical evidence on the area under research. Finally, most of the existing research on TE was carried out in the western context, whereas the context of our research belonged to a non-western environment meeting the need for generalizing the findings in different cultures.

5.4.2 Contributions to the knowledge

The study has been able to establish awareness about training effectiveness through the realization of its potential components at PSOs in Pakistan. The study tried to contribute some strategies to acquire sustainable effectiveness of training in PSOs in the future. The research framework resorts to ignite an academic debate to strengthen training effectiveness and facilitate training transfer to justify investment in training. Also to highlight many salient issues linked with this area. As a result of empirical investigation and in-depth investigation, training program characteristics and workplace environments were found in close agreement among these. Several impediments have been identified by this study with pertinent solutions to these.

5.4.3 Contributions to the practice

1. The research has been able to help improving training effectiveness in public organizations.
2. It extends support to future studies that could be organized to dig in training evaluation further.
3. Public organizations got the opportunity to make use of data acquired on the subject under investigation.

5.4.4 Practical contributions

The study is able to offer practical implications by providing new insights for training effectiveness through management of training program characteristics (TPC) & workplace environment characteristics (WPEC) coupled with different dimensions. Therefore, results of this study provide pathways of new guidelines that can prove beneficial in getting the objectives of TE. A score of other implications are expressed as under:

1. The findings of this research provide meaningful and practical implications for instructors, training designers, managers and supervisors when creating effective training programs.
2. This study highlights the training characteristics that have the potential to affect training outcomes.
3. The current study is critical for training designers and instructors to develop appropriate training characteristics that are relevant to management development training programs to improve their expectations for training outcomes and their expectations for the training characteristics, which would encourage them to learn during the training program.

4. This study provides practitioners with a set of training characteristics that they can invest in to achieve the desired results, as perceived by the trainees. Thus, training professionals and organizations should invest more money and effort into the training characteristics that contribute to successful training.
5. Organizations should invest more money to improve training content that contribute to successful training.

5.4.5 Methodological implications:

Items were purified from 8 to 5 for high reliability and this study supported existing research on multidimensionality of the construct, cross sectional design as aims to measure both the exposure as well as the outcome of interest at the same point in time (Morgan and Casper, 2000).

5.4.6 Implications for research, practice and society

Management development training (MDT) is capacitated to bring reduction in poverty; because it serves to create more jobs, jobs promotion, and inclusive growth. MDT sets out to develop individuals with the pertinent skills for competing the public sector and dynamic labor market. It is worthwhile to mention here that many developing nations have high youth rates and unemployment that needs to gain employment through qualification. It is widely acknowledged that measures for improving skill training can meet success if it synchronizes with economic policies and employment. Attaining economic growth with high productivity that may result in more economic and commercial opportunities in the field of teaching, impelling public policy and improvement in the existing skills system that is composed of two subsystems: training as well as labor market.

(i) Need to steer the training policies as well as approaches,

(ii) Setting the occupational qualification standards,

(iii) Creating a mechanism for the interchange of knowledge with labor market information,

(iv) Setting skill policies

This research is likely to help design an all-encompassing model for socio-economic development and contribute the body of knowledge through training effectiveness as pathways of training effectiveness still need exploration. Moreover, governments in developing countries need to probe into the skill system. Furthermore, training can successfully contributed to make socio-economic development in various countries (Ugochukwu Okolie, 2019). Analysis of results unveil the implications subsequent of sustainable training and trained people on socio-economic characteristics of different communities of society and formal or informal economy that gets effects of training industry specifically in contextual conditions of developing countries those are prey to skill deficiency and use current models as well as theories on training & development.

Target audience of this research will be researchers and professionals relating to career development, skill development, entrepreneurial development, and people from different disciplines students, practionerss, policy framers, education and training industry and think tanks.

A survey was conducted covering multi-level survey by including public managers, training managers and supervisors with non-managers those fulfilled the criteria of having experience of training of public organizations in Pakistan to investigate the in-house training programs for their effectiveness in terms of attitudinal change in learning, knowledge, and skills in face of

competing for public organizations of the UK, Australia, etc. Three large PSOs based in three different cities were targeted to gather responses. The survey exposed the key findings as under:

1. Public organizations are investing the bulk of resources in training but without justifying its utility.
2. A large number of respondents sensed the importance of training effectiveness.
3. The majority of world organizations rely on face to face training as a primary form of delivery method.

As training effectiveness has been less researched area on knowing the characteristics of training programs and effectiveness of workplace environment that may support organizational performance, the extant research presents an empirical-based and theoretically braced framework of organizational outcomes of training effectiveness. As per the practical scenario, low organizational performance is a dilemma if intended results are not delivered by constant management of training, this may be attributed to causal factors like low self-efficacy of trainees, tendency to acquire knowledge and skills, training non-evaluation scenario and ascertaining features like ROI. The survey results led to show that training received considerable effectiveness. If it is able

(1) To induce high self-efficacy among trainees,

(2) To buoy up knowledge acquisition,

(3) To go for more skill acquisition with a change in attitude,

(4) To adopt a penetrating instructional style for team building as well as a change in learning the culture,

(5) To create a work support scenario to upkeep participants for application of learning

(6) To develop a congenial workplace culture for absorbing new technology practices for improving job performance.

Our results unveil that trainees in developing countries make an advanced perception about the training and this thinking is important in the sense that blocks change. Trainee activation therefore, emerges as a major need to make training effective. Hence, main work associated with TEEF is to ascertain how trainees can be actually activated. Trainees' activation can be measured through application of new knowledge by the trainees beyond expectations (Eun, Sunyoung, Hye, 2019). Operationalization of training effectiveness lies in transfer of training (Hodge and Barratt, 2016). An organization manages to provide learning to its employees raising expectations from them to translate this learning into action and win competitive advantage (Gotsi & Wilson, 2001).

This approach affects trainees' perception about training (Pham, Gijselaers, & Segers, 2011) and their tendency to build an advanced perception about training is likely to decline. Here an organization seeks to influence through a unique organizational factor and that is organizational image in a fragmented off-line and on-line environment using blogging as well as microblogging i.e. Twitter (Gilpin, 2010). Using the wheels of information technology, a training organization can improve its image as well as reputation.

Organizational image is referred to as insiders' perceptions about how outsiders perceive the organization while reputation offers an extensive and conceptual blend of organizational self-presentation, and as perceived by media as well as other stakeholders (Dhalla, 2007). These contextual conditions signal to propose a new TAM theory that lays the need of 'Trainees Activation Management' and thrives upon the developing countries to activate their trainees well before training and this activation may result in desirable transfer of training. The

following model takes birth after passing through the research process. To make sure that the training is successful, the model proposes that position of training program characteristics is to be aligned with workplace environment. If both are positioned well, they can support training effectiveness. Moreover, success of training can be judged on the efficacy of training evaluation mechanism and ascertaining return on investment, subsequently a clear picture of training effectiveness is likely to draw (Salas and Cannon-Bowers, 2001). The following drawn conceptual framework symbolizes the specific direction of the research after execution through a number of factors at individual as well as organizational level:

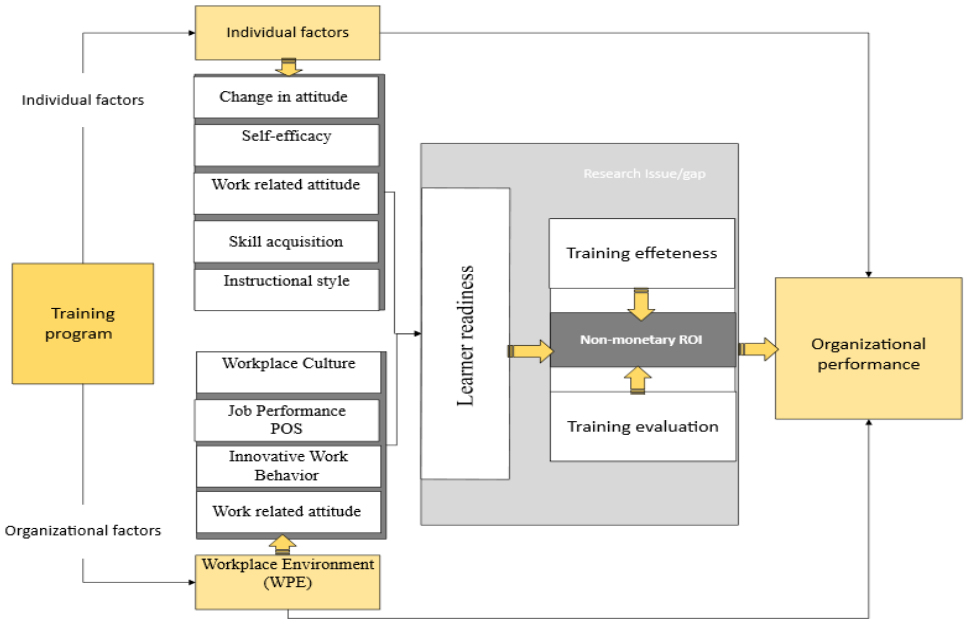


Fig 1: Final Model that provides recipe to construct desired outcome.

The final model firstly helps to generate evaluation data from diverse sources accommodating different perspectives as well as both qualitative along quantitative-based evaluation methods (Nickols, 2005; Vartiainen, 2003). Secondly, it further incorporates different data sources that augment information reliability and improve the evaluation results and their validity.

Thirdly, it offers a combination of formative assessment along with summative evaluation and reiterates to focus results by converging training design before execution. This allows different stakeholders involved in a training process to interact with each other before the conduction of training. Fourthly, it links up training evaluation with the training process in a way to integrate these and run together in a single compatible system. By this integrity, evaluation becomes an integral part of objectives in the entire phenomenon. It creates a system based on continuous evaluation of training program characteristics for their return on investment out of training effectiveness in terms of learning and change in performance underpinned by factors supporting the workplace environment. It enables evaluation to cover the issues of confronting outcomes in public organizations setting. Moreover, the current achievements of the training system are intangible and difficult to measure.

The research findings followed the Baron and Kenny (1986) steps:

Step 1: Significant relationship is likely to exist between the independent variables (TPC&WPE) and mediating variables (LR, Te & ROI). TPC&WPE-- LR, Te & ROI

Step 2: Significant relationship is likely to exist between the mediating variable (LR, Te & ROI) and dependent variable (TE). LR, Te & ROI----TEEF

Step 3: Significant relationship is likely to exist between the dependent variable (TE) and the independent variable. TE----TPC & WPE

Step 4: The existence of an insignificant relationship between the independent variable and the dependent variable following controlling the effect of the mediating variable indicates full mediation.

Adoption of mediation analysis was made to test the hypothesis using PROCESS macro 2.15 relating to SPSS version 26.0 developed by Preacher and Hayes, (2008) allowed testing the presence of a direct or indirect mediating relationship. This research preferred to employ the bootstrapping technique from PROCESS application based on upper and lower level confidence intervals (ULCI and LLCI) through range without including zero. Several simulation-based studies validated the effectiveness associated with bootstrapping procedures found as a strong evidential method used for mediation also to assess indirect effect (Hayes 2009; MacKinnon et al., 2007; Williams and MacKinnon, 2008).

Mediation advances through independent variables such as X1 & X2 moves towards dependent variable (Y) pursuing a linear regression path alongside C stated as "total effects". 3rd party mediates as (M) between X and Y, X embarks on M guides towards (Y) in turn.

By adding a mediator, the C path reflects a smaller direct effect. Preacher and Hayes (2008) point it out as 'path a' that carries statistical significance along with path b that proves the presence of mediation devising indirect effect. Median regression methods were applied to understand reality as a part of empirical realism. These provide enduring structures as well as generative mechanisms depicting observable phenomena.

Public employees in the local cultural environment show reluctance to involve in face to face interviews and avoid to bring their views to the limelight. Therefore, face to face interview was not preferred instead they culturally liked to express themselves in question-answer format where it remains easy for them to select the correct answers and contribute quality information pertinent to the research study. Moreover, in-person delivery of the questionnaire proves a robust method of collecting quantitative data.

Furthermore, this method proves flexible and less stressful for respondents. Also, there is involvement of less cost per respondent during data collection.

No worldly process is void of difficulties. The researcher faced several difficulties in the form of a lack of understanding of respondents to comprehend questions, the unfriendliness of some of the respondents and lack of communication with the respondents. These issues were overcome with the help of the cultural affinity of the researcher with the organization as the main limitation of the research was to cover one homogeneous type of public organization. Social reality carries a perceptive meaning by human beings therefore, every human action has a particular meaning for them and others. Based on these views, certain attributions are made. Different perceptions were sought to represent a kind of radical humanist paradigm on management training. Analyses show that despite conducting training regularly, PSOs are not able to exercise tight control on ensuring the attainment of training objectives.

These organizations remain unable to use the theories collectively that could reinforce the current authority structure. No evaluation based on the technological instrument was discovered in the last decade. Onsite monitoring is now possible through technology, training proceedings can be monitored as well as recorded through the auspices of new technology. The contemporary age illustrates the different analogy as compared to the past. The evaluation body should have online access. On-time and onsite evaluation occurs during training that can occur which offers a new feature. For example, training starts at 9.00, due to the traffic mess, most of the participants missed the first session of one hour. This situation will embarrass the trainer. Onsite monitoring and evaluation will check this factor and report to the management about lacking occurs. This is onsite development during training. Development after Training is stressed to evaluate how the first hour of training could be developed from the 2nd hour.

How the 3rd hour can be got improved from the 4th hour. In the case of the insignificance of LR, Relativist, nominalist and constructionist are referred to proceed in this direction. I leave questions for constructionists. Train the trainer is not the God gifted, he is human-like trainees. Trainer personality should be relevant to training objectives. Trainer selection is an issue. Before training, selecting the trainer is a critical challenge.

Past research on training effectiveness focused much on training content and design. This emerged as a great limitation faced by past research. The literature reviewed for this research study helps out the importance of feedback, the viability of training methods and dynamics of the instructional mechanism as vitally significant to effective training. It is therefore evident that factors other than training content and design must be considered to get a broad understanding of the training phenomenon.

Two major factors found formally influence the training effectiveness is training program characteristics and workplace environment characteristics that is explained by the literature review. But there are other factors such as learner readiness, training evaluation and return on investment that can justify training investment and influence job training informally if organizations prefer to get their mediation. In the coming sections, inter-link among these constructs is explored. Mediating role of learner readiness, training evaluation and return on investment is rarely discussed before this.

Low self-efficacy, organizational culture, and employee attitude may come up as the symptoms of low learning and its low transfer in terms of performance. When people reflect high SE they show signs of positivity towards the training in the form of positive attitude, positive inclination in using technology and deliver indication to apply newly learned competencies.

