

## TRAINEES' BEHAVIOR, ORGANIZATIONAL INTERVENTIONS AND THEIR IMPACT ON TRAINING EFFECTIVENESS: A CASE OF PUBLIC SECTOR ORGANIZATION OF KHYBER PAKHTUNKHWA.

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ARTICLE INFO	ABSTRACT
<p><i>Article History:</i> Received: April Revised: May Accepted: June Available Online: June</p> <hr/> <p><i>Keywords:</i> Training needs assessment (TNA), Employee motivation, employees' learning, employees' commitment, training framing and training effectiveness</p> <hr/> <p><i>JEL Classification:</i> M10</p>	<p><i>The main motive of this study was to explore the impact of trainees' behaviors (motivation, employees' commitment and learning) and organizational interventions (training needs assessment and training framing) and the cumulative impact on training effectiveness in the public sector organizations of Khyber Pakhtunkhwa. A total of 635 respondents, associated with government organizations working in BPS-17 &amp; above and have successfully completed their trainings in last two years were selected through stratified random sampling technique. Data was analyzed with the help of structural equation modeling technique. To validate the study model, confirmatory factor analysis was used. Results revealed that employees' commitment, TNA, employees' learning, employees' motivation and training framing has positive impact on training effectiveness. The results of current study will help future researchers to understand and explore the association in similar settings. It is expected that policymakers, and administrators of public sector organizations may use these results for the training effectiveness, and will enable them to utilize organizational resources (human and financial) in efficient and effective manner. Qualitative study in pre and post training, may discover some further aspects of the resulted association.</i></p>

### 1. INTRODUCTION

Different forces in the external environment i.e. (changing technology, process, and intervention of new competitor etc.) play important role in changing organization long term decisions. Human resource development is fundamental part of organization long term decisions and even in high technology based industries, human capital effectively sustain its existence (Barrett, 2011). Training magically bridge organizational present and future requirements and create venue to the valley of change. A planned training program enhance organization intellectual capital in efficient and effective way (Campisi & Costa, 2008). To develop and maintain sustainable competitive advantage continues learning system is very important. Trained employees are the main pillar in the organizational development and growth, as competitors fail to replicate the trained workforce of its competitors. Despite training has positive impact on organization development, still it carry huge criticism due to deprived results and stumpy effectiveness (Davids et al., 2014). A progressive organization needs not only to develop an effective training system but to increase ration of investment on its workforce (Curado & Teixeira, 2014). Training helps employees' in optimum utilization of one's potential (Ghosh, Joshi, Satyawadi, Mukherjee, & Ranjan, 2011).

Training needs assessment (TNA) is the fundamental component of a training program. TNA play decisive role in setting training' objectives, identifying training deliverables, training evaluation and training effectiveness. At one end TNA sensitize the organization system and at another end identify gaps in existing knowledge, skills and attitude to achieve best performance standards not only for individual but for the organization as well (Buckley & Caple, 2009). Numerous organizations either due to lack of interest or of the required skills fail to identify real gaps, which leads training program to a failure end (Denby, 2010). The foundation of a training program is based on training needs assessment (TNA) (Shah & Gopal, 2012). TNA assess personal, task and organizational factors and highlight shortfall

if any, and also recommend training and non-training solutions for the identified shortfalls (Iqbal & Khan, 2011; Khan & Masrek, 2017).

Classic view of TNA only focus on training solution and ignoring the non-training aspect (Iqbal & Khan, 2011). Public sector organizations invest huge amount of financial and human resources by executing traditional approaches which ignoring non-training aspect of TNA. In the year 2017-18 just US invested approximately 93.6 billion dollars on employees training (Mazareanu, 2019). While in one of the subject training institute of Khyber Pakhtunkhwa per trainee cost is around 250,000/ to 300,000/- depend on a range of facilities they offer. Regardless of this massive investment, it's worthy to mention that no single government sector training institute conduct any proper TNA or training evaluation. Training program development in absence of TNA will neither bring any value addition to system, nor any proof that investment on training will have positive return (Denby, 2010). Majority of the training institutes fail to develop a proper system for the conduction of TNA and training evaluation (Judith Brown, 2002; Kapoor, D.S.Chaubey, & Negi, 2015). This ignoring attitude across the government sector organizations causing various problems for individual employees and organizations (Iqbal & Khan, 2011; Judith Brown, 2002).