Also, generate positive impressions as well as attitudes needed to embark on a task effectively. This study demonstrated that training programs get effectiveness through reinforcement of training program characteristics and workplace environment under the mediation of training evaluation and return on investment hence serve as prerequisites to get augmented organizational performance. Under the shadow of mediation, training will escalate its worth and trainees can respond to training positively to acquire relevant knowledge. Thus, the research results substantiate the evidence that the benefits of training can be enhanced by conducting training evaluation and performance-based return on investment systematically to strengthen training program characteristics and so workplace environment. Subsequently, the workplace environment served as a strong incubator to develop and shape employees' thoughts and attitudes. Managers accordingly adopt actions to undertake resource utilization and effective signal strength will enhance.

Linked with the previous discussion, the ultimate object of the current research is to assist organizations and management in finding justification for making investments in human development programs (IHDP). Training effectiveness was operationalized for this study in terms of enhanced employee attributes that could bring tangible and intangible benefits for the public organizations. The following research framework is proposed explaining the conceptual and operational application of training effectiveness of training program before and after the training evaluation mechanism.

5.5 Limitations for research

Like other studies, this research study is not void of limitations. The proposed evaluation framework is limited to public organizations. Future research may encompass private sector organizations from a different context. The study faced limitations about assurance from respondents for properly understanding the spirit behind the questions. Moreover, diversity of knowledge, experience, and understanding created a limitation for the researcher to align strategy according to seize the potential in the prevalent conditions. The cross-sectional research design was adopted instead of embracing of longitudinal research design that had better assisted to test the causal relationship among extant variables. Moreover, to conduct an analysis of data gathered, the quantitative research design was employed by using structured questionnaires. Future studies may encourage insightful qualitative data. To get further in-depth and thoughtful data, a mixed-method applying both qualitative and quantitative could have provided greater assistance. Moreover, the data utilized for this study is extensively based on subjective opinions furnished by employees. Future studies are recommended to adopt more objective measures. The extant research adopted a multi-source strategy at the time of data collection that proves helpful to point out personal biases from discrete respondents otherwise it would have posed another potential limitation. However, generalizability posed another limitation of this study.

5.5.1 Methodological Limitations

The research design deployed by this research faced certain methodological limitation that needs worthwhile to mention. Firstly, the data collection was made from participants of the training. In future activity, multiple sources besides trainees may be included in the research activity from among their supervisors.

Wherever possible, a control (trainees) with comparison (non-trainees) group should be employed for evaluation (Ban and Faerman, 1990). The measures based on self-assessment may cause common-method variance that might cause exaggeration about the observed relationship among the variables for this study. Future studies may therefore, engage supervisors as multiple sources.

The other limitation pertains to the management of the self-administered questionnaire for examining the suggested conceptual framework. Data collection from the single source may face problems in relation to causal prediction during and after the survey. Seeing this limitation, apart from the quantitative data, conducting in-depth interviews from participants may prove helpful. In this scenario, multiple methods may further elucidate findings. The 3rd limitations pertains to the data collection that comes as a result of self-reporting of the study participants due to self-administration of questionnaire which may cause reliability as well as validity issues showing high correlation among the measures; hence errors found correlation among each other (Park and Kim, 2009). Fourthly, the research conducted analysis of the effect pertaining to training characteristics and workplace environment characteristics on training effectiveness in public sector, that restraints the research generalizability (Cole at al., 2006).

It is however, unsure that the same patterns can be retrieved from other cultures and results delivered by this sample would be obtained from other populations owing to cultural variations. Further research may investigate the cross-cultural dimensions of this subject in context of other industries or other areas besides training. Another limitation posed by the strategy was to assess the learning transfer during training whereas training evaluation should be made through adopting short- and long-term quantification (Gandine and Saks, 2004).

However, the above limitations do not mitigate the significance of the obtained results. These limitations point to the prospective research which provides support to the area. The succeeding section discourses the implications for prospect research.

5.6 Implications

This study adds new knowledge as a way to contribute originality and value in the current literature by reflecting positive impact delivered by training program characteristics (TPC) & workplace environment characteristics (WPEC) on training effectiveness (TE). Moreover, through analyzing mediating role of learner readiness, training evaluation and return on investment on this relationship, literature on TE has been added significant contribution. Furthermore, mediation analysis offers value contribution to the current body of knowledge. A better understanding was sought in form of an empirical evidence on the relationship of variables selected for the study. The findings adduced by this study are capacitated to assist stakeholders, policymakers as well as management of public organizations in Pakistan for adopting an adequate HRD practice to develop human capital and create a viable competition within the organization. The implications of this research will enable training organizations public and private, research students, practitioners and think tanks to update development strategies, bring reforms wherever required to improve the outlook.

5.6.1 Implication for HRD practionerss

Training is confronting barriers that result in weak transfer and affects training effectiveness in public organizations of Pakistan. LTSI offers a range of variables leading to learning transfer that provides a clear picture of the gaps around training effectiveness. It is likely that HRD practionerss practice with a certain level approach will inevitably miss a lot of critical dimensions of training effectiveness, may bring out erroneous conclusions relating to the training program (Holton, 1996).

By offering a multidimensional construct, the concept of training effectiveness has become significant for organizations of current times to endure healthy competition. The findings offered by this study put forth doable suggestions towards managers for managing the conflicting interests carried by diverse stakeholders to create a better training environment. From managerial perspective, an all-encompassing and multidimensional concept of training effective provides an effective approach to bring improvement in organizational compatibility. Thus, managers must focus vital dimensions of TE by fulfilling the needs as well as requirements of the key stakeholders.

In the wake of dynamic conditions, public managers always face critical situations to handle for which a contextual fit dynamic approach can extend help in a best possible manner. The existing approaches are insufficient to cope with their real experience. A new theoretical model is contributed at the 3rd step that could make sure that training is contributing effectively to the training program level and workplace environment level (Figure 1). The 4th contribution is about the application of the newly proposed theoretical model to develop new research propositions and shape research that could illuminate the path leading to real training effectiveness.

To narrow down the gap or variance in the research approach as well as perspectives, researchers may consider elements those help to form common ground based on which training theory could be tested empirically and look beyond the given dimensions and add clarity by sneaking through the intricacy of critical elements.

5.7 Ethical Considerations in Research

The ethical limits of the research and its time frame were adequately followed in true letter and spirit. The informed consent was sought from participants of the study before filling the questionnaire. Willingness was assured to return the survey. It was duly taken care that language and diction of questions may not impinge on the natural or religious beliefs or individual values of participants. Likewise, individual esteem, confidentiality and anonymity of participants were observed. Data was collected on a prior appointment basis. Participants were allowed to withdraw and any stage.

5.8 Recommendation

1. Developing a focused and comprehensive training strategy is need of the hour by encompassing every stakeholder through two way communication system.
2. The strategy for the training must be translated into the training policy. There should be one person who should be held accountable for training success supported by an implementation committee to monitor and evaluate the training events.
3. Induction of curriculum configured with the global market standards merging the outcomes of advanced training labs can help predicting the scenario of human resource development.

4. Currently there is no mechanism or system in the training organization to assist faculty while giving grades to the assignments and manage to update grade book of each trainee; for this training management should serve to mediate between students and faculty.

5. There is no internal learning management system (LMS) within the training organizations. Training organizations therefore, should establish an open learning online management system empowering training administrators, educators as well as learners with an integrated system for creating custom-made learning environments.

6. As internal assessment mechanism in Management Development training program is comparatively weak in Pakistan to justify investment in training, this warrants the need to adopt pre-assessment of trainees, during and after the training. This will create a liaison between trainees' parent organization and training management organization and current disintegration between the two organizations will evade.

7. A person must be designated accountable for all management development related training as it mainly centers around three entities.

- Create accountability in relation to training needs assessment as well as evaluation. Currently prevalent system of needs assessment is unstructured and without any serious evaluation.

- Need to analyze and evaluate needs assessment as well as evaluation reports at the level of general interest. Currently, the management of training is being conducted at an individual department and it has failed to create a deep interest at an organizational level.

- Training and evaluation must go hand in glove with each other.

- To ensure the success of a training program, there is a need to conduct analysis at three stages, organization, person as well as task. Currently, no such deep analysis except task analysis is carried out.

In view of foregoing suggestions, training organizations are required to update the training manual which may provide SOPs for prospective trainees.

Milestones achieved by the extant research

36 Research objectives

Objectives	Achieving research objectives
Objectives 1&2	Purposes of Objectives 1&2 was achieved using literature review in chapter 2 following the understanding of the pertinent theories as well as models transcribed in the literature.
Objective 3	Objective 3 was realized through justifying the research philosophies enunciated in Chapter 3 paving way for the purpose of data collection, analysis as well as presenting.
s **Objective 4**	Purpose of objective 4 was fulfilled by collecting primary data from among public sector employees via self- administered questionnaire survey. Analysis on data collection was entailed in chapter 4 thereby reviewing pertinent literature for building questionnaire with adequate justification provided in Chapter 6.
Objective 5	Accomplishment of objectives was made by conducting need to mediate analysis on empirical data.

Table 37 LTSI Scale Scores Rank Ordered and Classified

LTSI Scale	Name Mean	LTSI Scale Description
Catalysts for Learning Transfer (> 4.01)		
JP	4.33	I feel engaged at workplace (work related attitude Q6-10)
WPSC	4.29	Work environment is supportive.
Catalysts Needing Improvement (3.51 - 4.00)		
SE	3.96	Training helps to improve knowledge.
SA	3.95	A good instructor makes training effective.
CIA	3.88	Training methodology makes training program effectiveness.
IS	3.70	New knowledge and skills are learnt through training.
Barriers to Learning Transfer (2.5 - 3.5)		
ROI	3.47	Awareness about training is improved.
TEEF	3.07	Learning transfer contributes to training effectiveness.

The results shown above indicate that LTSI scale scores reflect high mean after training.

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Appendix A

Cover Letter of Questionnaire

Respected Sir/Madam,

Subject: ***The Research Survey on Proposing a Training Evaluation Framework to assess Training Effectiveness in Public Sector of Pakistan***

We are conducting an empirical research on examining how and to what extent, selected training effectiveness schema of individual and category factors affect organizational performance in public sector training environment. The study will suggest the recommendations to incorporate knowledge about training effectiveness factors into the training system in order to enhance training effectiveness in public organizations of Pakistan.

The prime objective of this survey is to understand the relationship/impact of training practices such as training program characteristics (TPC), training evaluation (Te) and workplace environment (WPE) with/on training effectiveness and subsequent linkage of TE with/on organizational performance.

For the purpose of data collection, we request you to fill up the enclosed questionnaire. The research is unique of its kind in Pakistani public organizations context with this schema of individual and category variables. The name of participant and organization will be kept confidential and anonymous. The information obtained will not be disclosed. The findings will be eventually shared at the end of research.

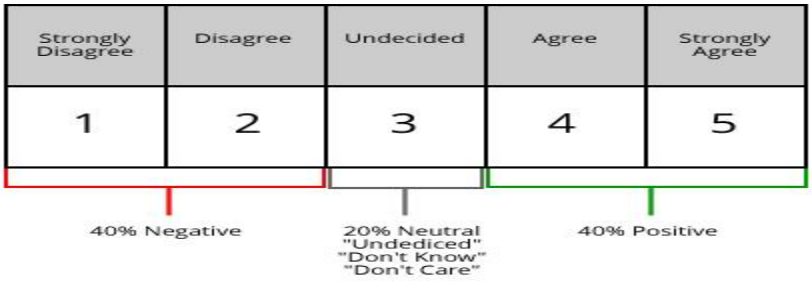
Your response based on fair and expert judgment is highly appreciated.

Thanks.

Cordially yours,

Muhammad Maqsood Khalid
Doctoral Candidate,

Appendix B Questionnaire



1.	Training improves efficiency and productivity.	2.0%	11.3%	17.3%	40.9%	28.4%
2.	Training helps to improve knowledge.	0.9%	10.0%	15.6%	39.3%	34.2%
3.	Training is better delivered through lectures.	2.7%	11.3%	14.7%	46.9%	24.4%
4.	Training is better delivered through practical.	4.4%	23.3%	28.2%	34.7%	9.3%
5.	Training is better delivered through demos.	1.3%	7.6%	12.9%	41.8%	36.4%
6.	Training is better delivered through field visit.	1.6%	8.4%	10.4%	42.9%	36.7%
7.	Training is better delivered through sound methodology.	1.1%	10.0%	12.0%	51.6%	25.3%
8.	A good instructor makes training effective.	3.3%	8.9%	9.8%	44.9%	33.1%
9.	Lectures make training effective.	3.6%	8.4%	17.6%	48.9%	21.6%
10.	Practical make training effective.	0.0%	7.3%	23.8%	38.9%	30.0%
11.	Demos make training effective.	6.0%	16.9%	25.6%	36.0%	15.6%

12.	Lectures make training effective.	2.2%	15.6%	7.6%	41.3%	33.3%
13.	Training methodology makes training program effectiveness.	5.1%	16.0%	11.6%	38.2%	29.1%
14.	New knowledge and skills are learnt through training.	7.8%	20.0%	11.8%	35.3%	25.1%
15.	Knowledge enhancement improves Job efficiency	6.9%	23.1%	13.1%	31.3%	25.6%
16.	Work environment is supportive.	0.0%	2.2%	5.3%	52.2%	40.2%
17.	Creativity helps to develop extra role to perform.	0.0%	2.4%	16.2%	50.9%	30.0%
18.	Employees have full management and supervisor support.	0.0%	0.7%	11.3%	48.0%	40.0%
19.	Employees' perceived organizational support influences innovative work behavior positively.	0.0%	0.4%	10.2%	48.0%	41.3%
20.	Workplace innovative environment reflects effectiveness of training.	0.0%	0.4%	8.9%	46.4%	44.2%
21.	I feel engaged at workplace.	0.9%	2.0%	7.8%	55.3%	34.0%
22.	I feel motivated to implement my action plans.	0.2%	2.0%	14.9%	50.9%	32.0%
23.	I feel the need to use new technology.	0.0%	0.4%	10.0%	48.9%	40.7%