The investment of a handsome amount on training activity in the developing economy in the absence of any pre or post research study which may ensure some positive results need to be the centre of concern for researchers. Training effectiveness is a complex phenomenon that has many diverse aspects. This study will cover five aspects of training effectiveness i.e. a) training needs assessment; b) employee's motivation; c) employee's learning; d) employees' commitment; e) training framing/ awareness were not consider in previous literature. The aim and objective of the current study is to look into the existing approaches of organizational interventions (TNA, training framing) in these public sector organization, and to evaluate the importance of trainees' behavioral elements (motivation, commitment, and learning) on training effectiveness of these organizations.

## 2. REVIEW OF LITERATURE AND HYPOTHESES DEVELOPMENT

For organizational survival and competitive advantage training has the undeniable role in current multifaceted and vibrant organizational strategies that help its workforce to upgrade their knowledge to next level. Training is deliberate and methodical process (Chauhan, Ghosh, Rai, & Kapoor, 2017), for advancement of employee's work related knowledge, skill, attitude and behavior. It is a long term tactical plan for the organization workforce to acquire market base knowledge, skill and attitude (Azmawani, Siew, Murali, & Florence, 2013; Chiaburu & Tekleab, 2005; Lee, 2019; Steensma & Groeneveld, 2010; Tsai & Tai, 2003). T&D help organizations in achieving its set goals and maintain its competitive advantage through optimum utilization of its workforce (Alvelos, Ferreira, & Bates, 2015; Azmawani et al., 2013; Chiaburu & Tekleab, 2005; Sahinidis & Bouris, 2008). Organizational survival largely depends on market based employee knowledge, skill and behavior (Azmawani et al., 2013). Organizational T&D objectives can be achieved, when employees have the opportunities to acquire and transfer market based knowledge to work setting (Bhatti, Battour, Sundram, & Othman, 2013). Traditionally there are two types of view about T&D one is "vacuum view" where system operate in a close system, while the other one is "system view" which operate in an open system (Sleezer, 1993), majority of the public sector organizations follow "vacuum view" where enhancement of KSA are the primary focus regardless of the fact that these KSA will bridge the gaps.

Due to no or less return, no organization happily invest on training. Kodwani (2017) in his study in USA concludes that only 10% could lead to effective transfer of the newly acquired skills. These facts marks training is expensive and risky investment. Organizations having skilled team of training and development can minimize investment' risk by providing environment for training transfer (Azmawani et al., 2013; Cole, 2008; Eddie W.L. Cheng & Danny C.K. Ho, 2001; Yaqub, Singh, & Dutta, 2021). Training can convert risk into opportunities by creating venue of development (Boukamcha, 2015). TNA is fundamental component of any T&D program, success or failure cannot chalk in absence of TNA. Training without TNA will be second to wastages of organizational resources. Tactlessly many organizations either due to lack of relevant knowledge or financial resources move to classic approach of training on the cost of training effectiveness (Hughey & Mussnug, 1997; Lee, 2019).

## **2.1 Training Needs Assessment**

TNA is a systematic process of exploring performance gaps at personal, task and organizational level and advice training and non-training solutions (Shah & Gopal, 2012). The mismatch of employees' performance with that of the desired level of skills mean that training is required to upgrade employees KSA (Durra, 1990). TNA identify gaps after assessment at organizational, task and at personal (Roberson, Kulik, & Pepper, 2003). TNA also help in setting objectives for training (Sleezer, 1993). Organizations have no choice to ignore the needs but to bridge the needs for its own development (Iqbal & Khan, 2011).

Training program mainly based on the resultant information of TNA (Bresnahan & Johnson, 2013; Clarke, 2003). It give direction to training program, enhance contents feasibility to effectively utilize the available resources (Khan, Masrek, & Nadzar, 2015). Training objective setting, contents development, identification of trainee and trainer, fitting learning methods and training evaluation are based on the output of TNA, absence of which will be a complete wastage of organizational resources (Khan & Masrek, 2017; Tao, Yeh, & Sun, 2006). TNA increase employee involvement in the training program while identifying performance gaps (Kodwani, 2017). The primary objectives of TNA is to enable decision makers to design an effective training program in view of the available data (Iqbal & Khan, 2011).

TNA perform four pivotal functions for the organization, first it identify area of a problem, secondly it provide real time data to decision makers for problem resolution (training non-training), thirdly it give criteria for training evaluation, lastly it determine possible outcome of a training program (Judith Brown, 2002). Durra (1990), in his research work added that without TNA, experts will fail to formulate strategy, trainer will not be able to deliver in absence of training objective, criteria for training evaluation may not be framed. Similarly Iqbal and Khan (2011) in their study revealed that the fundamental aim of TNA is to design training plan and objectives, and time span for its completion.

### **2.1.1 Approaches of Needs Assessment**

Different approaches for TNA could be found in the extant literature. These approaches include “traditional approach” where trainer has the sole responsibility to suggest trainings contents, while in “business approach” gaps are identified from business plan and they train an already trained employees. Similarly, in “process oriented approach” gaps are identified from functions performed in different departments of the organization (Carlisle, Bhanugopan, & Fish, 2011). All the targeted public sector organizations using traditional, business and blend approach where focus is on the activities instead of employees. Traditional approach focus only on training as solution, while modern view consider both training and non-training solutions (Iqbal & Khan, 2011; Vishwakarma & Tyagi, 2017). Gapes in the organization system and strategies, new recruits, inclusion of new system or process, poor performers, in the promotion zone, are additional approaches used in lieu of TNA (Roberson et al., 2003).

### **2.1.2 TNA and Training Effectiveness**

Content development, objective setting, training design, trainer and trainees' selection, largely depend on the gaps identified in TNA. It help to avoid over and underutilization of contents with the aim of effective utilization of organizational resources (Khan & Masrek, 2017). Training effectiveness mean attainment of training objectives, enhanced performance, less defects in products or services, and low absenteeism (Nazli & Khairudin, 2018). Training evaluation enable policy makers to decide either to invest or not in a training program (Ghosh, Satyawadi, Joshi, Ranjan, & Singh, 2012). Reaction, learning, behavior and result are the outcomes need to evaluate at the end of a training program (Kirkpatrick, 1967). Training effectiveness largely depends on training transfer, where trainees create opportunities to transfer newly acquired knowledge skill to working environment (Kodwani, 2017; Kuchеров & Manokhina, 2017). This whole interdependent system of training program is supported by training engagement theory (Sitzmann & Weinhardt, 2015). While intentionally or unintentionally avoiding market base approaches are supported by incompetency training theory. With the availability of the aforementioned literature the following hypothesis is put to test for validation:

**H 1:** Training needs assessment is positively associated with training effectiveness.

### 2.1.3 TNA and Training Framing as Moderating Variable

Training framing is an emerging concept in training where supervisor play an active role in enhancing awareness of potential trainees, it further enable them to actively participate in the training with increased level of motivation (Tai, 2006). Training framing has two fold impact, on one side it help in improving existing knowledge and skill, it also facilitate employees in career growth. Supervisor also guide trainees that how effective training is beneficial for both employees' and organizational development, by maintaining sustainable competitive advantage (Iqbal & Khan, 2011). The concept is also reinforced by training engagement theory which empower trainees to set and rank training' goals and increase training effectiveness (Sitzmann & Weinhardt, 2015). In view of the aforesaid literature hypothesis is framed that training framing moderate the association between training need assessment and training effectiveness.

**H 2:** Training framing moderates the association between training needs assessment and training effectiveness.

## 2.2 Trainee's Motivation

Motivation refer to a psychological mechanism that alert energies and guide required behavior through automatic or reflective mechanisms (Gloster et al., 2018). Similarly it direct individuals, either to continue or discontinue a stated set of behavior (Al-Sada, Al-Esmal, & Faisal, 2017). Motivation affect trainee's attitude to learn new skills and to apply it in working environment, it also help employees in readiness to actively participate in training program (Aziz & Ahmad, 2011). Different internal and external factors enhance employees' motivation to achieve set objectives (Tai, 2006).