24.	New technology helps to develop a self-driven workforce.	0.0%	2.0%	12.9%	52.7%	32.4%
25.	Workplace setting is supportive to implement new action plans.	0.0%	4.7%	12.7%	50.9%	31.8%
26.	My manager gives honest feedback about my performance.	0.0%	5.3%	18.2%	56.4%	20.0%
27.	My manager and supervisor inform me about latest professional developments.	0.0%	0.7%	14.7%	49.6%	35.1%
28.	Training results are monitored for their implementation.	8.0%	23.1%	14.9%	26.0%	28.0%
29.	Results are feeded back into training process to improve training practices.	3.6%	16.0%	24.0%	34.9%	21.6%
30.	Training results indicate effective performance of training institutions.	2.9%	21.8%	25.8%	33.6%	15.8%
31.	Training benefits are transferred to the job in your organization.	2.0%	7.3%	20.7%	38.7%	30.2%
32.	Learner readiness is essential to attain training objectives.	1.3%	5.6%	14.0%	38.4%	40.7%
33.	Organizations do not give incentives to those who transfer training benefits.	0.0%	4.4%	19.3%	38.4%	37.8%

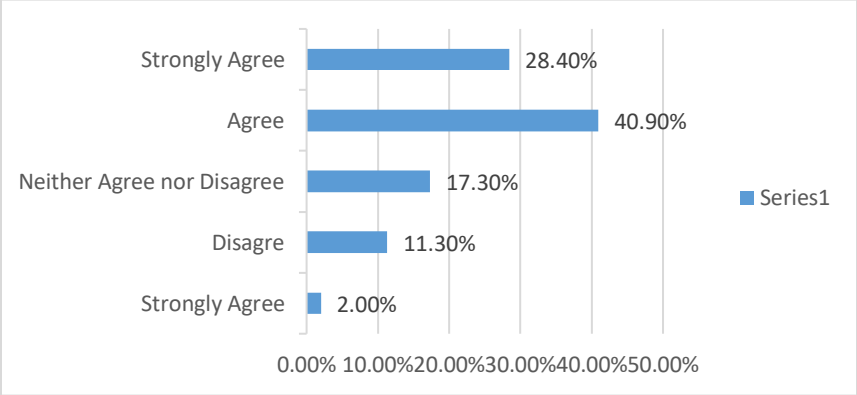
34.	Knowledge and skills acquired during training are not monitored for implementing.	2.0%	6.2%	23.8%	35.6%	32.4%
35.	Training design fulfils the learning preferences of learners.	0.9%	4.9%	19.8%	37.8%	35.3%
36.	Training evaluation mechanism is important.	0.2%	7.3%	23.6%	41.8%	27.1%
37.	Training transfer is important.	0.0%	4.7%	21.3%	42.7%	31.3%
38.	Training transfer climate is important.	0.2%	2.4%	21.8%	43.8%	31.8%
39.	Training participation is improved.	0.0%	3.1%	20.7%	52.4%	21.6%
40.	Awareness about training is improved.	2.4%	5.3%	27.6%	48.0%	16.7%
41.	I feel satisfied with the effectiveness of training program for its return.	1.8%	4.9%	25.6%	39.8%	28.0%
42.	I feel a change in knowledge and skills after training.	0.4%	3.3%	20.9%	50.9%	24.4%
43.	I feel a change in behaviour and application.	0.9%	12.7%	21.3%	41.6%	23.6%
44.	Efficient management and better decision making are returns of training.	0.9%	12.9%	23.1%	41.6%	20.2%

45.	Training program costs were achieved in terms of employee tasks execution.	1.1%	17.8%	30.0%	33.1%	18.0%
46.	I like training.	0.0%	1.1%	22.4%	45.6%	30.9%
47.	Training could not satisfy me.	0.0%	0.0%	21.1%	43.6%	35.3%
48.	I feel a strong sense of attachment to my job.	0.0%	2.4%	18.0%	54.7%	24.9%
49.	I enjoy discussing problems during training.	0.0%	2.4%	25.1%	47.8%	24.7%
50.	Training transfer increases the effectiveness of training.	0.0%	4.7%	22.4%	52.0%	20.9%
51.	Training effectiveness are assessed through change in knowledge, skills and attitudes.	0.0%	0.0%	9.1%	57.3%	33.6%
52.	Learning transfer contributes to training effectiveness.	33.6%	4.4%	10.0%	34.0%	18.0%
53.	Training transfer climate supports training effectiveness.	0.0%	0.9%	21.6%	48.7%	28.9%
54.	Training participation is a good sign of training effectiveness.	1.1%	35.8%	12.7%	33.8%	16.7%
55.	Training evaluation mechanism supports training effectiveness.	2.4%	8.0%	46.2%	27.8%	15.6%
56.	Institutional support in funding and access to resources is available.	0.9%	40.0%	13.1%	28.4%	17.6%

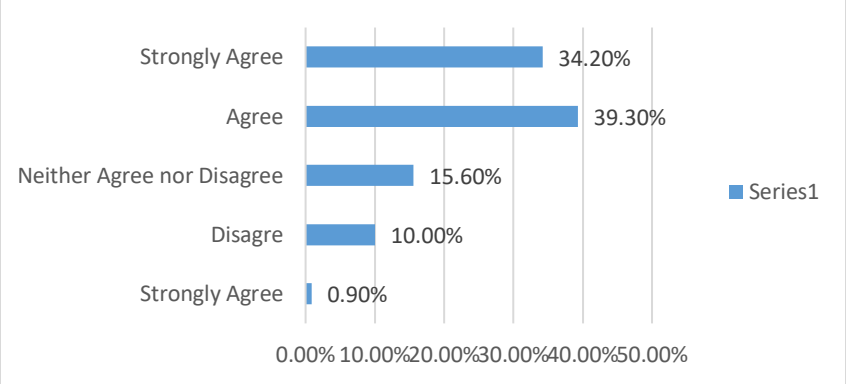
57.	Training assessment supports training effectiveness.	0.7%	3.6%	48.7%	29.6%	17.6%
58.	Training awareness supports training effectiveness.	0.0%	1.6%	22.0%	46.7%	29.8%
59.	Effectiveness of training improves training education further.	1.8%	8.2%	24.9%	40.7%	22.2%
60.	An effective training improves organizational performance.	0.0%	1.1%	10.4%	48.7%	39.8%

Adapted from Kanaka Durga Veera Prasad, Rajesh Waman Vaidya, Vemula Anil Kumar, 2016

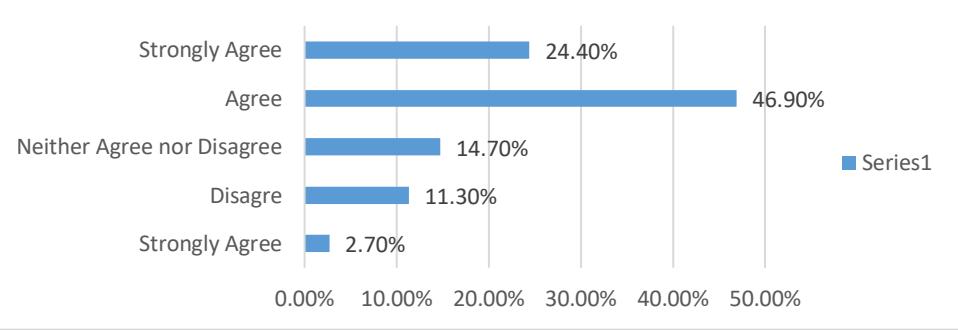
1. **Training improves efficiency and productivity.**



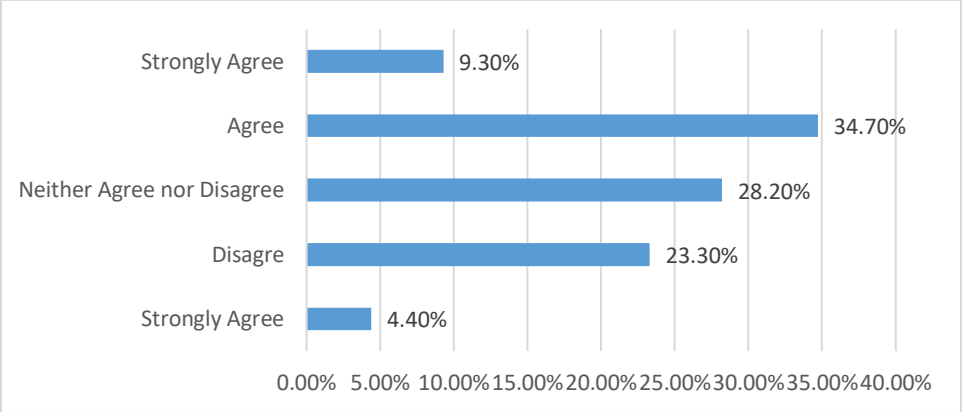
2. **Training helps to improve knowledge.**



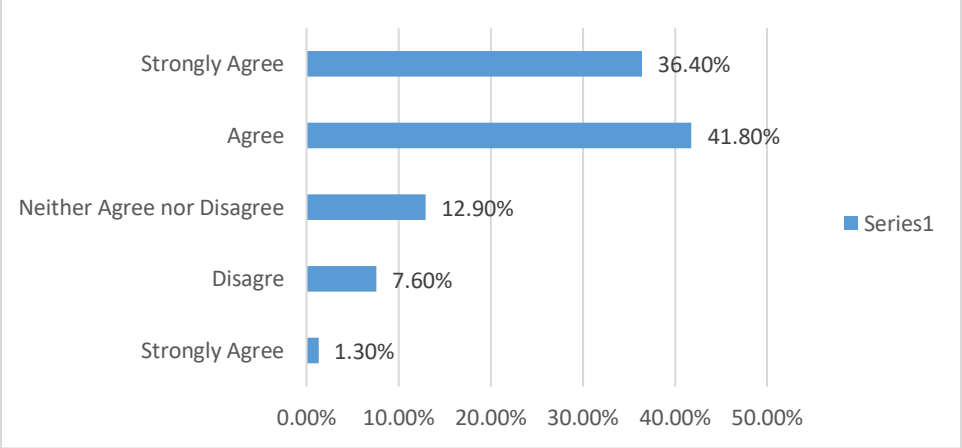
3. **Training is better delivered through lectures.**



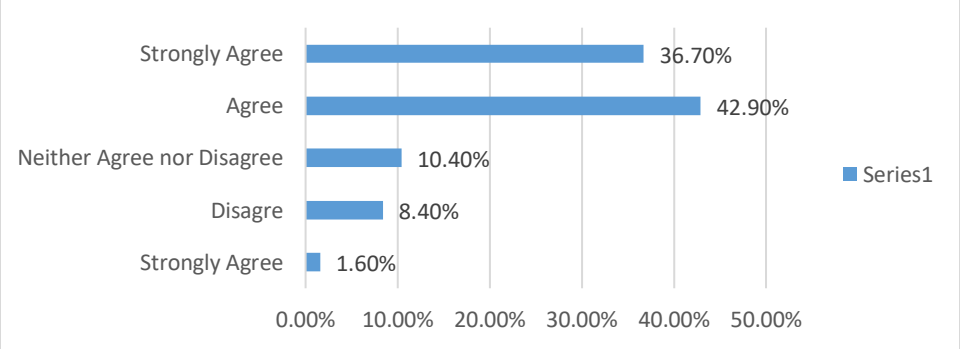
4. **Training is better delivered through practical.**



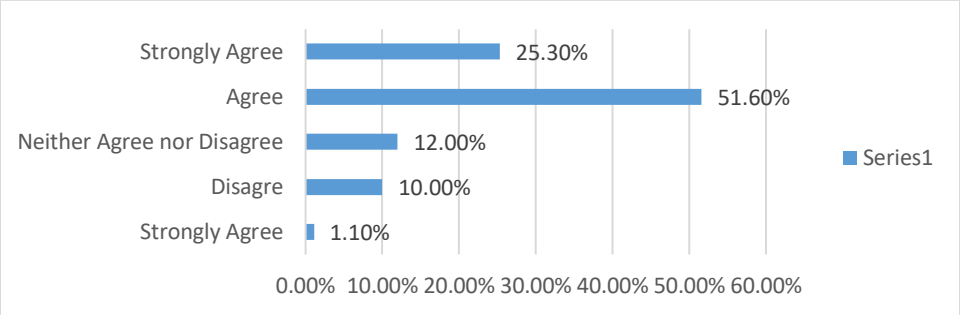
5. **Training is better delivered through demos.**



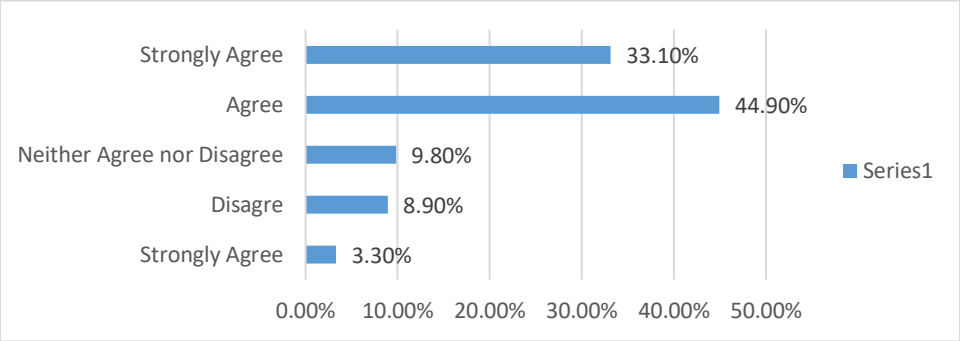
6. **Training is better delivered through field visit.**



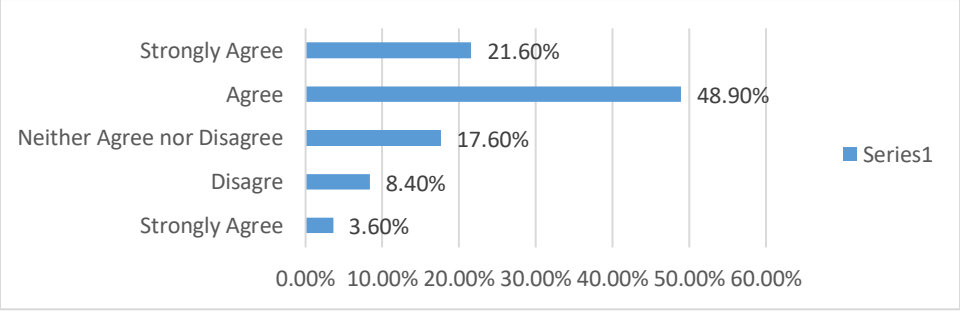
7. Training is better delivered through sound methodology.