Motivation has a fundamental rule in transfer of the newly acquired knowledge, skills, and attitude to working environment (Sahoo & Mishra, 2019). Employees' motivation has a positive relation with learning new skills (Davids, Gonzalez, Garrido, & Soto, 2014). Employee's motivation is effected by many factors like workplace environment, life balance, organizational system, professional challenges, performance, recognition and reward (Glen, 2006). In short employees' motivation not only enable them to actively participate and learn but to increase transfer of training (Tai, 2006). Motivation to learn refers to trainee's specific set of behavior that facilitate them to acquire new knowledge and skills (Bashir & Long, 2015). Motivation is closely associated with trainee's perception (negative / positive) and accordingly it affect trainee's learning intentions (Alvelos et al., 2015).

### 2.2.1 Motivation and Training Effectiveness

Motivation to learn is a critical factor in training effectiveness (Sahoo & Mishra, 2019). Motivation has positive influence on trainees abilities and capabilities and ultimately affect training effectiveness (Mielniczuk & Laguna, 2017; Tsai & Tai, 2003). Trainees' with high self-efficacy will show positive results (Tai, 2006). Both engagement and reinforcement theory of motivation help in understanding the complex mechanism of motivation and training effectiveness. In line of the above literature following hypothesis will be empirically tested:

**H 3:** Employee's motivation has positive association with training effectiveness.

### 2.2.2 Trainee's Motivation, Training Effectiveness and Training Framing

It is established through empirical studies that trainees motivation has positive association with training effectiveness (Sahoo & Mishra, 2019; Tsai & Tai, 2003). Training design, organization good well, individual trainees play positive role in training effectiveness and in employees motivation (Aziz & Ahmad, 2011). Training framing is another influential feature that play its role in enhancing employee's motivation (Park, Kang, & Kim, 2018). When trainees have full excess to training information certainly it will positively influence training effectiveness. Reinforcement theory of motivation help to elaborate the concept of motivation. On the basis of aforesaid literature the following hypothesis were put to empirically testing:

**H 4:** Training framing moderates the association between employee's motivation and training effectiveness.

### **2.3 Employee's Learning**

Learning refer to mental process of obtaining and developing knowledge, and generating solutions from the existing knowledge (Boukamcha, 2015). While Di'xon (2000) is of the point of view that learning is refer to explanation of activities and task one perform in routine activities. Learning environment in organization is more beneficial as it multiply organizational social environment (Chaurasia, 2017). In a nutshell, learning play an important role in individual and organizational growth and sustainable development (Latif, 2012). For survival and career growth learning has vital part. Learning are divided in two broad streams formal and informal learning, where former has predefine objective, approved contents, specified timeframe while the later one is flexible and based on one's life experience, (Kyndt, Vermeire, & Cabus, 2016). For its own survival and growth organizations will establish system of continuous learning, value and belief (Chiaburu & Tekleab, 2005; M.Dachner, E.Ellingson, A.Noë, & M.Saxton, 2021). Such organization encourage system of collective learning for sustainable development and competitive advantage (Craig & Allen, 2013; Valaski, Reinehr, & Malucelli, 2017).

Learning organization provide environment for generating innovative ideas, and its application for general development (Hasson, Schwarz, Holmstrom, Karanika-Murray, & Tafvelin, 2016). Learning and self-efficacy are interrelated, Self-efficacy is one's belief that he can perform the given task, with his own abilities and capabilities (Loomba & Karsten, 2019; Sahoo & Mishra, 2019; Sitzmann & Weinhardt, 2015). It play a very dominant role in job related learning process. High self-efficacy, enhance employees motivation and play a decisive role in one's extra ordinary performance.

#### **2.3.1 Transfer of Learning/Training**

Learning transfer refer to applying the newly acquired KSA's in working environment for improving employees and organization performance (Chiaburu & Tekleab, 2005). Learning transfer to actual work setting, and retain it over a longer time span give real return on investment (Davids et al., 2014; Muduli & Raval, 2018; Nazli & Khairudin, 2018; Park et al., 2018; Pineda-Herrero, Belvis, Moreno, Duran-Bellonch, & Úcar, 2011; Zwick, 2015). Managers and researchers are finding ways to enhance training transfer and ensure training effectiveness. Close linkage between work environment and training contents play active role in training transfer. Training contents highly correlate with trainee's perception about the significance of the training contents (Velada & Caetano, 2007). The contents which is closely related to work setting, trainees will learn more and relatively larger portion will be transfer to working environment (Davids et al., 2014).

Changes in one's behavior and then transfer of that behavior to work setting will required some time to mature (Cole, 2008). Acquiring the required level of skill and application of that skills to working environment are the important aspect in performance improvement(Loomba & Karsten, 2019). Training transfer design are supposed to bridge training contents with actual requirement. Training success largely based on how content are closely related to work setting (Alvelos et al., 2015). To conclude all the preceding discussion, the underpin research would put the following hypothesis for testing and validation in the current population:

**H 5:** Employee's learning has a positive association with training effectiveness.

### **2.4 Training Framing/Awareness**

On the complexity of the training program underpinning theories, researcher and academicians are at the same page. Training framing/ awareness is undeniable aspect of this complexity. Awareness play active role in enhancing trainee's self-efficacy (Chen, Sok, & Sok, 2007; Loomba & Karsten, 2019; Sitzmann & Weinhardt, 2015). Majority of the public sector organizations fail to create employees awareness about the objectives of training program. Trainee's awareness should be the central part of the training program. In absence of training awareness, financial and human resources will be next to wastage, as no one will be able to perform the way they are expected to (Latif, 2012). In training framing / awareness, supervisor play important role in molding trainee's positive attitude toward training to get maximum out of the available opportunity (Park et al., 2018).



In nutshell, training framing is an information setting by the management with the potential trainees ahead of training event. The session include but not limited to objectives, training policy, calendar and potential benefits as a result of the training program (Muduli & Raval, 2018; Vishwakarma & Tyagi, 2017). Training framing help in reducing anxiety and increase trainees self-efficacy, while on the other hand if management fail to provide the required information, it will create negative feeling about training program (Holladay, Knight, Paige, & Quiñones, 2003; Kodwani, 2017; Tai, 2006). Trainee's expectation and motivation for training program can positively be affected by information and support received from management (Chiaburu & Tekleab, 2005; Muduli & Raval, 2018). Training framing help employee to consider themselves more useful for the development of the organization (Simpson, Schraeder, & Borowski, 2015).

Management play the role of catalyst by provide accurate information and opportunity to apply the newly acquired KSA's into work setting (Chauhan et al., 2017). Lacking of such information may lead to trainee's negative attitude toward training program (Robotham, 2003). Management need to accept the role of change agent instead of just implementer, they have to showcase the benefits of training program to get trainees support in achieving training objectives (Analoui, 1994). Management support transform trainee's perception from negative to positive. If trainees are fully aware that some rewards are associated with some specific set of activities surely it will create positive energies in their efforts (Velada & Caetano, 2007).

#### **2.4.1 Employee's Learning, Training Effectiveness and Training Framing**

Training framing/awareness has a twofold impact: first it prepare trainees for training program, secondly it implement training program for achieving its real objectives, and resultantly training effectiveness would be boosted (Park et al., 2018; Tai, 2006). Human capital theory explaining this concept that how through investment in human resource, organizational and individual performance are closely interlinked. This theory simplify the training process in public sector organization. It also explain the linkages among different variables (employees learning, training framing and training effectiveness) of the current study (Mincer, 1958). In the light of this discussion, the current study would put the following hypothesis for testing and validation:

**H 6:** Training framing moderates association between employees' learning and training effectiveness.

### **2.5 Employee's Commitment**

Employees' commitment since long gain researcher and academicians interest because of its impact on employee's behavior and its role in the personal and organizational growth. Commitment refer to a state in which individual employee intellectually and emotionally affianced with the organization success and failure (Rao, 2017). It is the degree of connection of an individual employee with the goals and objectives of that organization, (Al-Sada et al., 2017). Meyer and Allen (1997) divide commitment into three main components normative, affective, and continuance commitment. In normative commitment employee feels thankful to be part of that organization, in affective commitment employees develop emotional attachment with that organization goals and objectives, while, continuance commitment refer to employees' own loss in case of leaving organization. High committed employee in training, will produce better result than a low committed employee (Hoppe, 2017). It enhance individual and organization's performance.