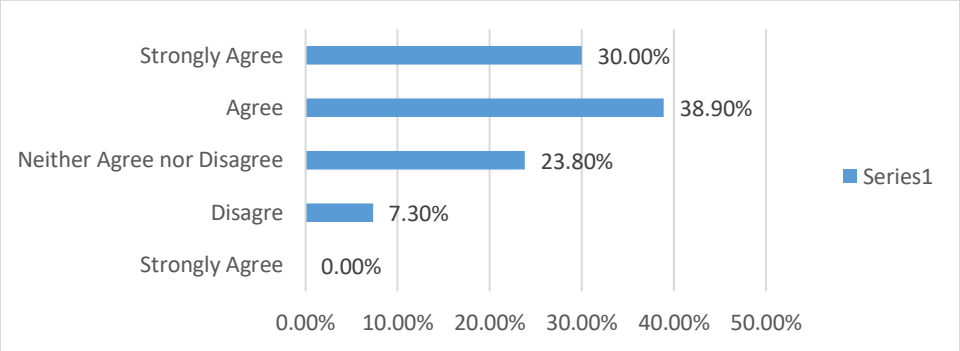
8. A good instructor makes training effective.



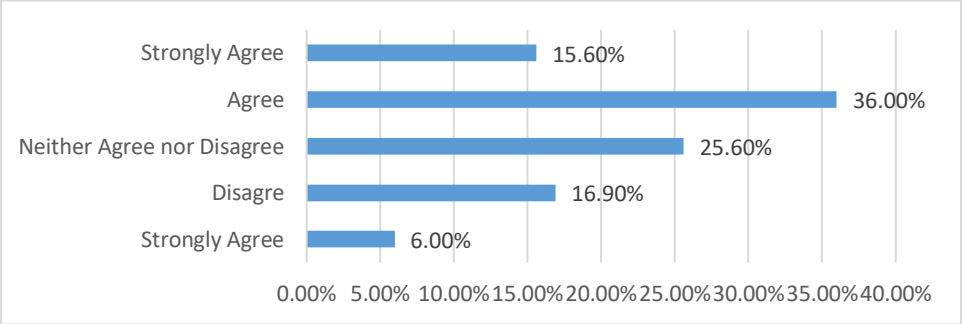
9. Lectures make training effective.



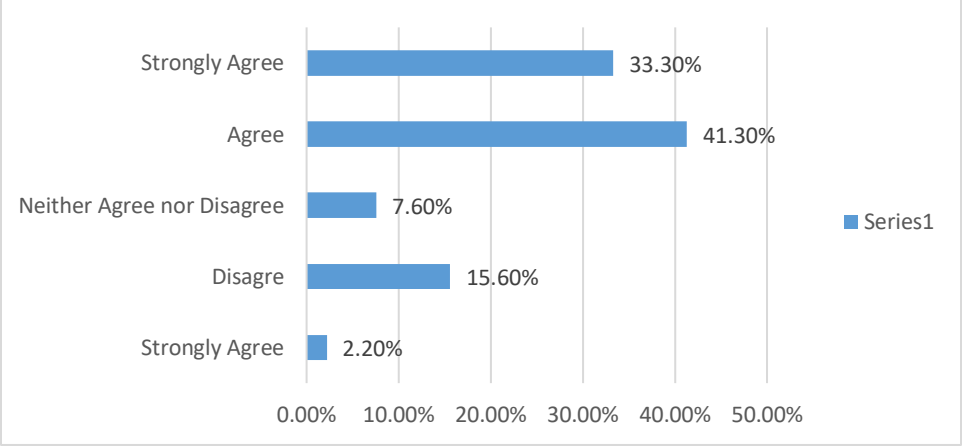
10. Practical make training effective.



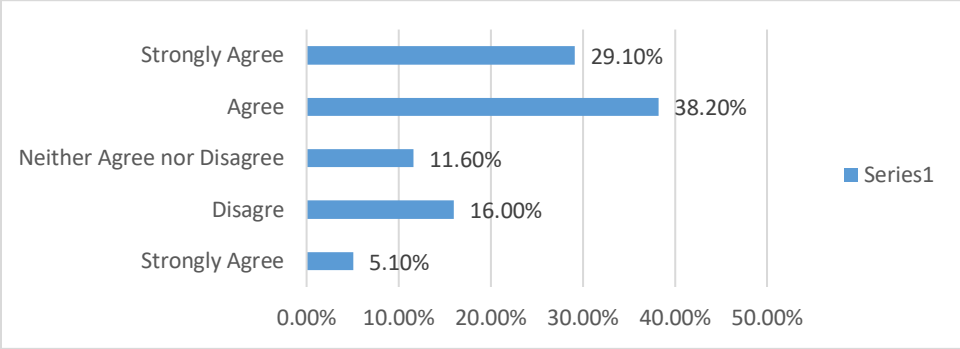
11. Demos make training effective.



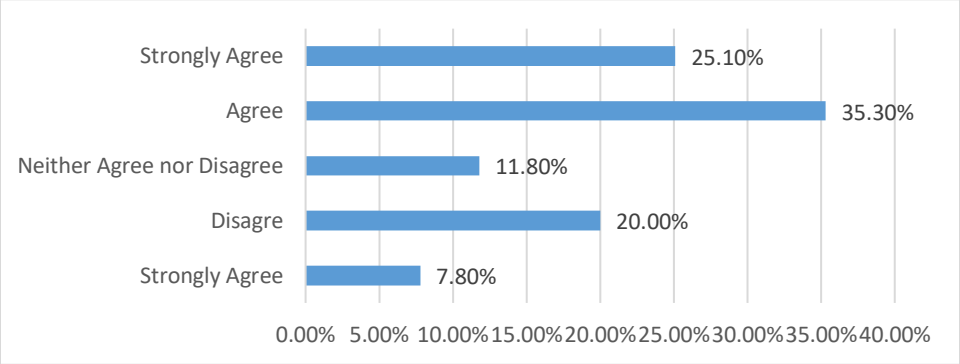
12. Lectures make training effective.



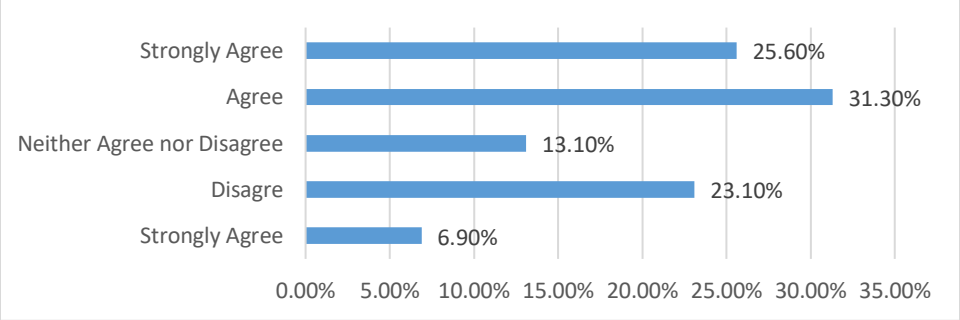
13. Training methodology makes training program effectiveness.



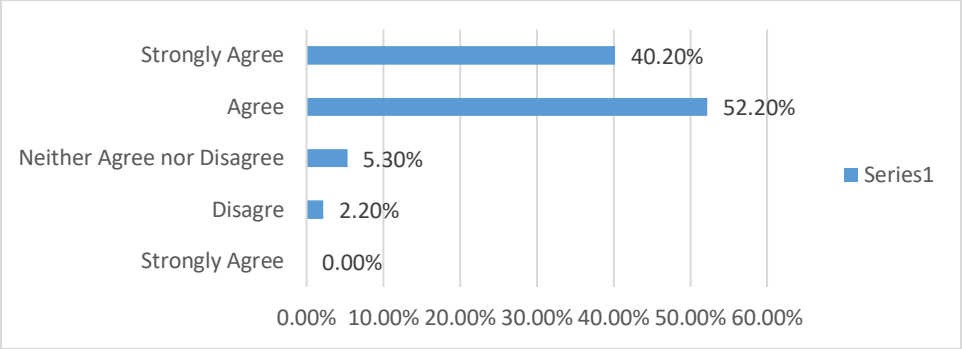
14. New knowledge and skills are learnt through training.



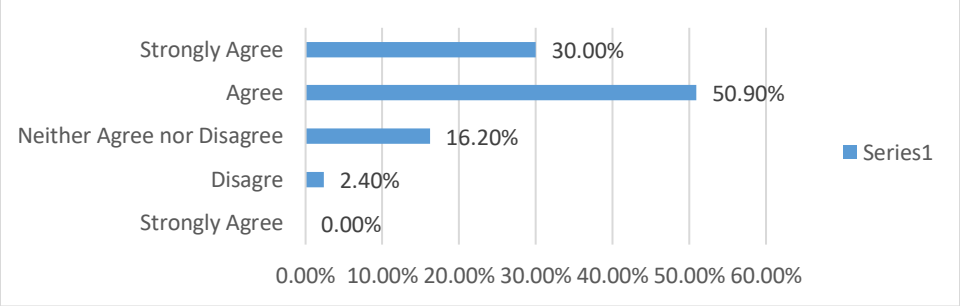
15. Knowledge enhancement improves job efficiency.



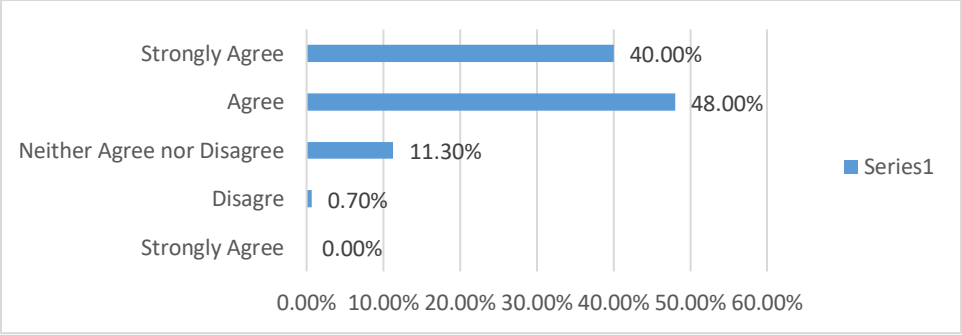
16. Spiritual feelings encourage creativity.



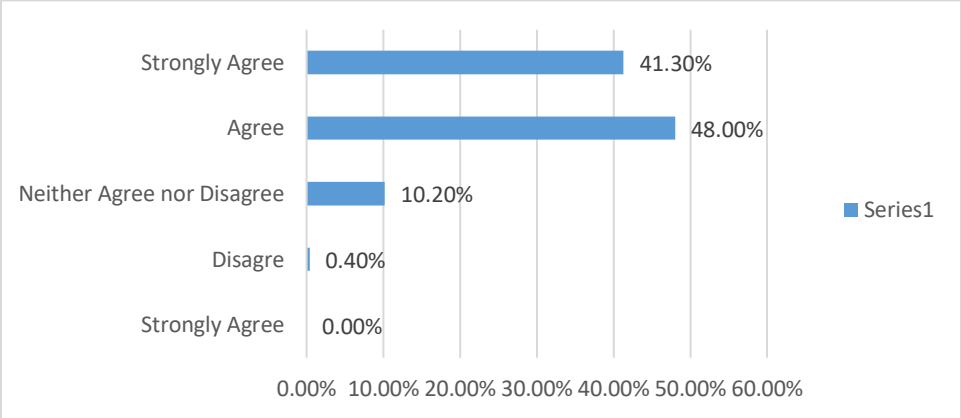
17. Creativity helps to develop extra role to perform.



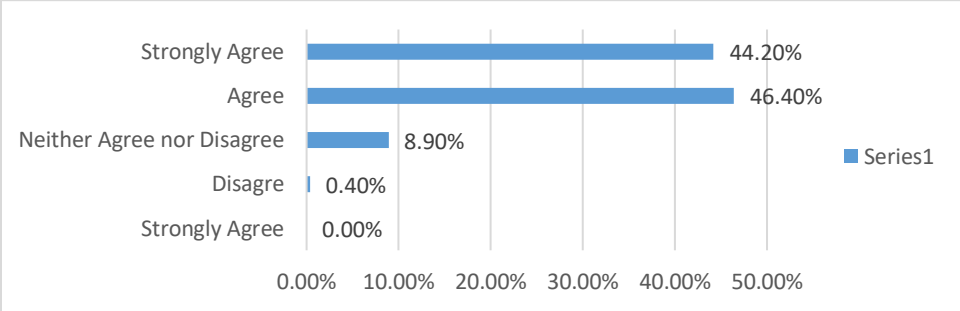
18. Employees have full management and supervisor support.



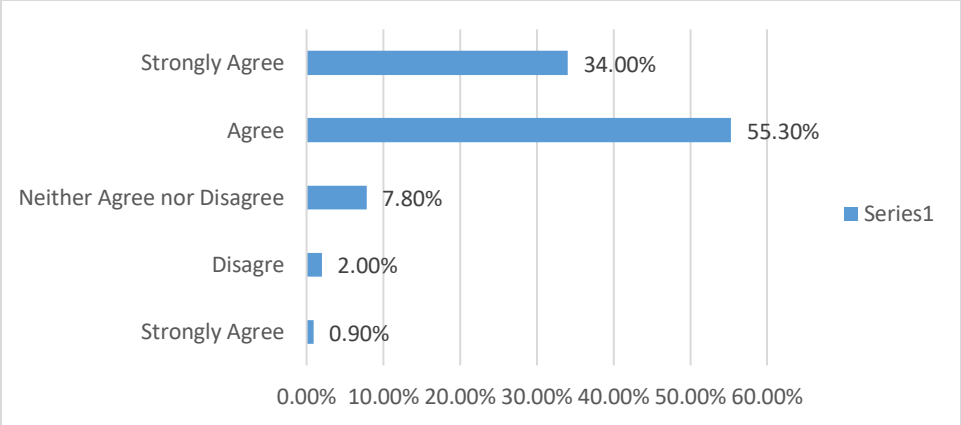
19. Employees' perceived organizational support influences innovative work behavior positively.



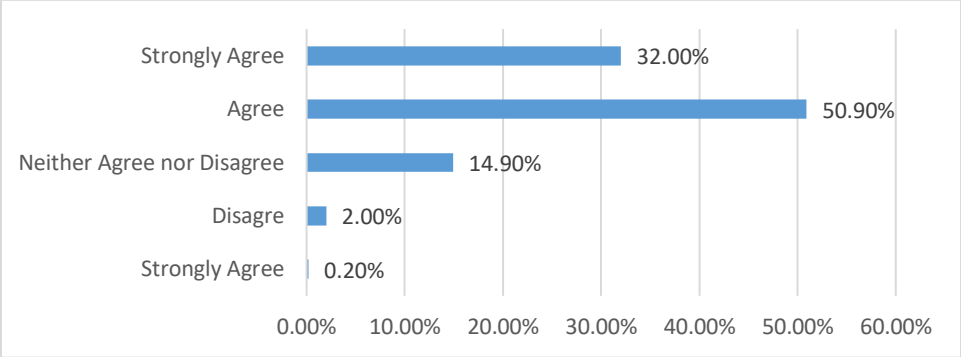
20. Workplace innovative environment reflects effectiveness of training.