Commitment has an impact on the overall behavior of the employees. Well-planned training program can positively affect trainees' commitment or vice versa (Denby, 2010). Training and development create a venue of learning and advancement in the mind of trainees which give way to commitment (Khawaja Fawad Latif, 2012). Training program affect employees commitment, and play a more active role in progression toward the achievement of organizational goals, objectives and strategies (Sahinidis & Bouris, 2008). Employee having high level of commitment, work for longer hours, less turnover, pay more attention, work harder, learn quickly and low absenteeism than those having less committed with the organization. It is meaningful to highlight that employee commitment is largely driven by their

own positive perception about the organization (Bashir & Long, 2015; Luo, Marnburg, & Law, 2017). Based on its importance, and evident from the literature, the current study would be testing the following hypothesis to validate the past findings:

**H 7:** Employee's commitment has positive association with training effectiveness.

### **2.5.1 Employee Commitment and Turnover**

Employees commitment with specific profession motivate him for acquiring new knowledge and skills to excel in that specific field, and the same behavior is beneficial for the organization as well (Fazio, Gong, Sims, & Yurova, 2017). Organization investment in human resource is supported by resource based view theory and this investment increase employees loyalty and commitment (Theriou, Aggelidis, & Theriou, 2009). Employees' commitment can be enhanced if supervisor succeed to give awareness that how this training will help him in personal and organizational growth. On the basis of the foregoing discussion, the study postulates the following hypothesis:

**H 8:** Training framing moderates the association between employee's commitment and training effectiveness.

## **2.6 Training Effectiveness**

Training effectiveness is the outcome of a systematically planned training program (Aziz & Ahmad, 2011; Chiaburu & Tekleab, 2005). Effectiveness of the training program is the positive change in employees' knowledge, skill and behavior. Training transfer of the resulted knowledge, skills, attitude, and behavior to work setting, play an important role in organization overall performance and vital indicator of training effectiveness (Bhatti et al., 2013). Normally, training effectiveness is measured by number of training evaluation techniques like trainees feedback, number of employees trained, utilization of training budget (Tai, 2006). According to Kirkpatrick (1967) four levels model (reaction, learning, behavior and result) the behavior and result refer to training transfer. For training effectiveness trainees should be accountable for training transfer and for retaining the newly acquired KSA's (Cheramie & Simmering, 2008). Training transfer is under huge critique because researchers (e.g., Ford, 2009) claim that only 20%, similarly (Marcus & Shoham, 2014) claim is that 10 to 20, while (Nikandrou et al., 2009) state that 40% of newly acquired knowledge immediately transferred, 25% remain for 06 months and only 15% retain for maximum one year. Training program design, trainee's characteristics and organizational environment affecting training effectiveness (Brown & McCracken, 2009). Training evaluation, give informative feedback about training program to policy makers.

Training evaluation refer to the process of critically judging different components of a training program from output aspect (Curado & Teixeira, 2014). Training evaluation can assess some tangible indicators like decrease in absenteeism, low operating cost, increased market share and customer satisfaction, but training effectiveness can't be merely link to these tangible indicators (Daniels, 2003). Organization spends handsome amount of money on training, and they rightly expect staff with marketable knowledge and skills (Adamson & Caple, 1996). Large number of organization fail to evaluate training program even after huge investment, because of time limitation, lack of support and capacity, complexity of learning etc. (Griffin, 2010).

## **2.7 Underpinning Theories of the Study**

To have a comprehensive view about the under discussion variables, the underpinning theories of the study are incompetency training theory, human capital theory, training engagement theory of motivation, reinforcement theory of motivation, resource based view theory, dynamic capability theory.