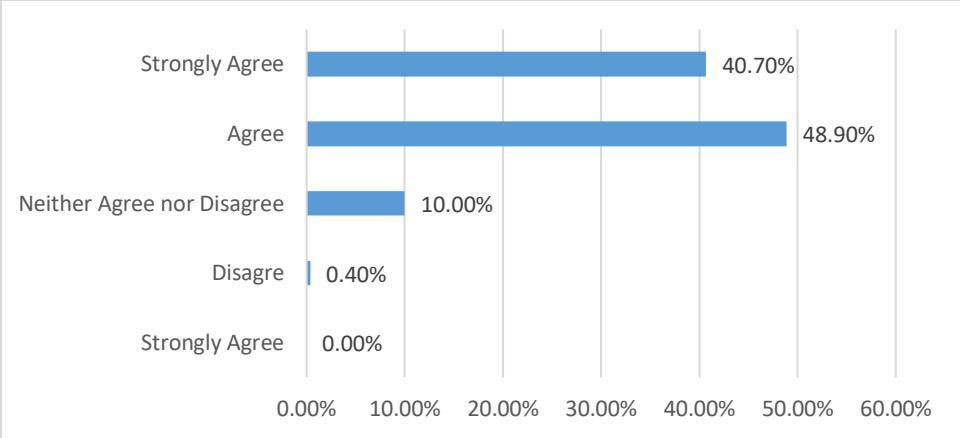
21. I feel engaged at workplace (work related attitude Q6-10)



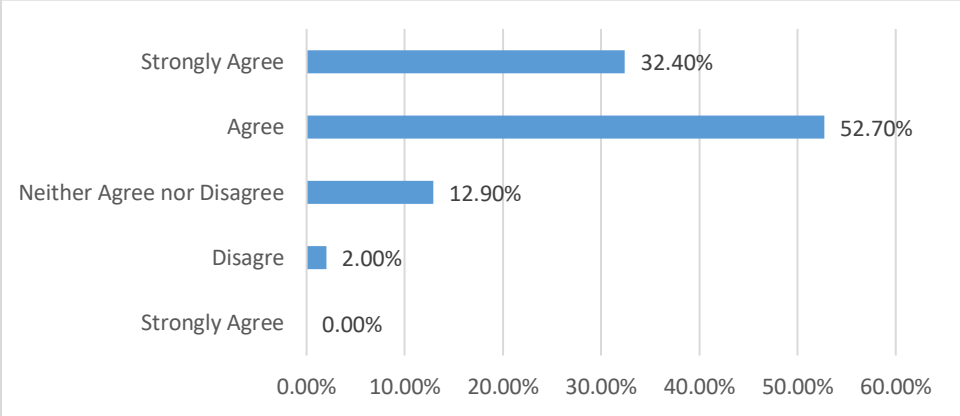
22. I feel motivated to implement my action plans.



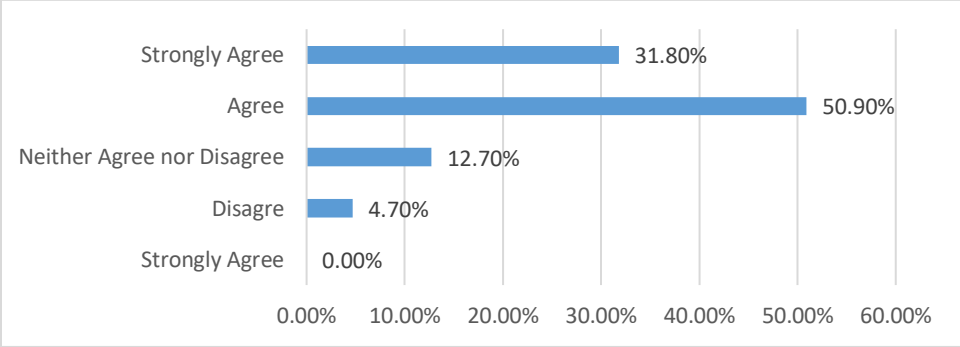
23. I feel the need to use new technology.



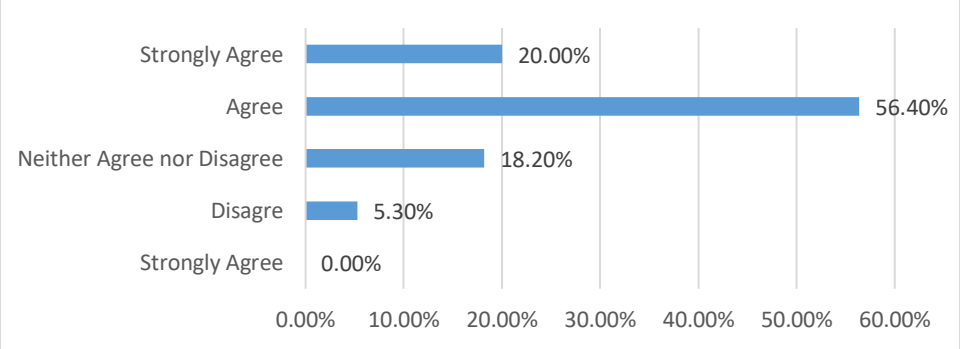
24. New technology helps to develop a self-driven workforce.



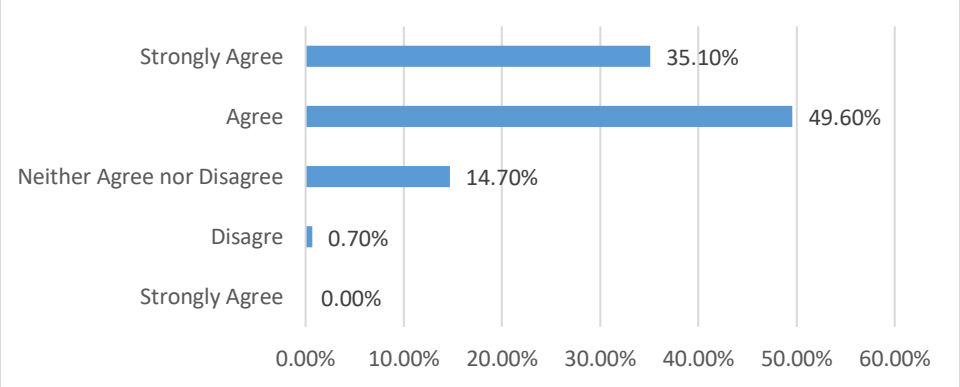
25. Workplace setting is supportive to implement new action plans.



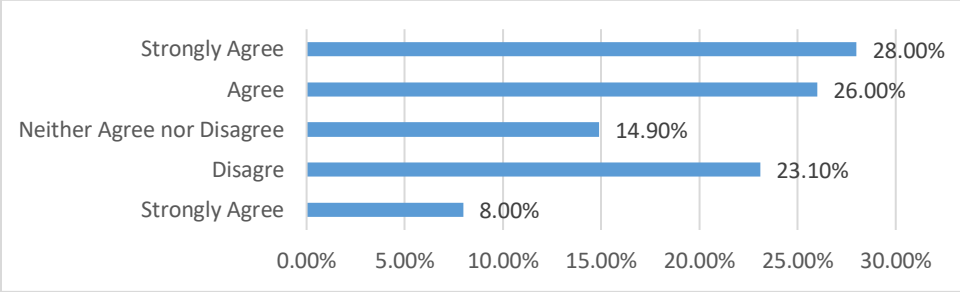
26. My manager gives honest feedback about my performance.



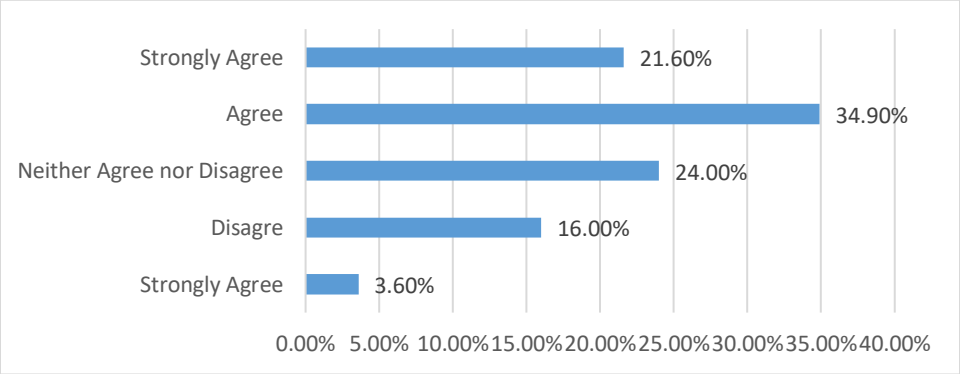
27. My manager and supervisor informs me about latest professional developments.



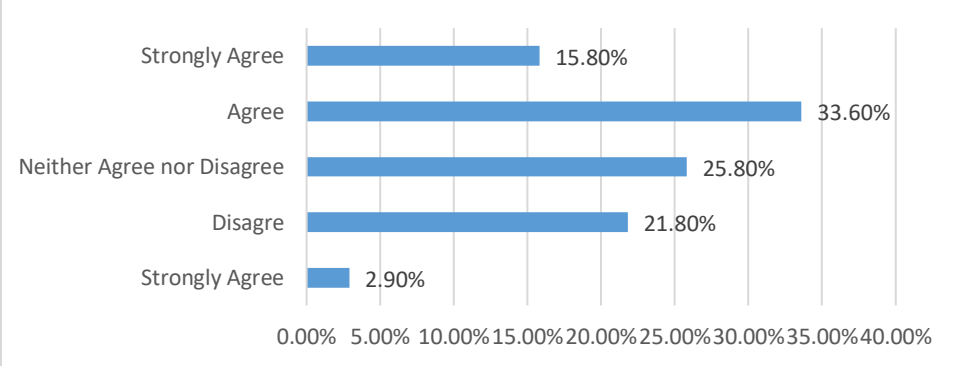
28. Training results are monitored for their implementation.



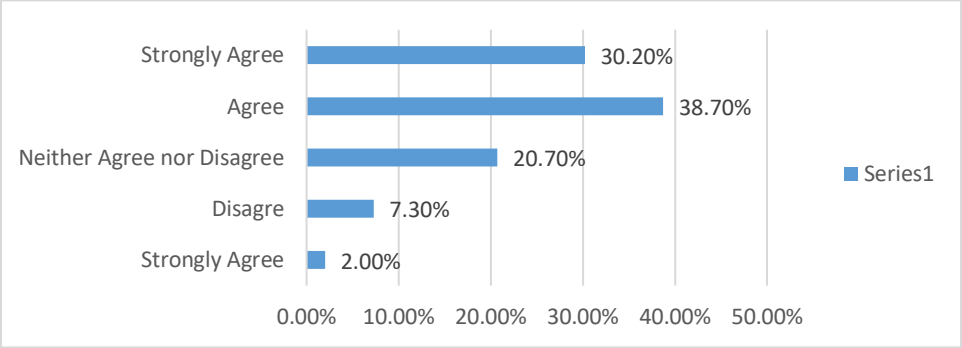
29. Results are feeded back into training process to improve training practices.



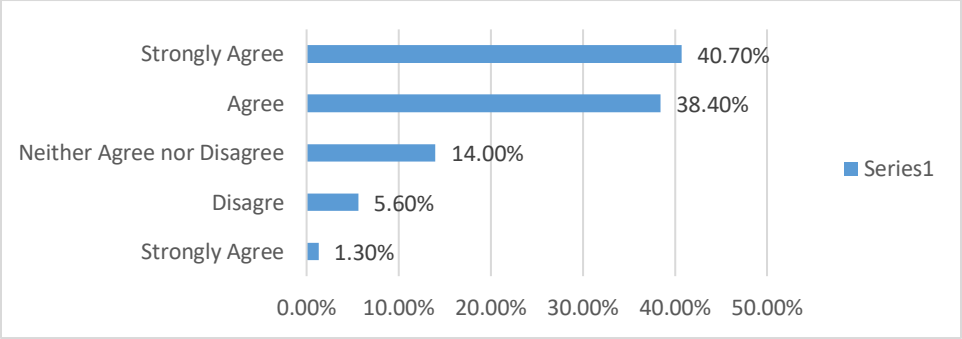
30. Training results indicate effective performance of training institutions. (WPPfm 5 Qs 10-15)



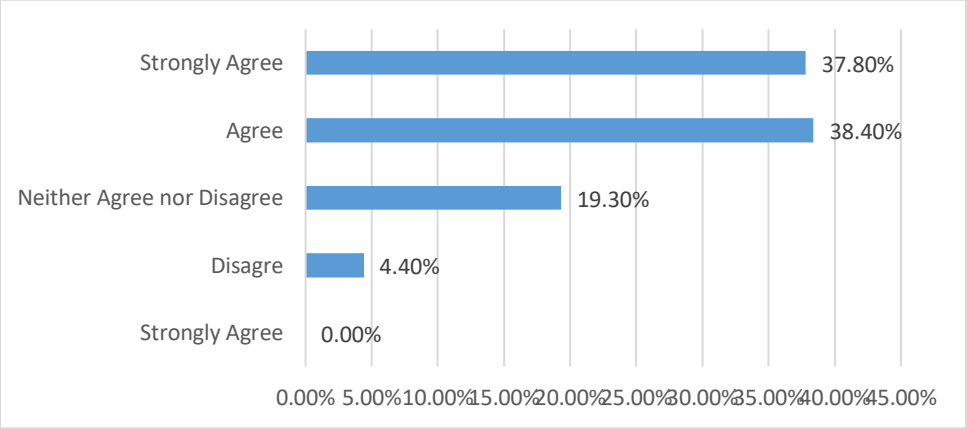
31. Training benefits are transferred to the job in your organization.



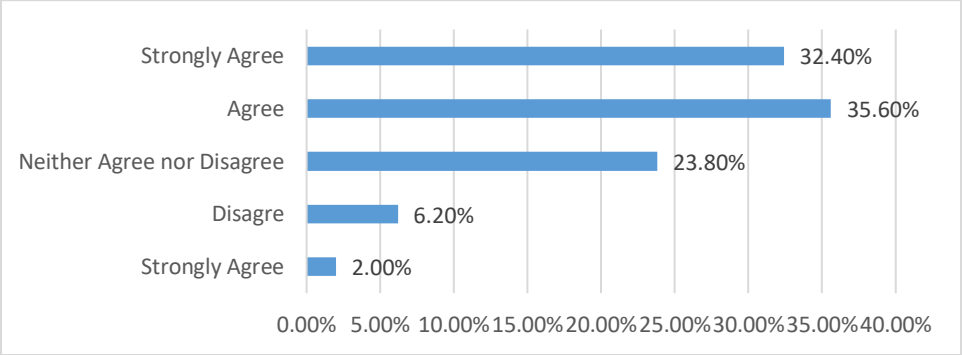
32. Learner readiness is essential to attain training objectives.