## Methodology

Cross-sectional data was collected through stratified random sampling. The target sample was consist of trained employees of education, health, administration and finance department working in BPS-17 or above. Scales were adopted from the work of (Algabbani, 1989) for TNA, (Hansen, 2001) for employee motivation, (Ayres, 2005) for employee learning, (Wills, 2013) for employee commitment, (Alexander, Thanacoody, & Hui, 2011) for training framing, and (Freeman, 2009) for training effectiveness). Data were collected by using personally administered survey technique, five-point Likert scale fastened in a range of strongly disagree=1 and strongly agree=5. Roscoe (1975) suggested sample size is in the range of 300 to 500, while for the underpin study researcher receive 658 filled questionnaire, after detail inspection 23 were rejected and analysis were run on 635 questionnaires. The number of accepted questionnaires in the four strata i.e education, health, administration, and finance are 323, 104, 102 and 106 respectively. For analyses AMOS and (SPSS) statistical package for social sciences were used.

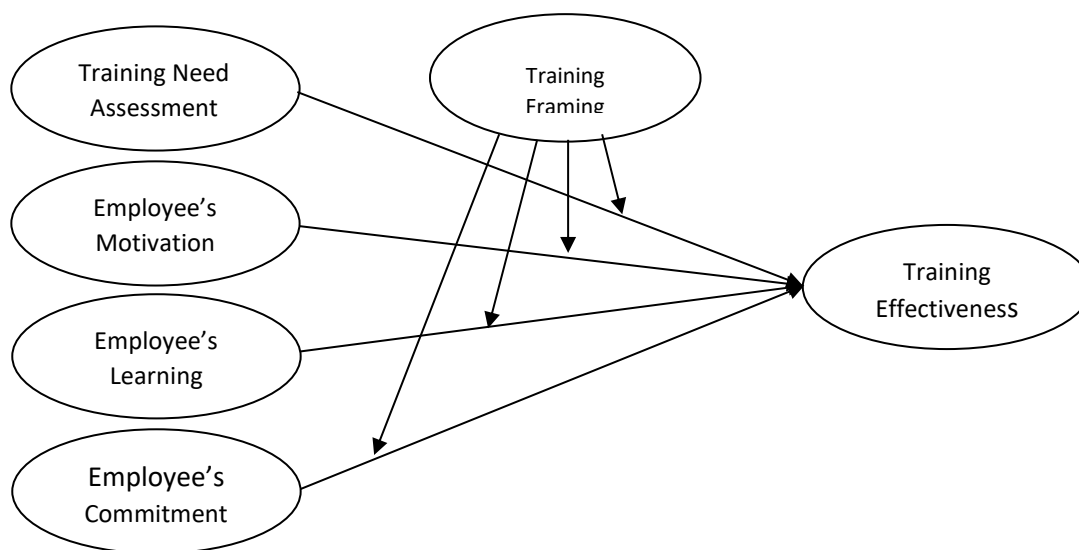


Figure 1 Research Framework

## 3. EMPIRICAL RESULTS

Instrument internal consistency count a lot and represented by instrument reliability (MarkN.K Saunders, Lewis, & Thornhill, 2012; Sekaran, 2003). The accepted range of Cronbach's alpha value is from 0.60 to 1 and reflect that instrument is error-free. Cronbach alpha's value for the current study is in the accepted range of 0.70 to 0.90 (table 1), while for validity the instrument was analyzed through pre-testing. Demographic information of the respondents can be evident in tables 1, 2, 3 and 4 respectively.

Table 1 Descriptive Statistics and Reliability Values

Variable	Mean	SD	Cronbach's Alpha
Training Need Assessment	19.04	2.67	0.711
Employee Motivation	18.63	2.97	0.701
Employee Learning	18.85	3.28	0.848
Employee Commitment	21.93	3.33	0.717
Training Framing	21.01	5.11	0.900
Training Effectiveness	21.40	2.32	0.721

### 3.1 Demographic information of the respondents

Table 2 show that a big chunk i.e. 75.4 percent trainees are in the range of 22 to 40 years of age. The message here is that these organization can productively utilize them for the next 20 years, while reaching the age of retirement.