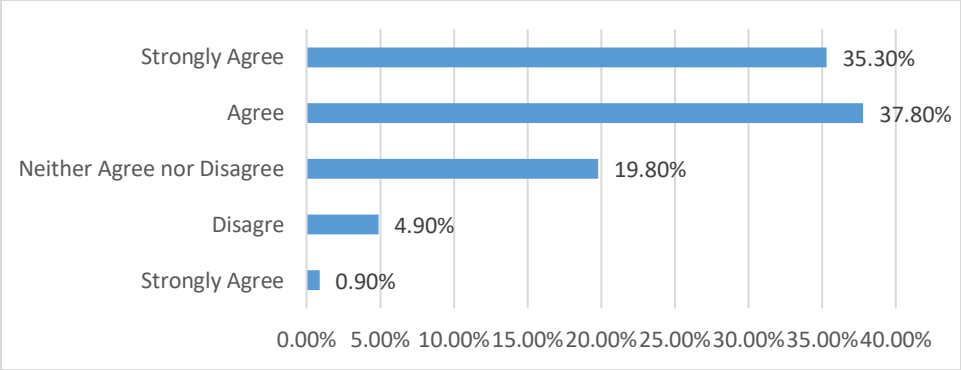
33. Organizations give incentives to those who transfer training benefits.



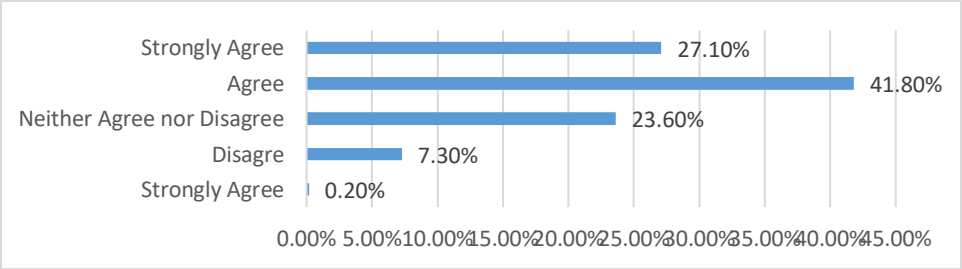
34. Knowledge and skills acquired during training are implemented.



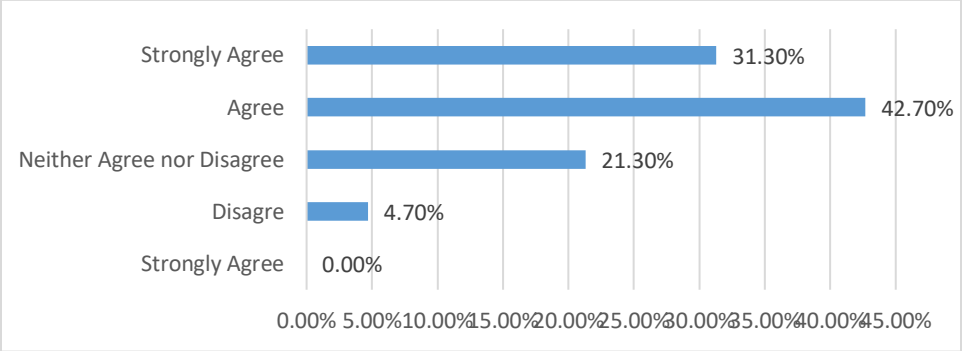
35. Training design fulfils the learning preferences of learners.



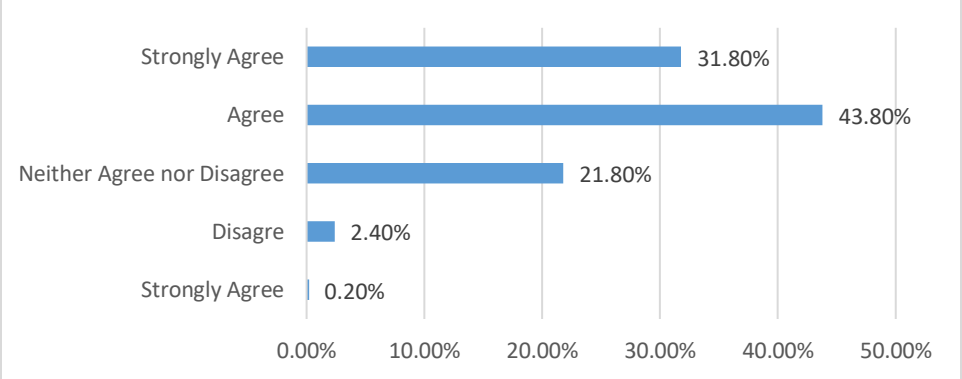
36. Training evaluation mechanism is important.



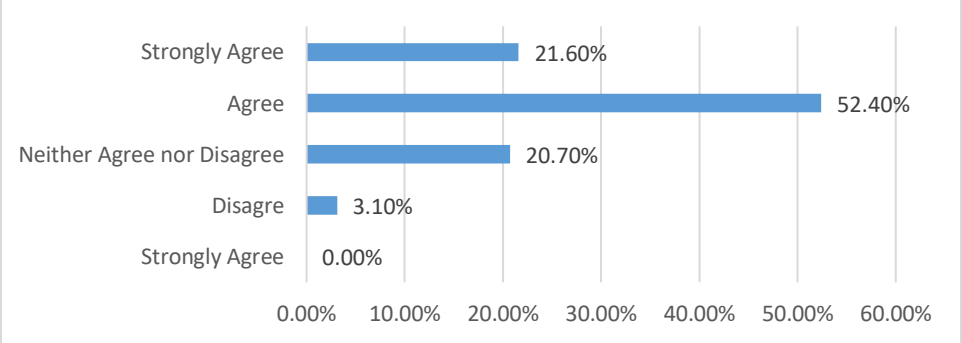
37. Training transfer is important.



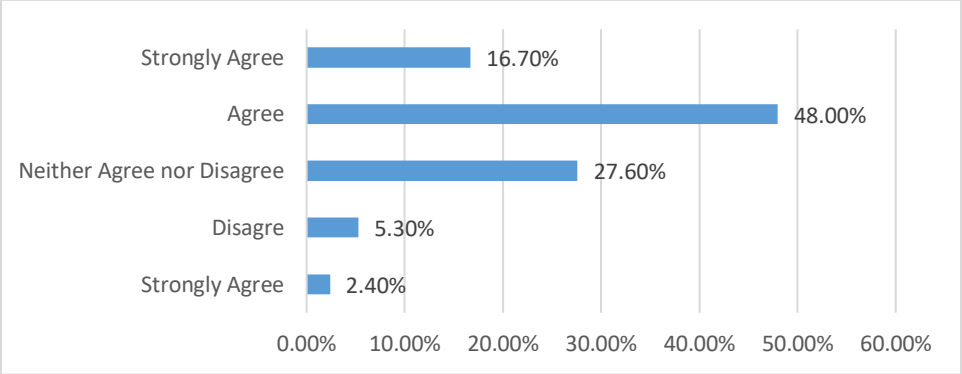
38. Training transfer climate is important.



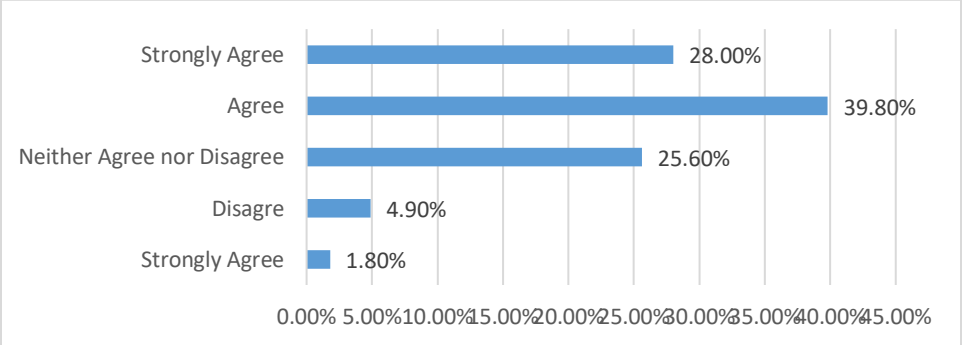
39. Training participation is improved.



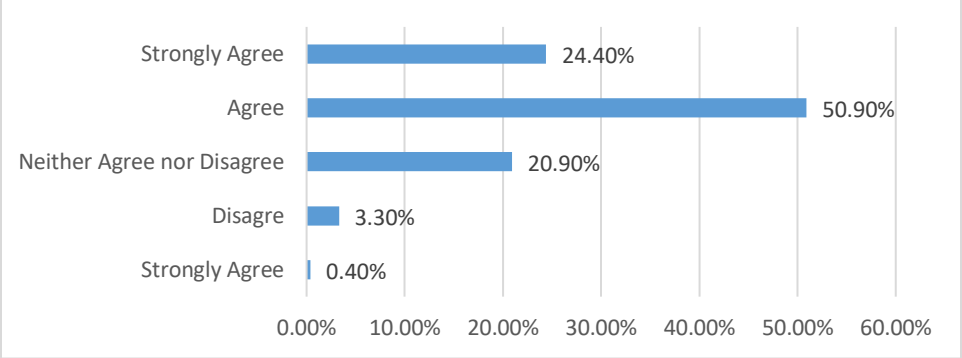
40. Awareness about training is improved.



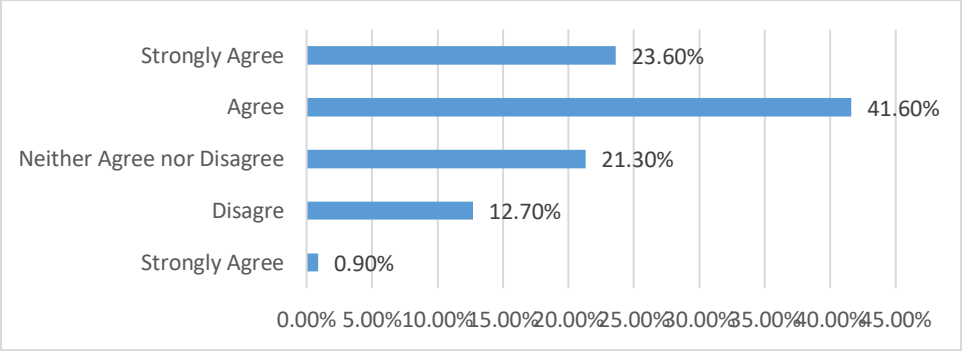
41. I feel satisfied with the effectiveness of training program for its return.



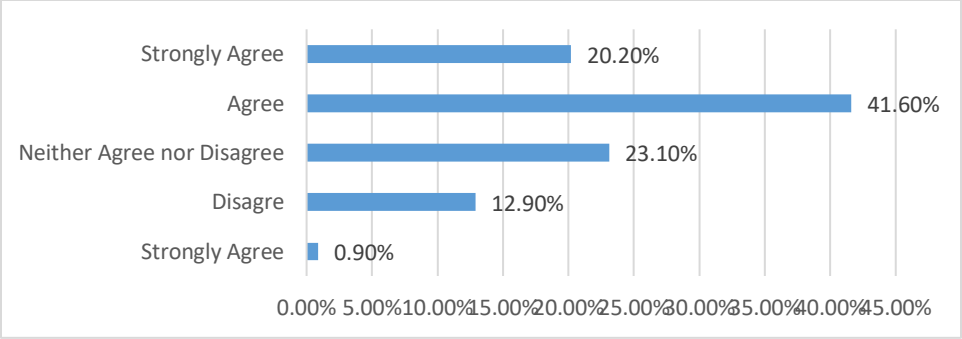
42. I feel a change in knowledge and skills after training.



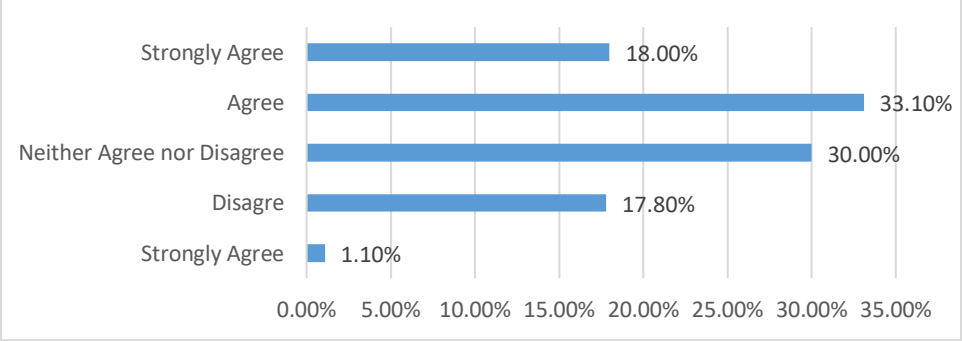
43. I feel a change in behavior and application.



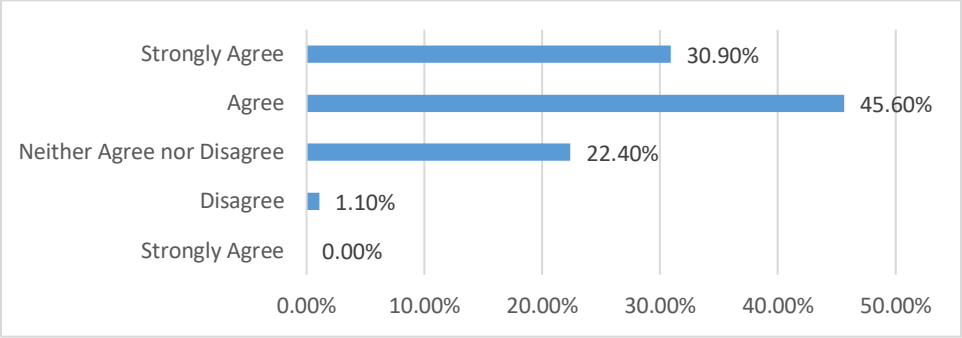
44. Efficient management and better decision making are returns of training.



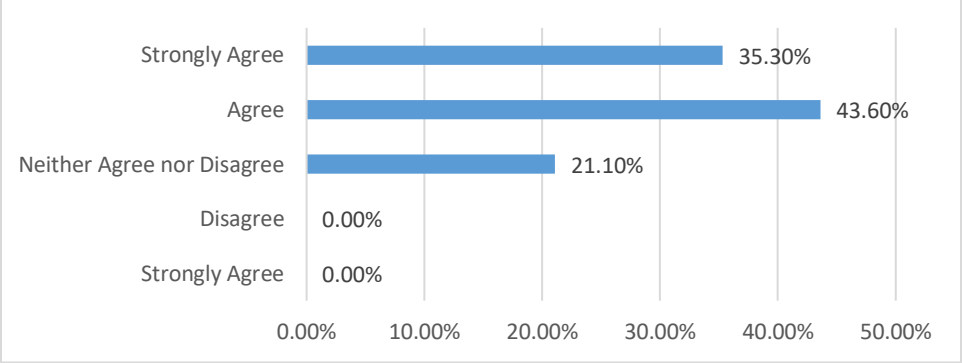
45. Training program costs were achieved in terms of employee tasks execution.



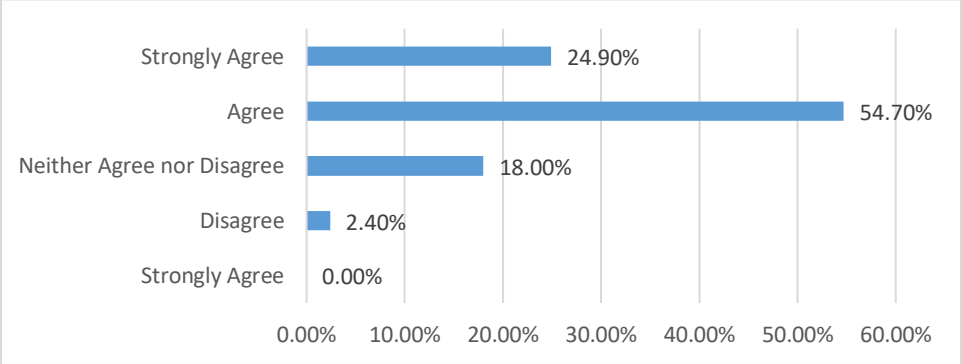
46. I like training.



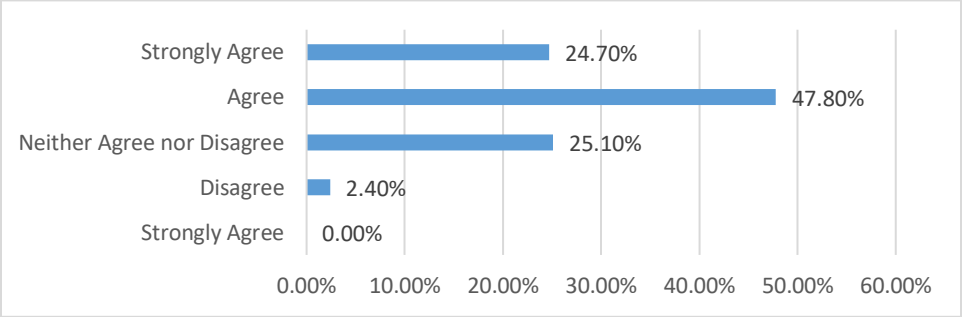
47. Training could not satisfy me.



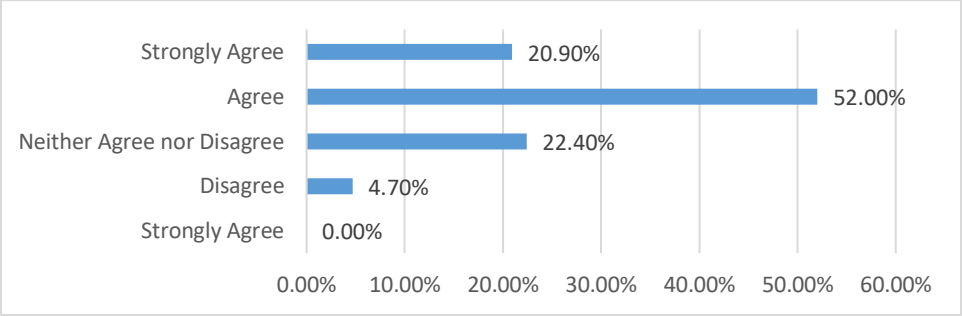
48. I feel a strong sense of attachment to my job.



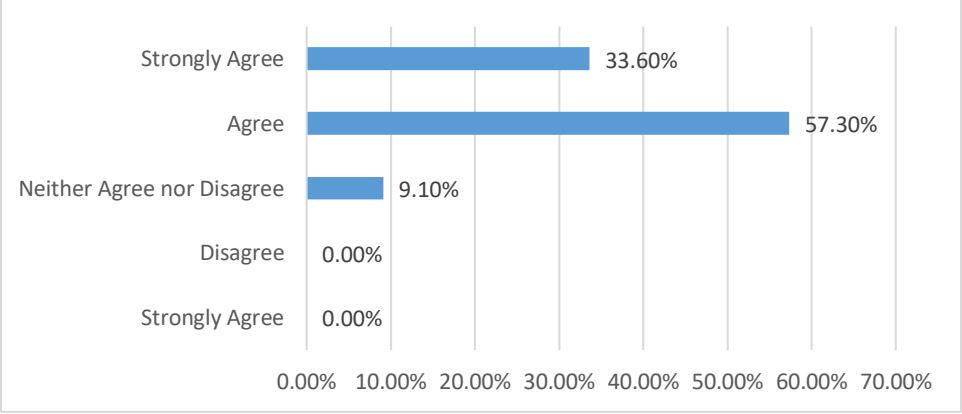
49. I enjoy discussing problems during training.



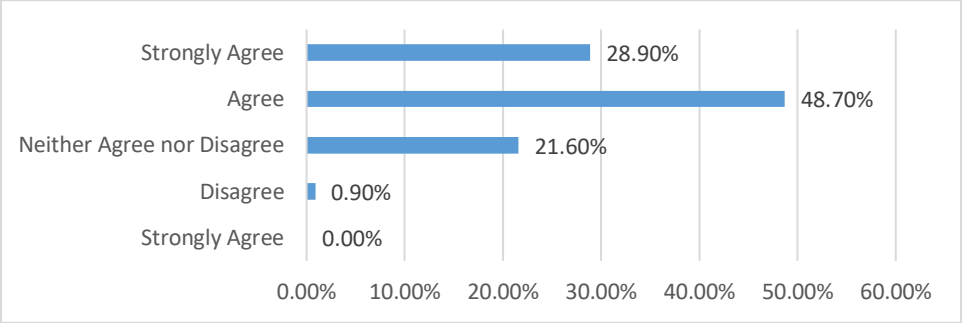
50. Training transfer increases the effectiveness of training.



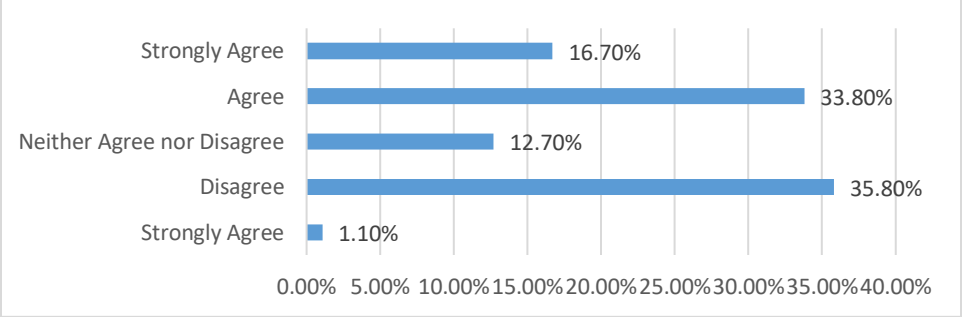
51. Training effectiveness are assessed through change in knowledge, skills and attitudes.



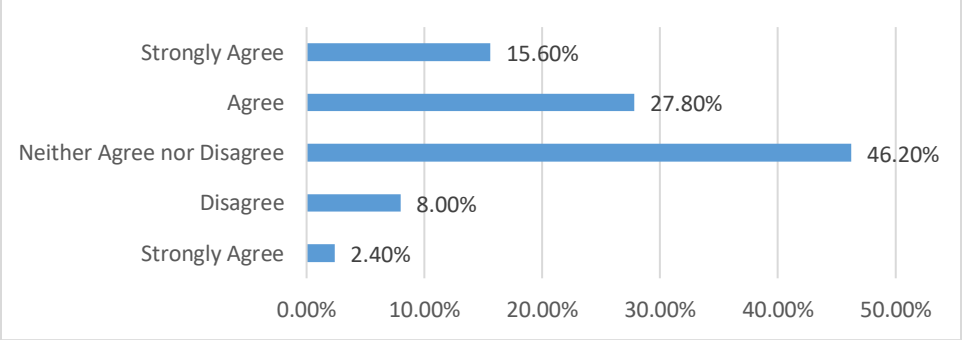
52. Learning transfer contributes to training effectiveness.



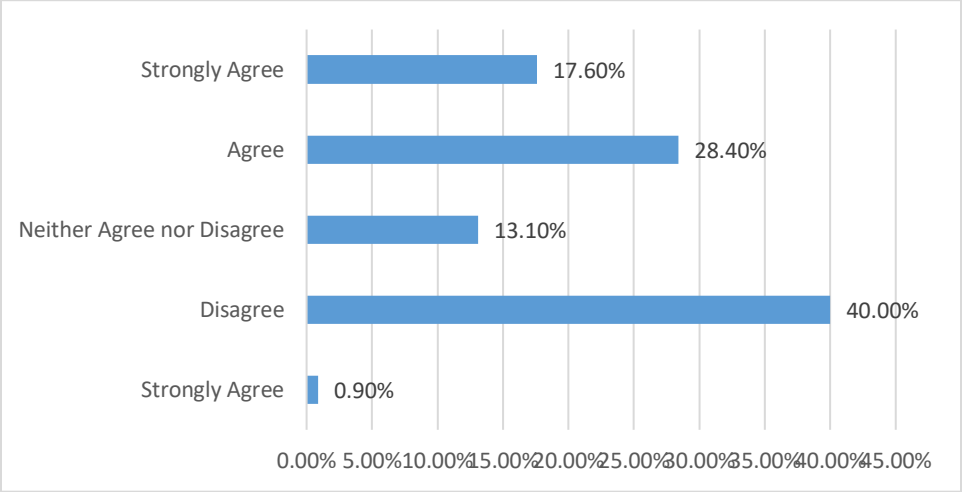
53. Training transfer climate supports training effectiveness.



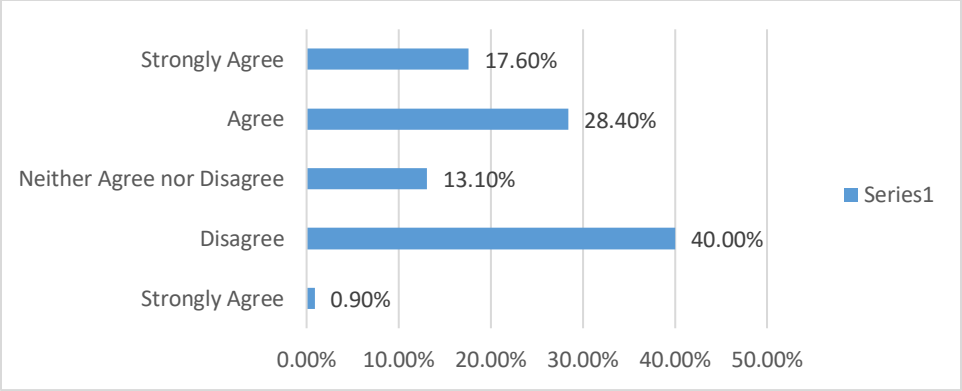
54. Training participation is a good sign of training effectiveness.



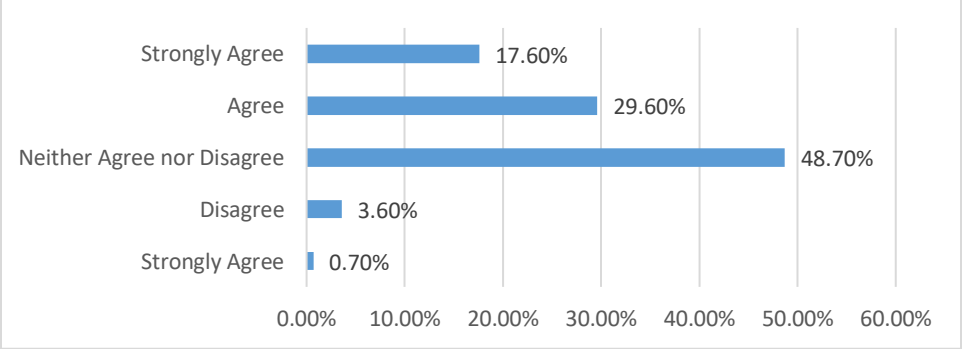
55. Training evaluation mechanism supports training effectiveness.



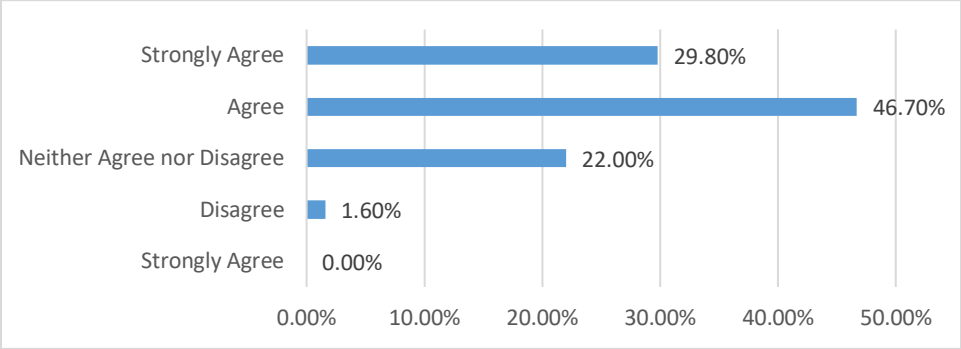
56. Institutional support in funding and access to resources is available.



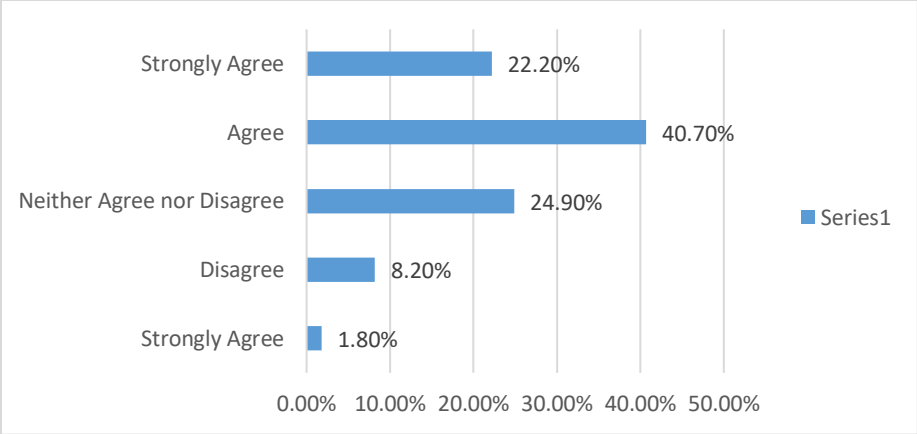
57. Training assessment supports training effectiveness.



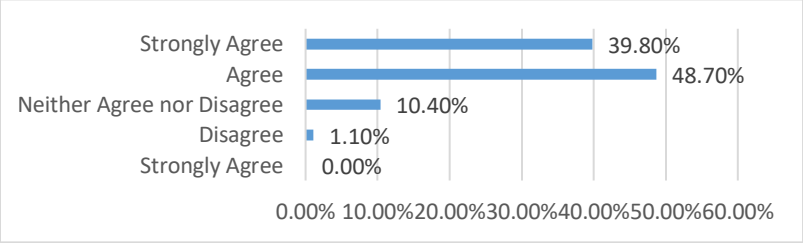
58. Training awareness supports training effectiveness.



59. Effectiveness of training improves training education further.

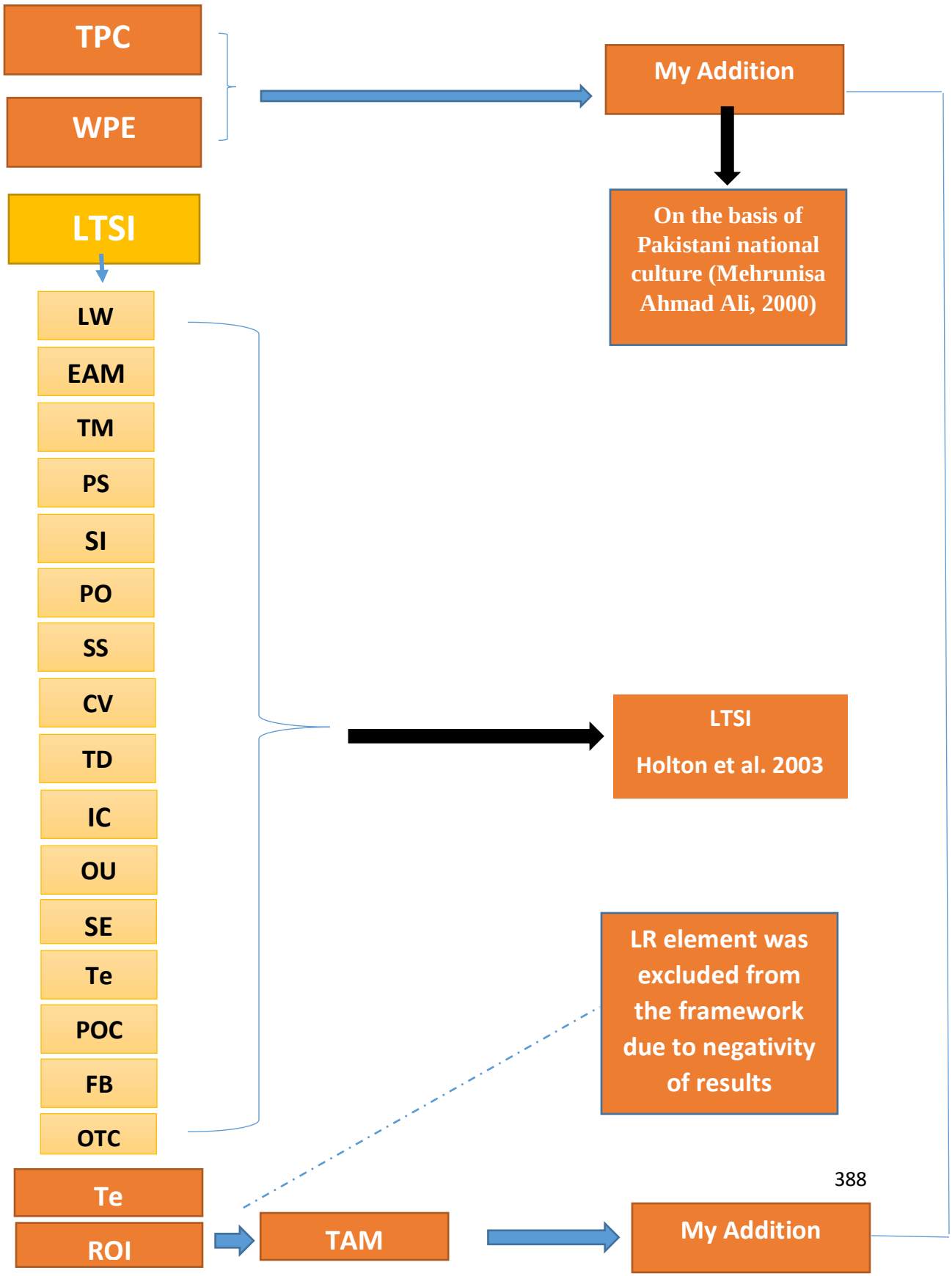


60. An effective training improves organizational performance.



Appendix C

Figure 28 Framework showing achievement



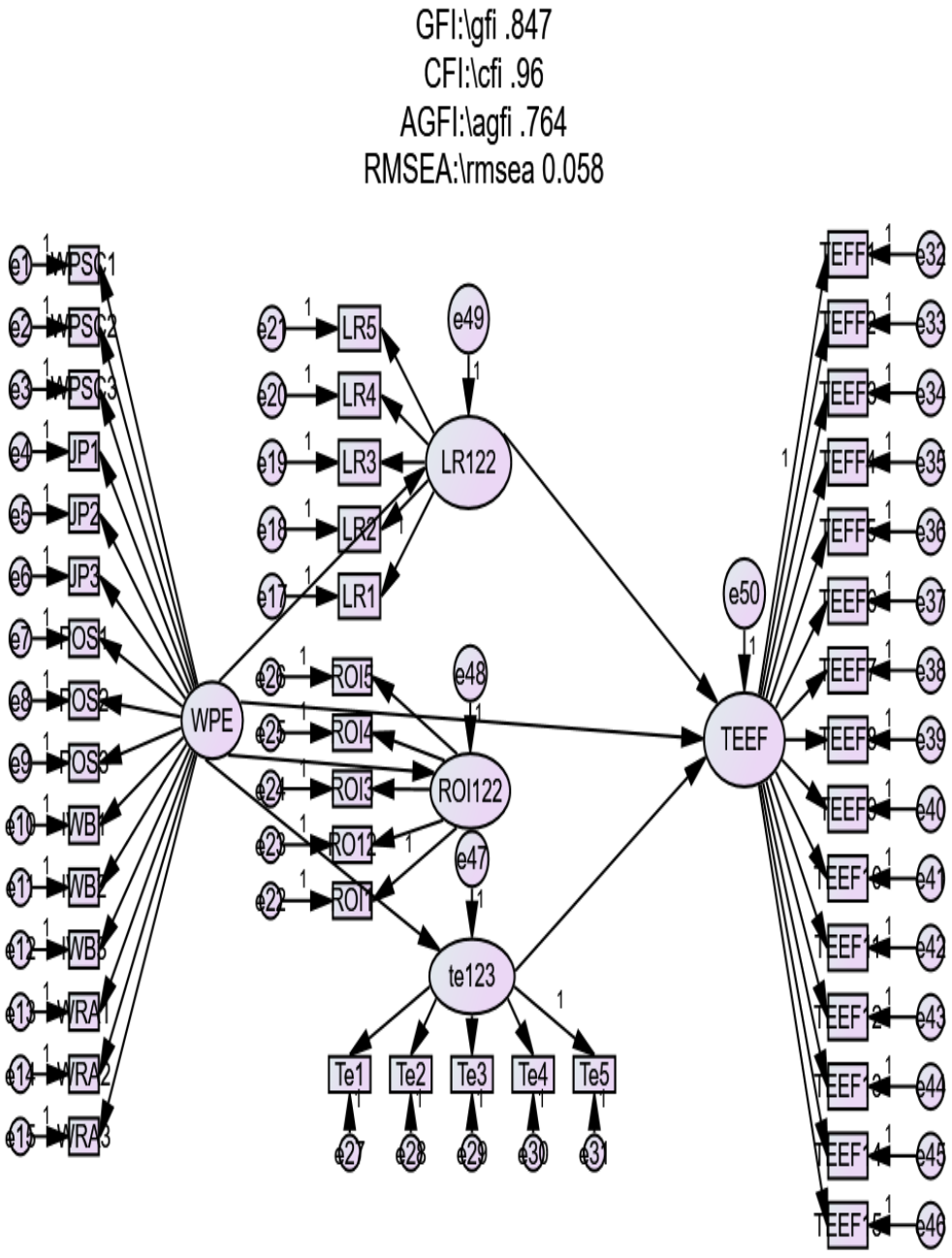
N.B: Broken line indicates exclusion of learner readiness variable.

Interpretation:

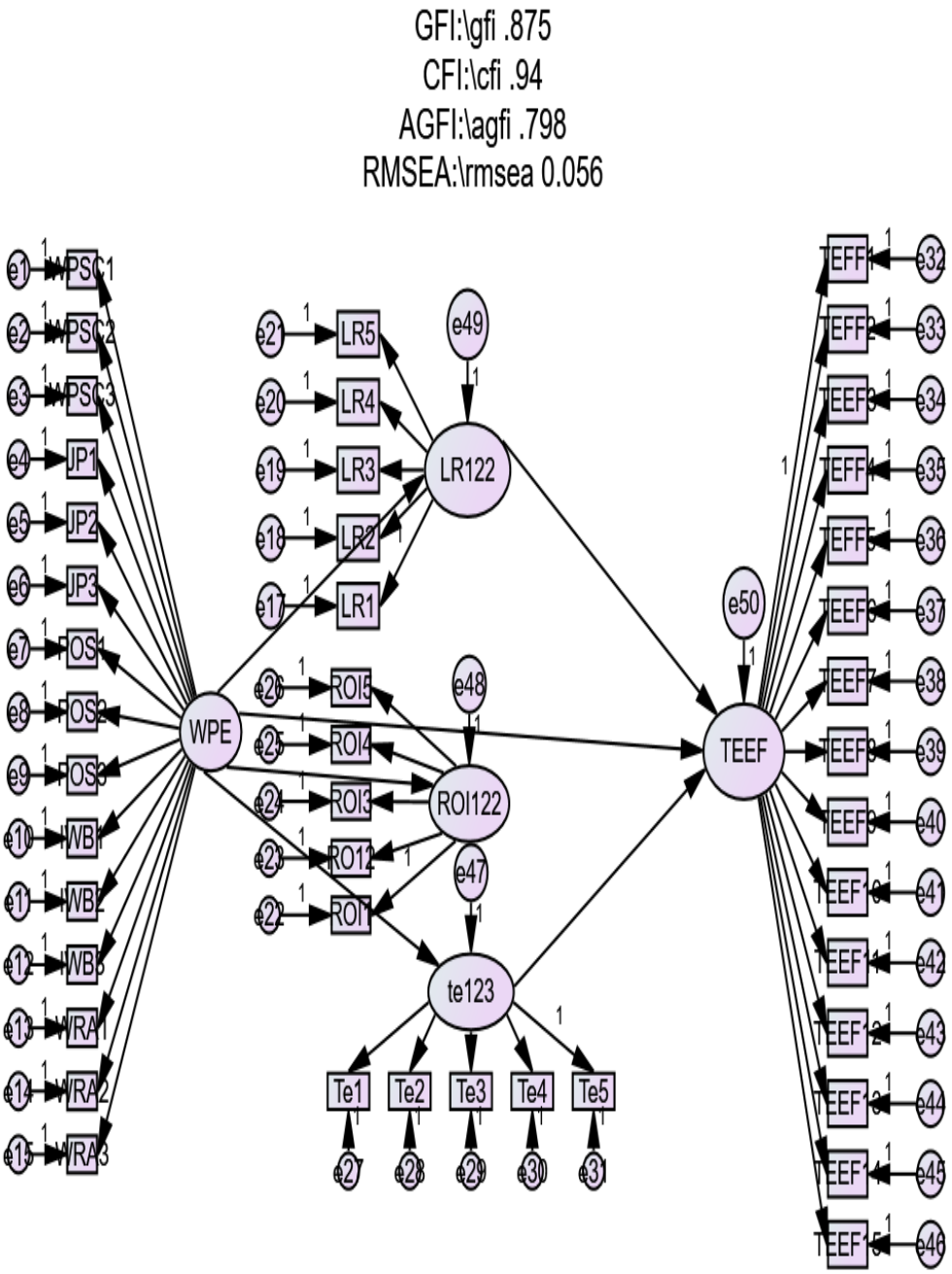
1. Learner willingness (LW) to learn from training
2. Impact of environment, ability and motivation (EAM) on training transfer
3. Transfer motivation (TM)-trainees' intrinsic motivation contributes to TT.
4. Peer support (PS) boosts on-job application of new KSA learnt during training.
5. Without supervisor involvement (SI) and interest-TT is not possible
6. Positive personal outcomes (PO) - Positive personal outcomes create positive outcomes in TT.
7. Facing supervisory sanctions (SS)-when supervisors inhibit TT, this is termed as supervisor sanctions.
8. Content validity (CV)-content seems valid when found in line with organizational and job objectives.
9. Training design (TD)-it offers a plan to support TT and enable the trainees to transfer learning to the job
10. Individual capacity (IC) to transfer-individual capacity to transfer training
11. Opportunity to use (OU)-trainees requires resources as opportunities to apply new KSA on job.
12. Self-efficacy level (SE)-individuals' confident to change their performance through transfer of learning
13. Transfer effort (TE) performance expectation- effort is associated with expectation to bring a change in performance at job.
14. Performance outcomes expectations (POC)- expectations lead to produce desirable and valuable outcomes.
15. Feedback (FB)-indicator based organizational data about performance on job.
16. Openness to change (OTC)-negative norms at workplace inhibits the use of new knowledge and skills.
17. TAM-trainees activation management as a novel idea to implement in PSOs.

Appendix D

Model 1



Model 2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