**Table 2** Statistics about the Age of the Respondent (N = 635)

Age Range	Frequency	Percent	Cumulative Percent
Valid			
22-34	281	44.3	44.3
35-40	198	31.2	75.4
41-46	85	13.4	88.8
47-52	71	11.2	100.0
Total	635	100.0	

The results in the Table 3 reflect the experience of the respondents, interestingly 40.3 percent of the respondents are having practical of more than 10 years, entering into a training program with more than decade of practical experience play a significance role in learning related KSA's.

**Table 3** Statistics about Experience of the Respondent (N = 635)

Experience Range	Frequency	Percent	Cumulative Percent
Valid			
Below 5 years	193	30.4	30.4
6 years to 10 years	186	29.3	59.7
Above 10 years	256	40.3	100.0
Total	635	100.0	

Table 4 imitate encouraging facts about the educational level of the respondents, and 73.9 percent of the trainees are having master degree, which is another indicator that the trainees are having the required capabilities to increase training effectiveness.

**Table 4** Statistics about the Education level of the Respondent (N = 635)

Qualification	Frequency	Percent	Cumulative Percent
Valid			
Bachelor	50	7.9	7.9
Master	469	73.9	81.7
Others	116	18.3	100.0
Total	635	100.0	

Structure equation modeling was used to assess and confirm that how different indicators and its error term fit in the model. Results of various fit indices endorse that scale is in acceptable range, and in step two fitness of overall model and association among indicators was evaluated. After validation of both individual and overall model fitness (table 5), the independent variable effect on the dependent variable were assessed by using structural model (Loehlin, 1998).

**Table 5** Fit Statistics and Measurement Scale Properties (N=635)

Constructs and Indicators	Completely Standardized Loadings* (t-Values)	Indicator Reliability	Error Variance	Construct Reliability	Variance Extracted
<b>Training Needs Assessment</b>				<b>0.711</b>	<b>0.7</b>
TNA2	0.45(15.6)	0.68	0.487		
TNA3	0.39 (16)	0.67	0.586		
TNA5	0.46(15)	0.68	0.487		
TNA6	0.57(13.2)	0.67	0.586		
TNA7	0.56 (13.8)	0.66	0.455		
TNA8	0.59(12.5)	0.67	0.376		
<b>Employees Motivation</b>				<b>0.701</b>	<b>0.7</b>
EM2	0.77 (10.2)	0.6	0.345		
EM3	0.80 (5.6)	0.59	0.367		
EM4	0.59 (15.3)	0.61	0.466		
EM5	0.36 (16.3)	0.67	0.586		

EM8	0.3 (17.4)	0.68	0.487		
EM9	0.15 (17.7)	0.7	0.489		
<b>Employees Learning</b>				<b>0.848</b>	<b>0.7</b>
EL1	0.64 (15.7)	0.83	0.147		
EL3	0.77 (13.4)	0.81	0.177		
EL4	0.73 (13.9)	0.82	0.198		
EL5	0.76 (13.7)	0.81	0.593		
EL6	0.65 (14.8)	0.83	0.635		
EL8	0.61 (15.8)	0.83	0.147		
<b>Employees Commitment</b>				<b>0.717</b>	<b>0.6</b>
EC1	0.51 (15.6)	0.68	0.384		
EC3	0.56 (14.6)	0.68	0.384		
EC4	0.51 (15.5)	0.69	0.535		
EC5	0.23 (17.4)	0.73	0.596		
EC6	0.67 (12.6)	0.66	0.71		
EC7	0.54 (14.8)	0.68	0.487		
EC10	0.54 (15.2)	0.67	0.586		
<b>Training Framing</b>				<b>0.9</b>	<b>0.7</b>
TF2	0.8 (13.6)	0.88	0.332		
TF3	0.78 (15.4)	0.88	0.148		
TF6	0.8 (13.9)	0.89	0.314		
TF5	0.82 (14.1)	0.88	0.355		
TF8	0.67 (16.1)	0.89	0.264		
TF10	0.73 (15.6)	0.89	0.161		
TF11	0.74 (14.2)	0.89	0.497		
<b>Training Effectiveness</b>				<b>0.721</b>	<b>0.8</b>
TE2	0.68 (11.9)	0.674	0.304		
TE3	0.65 (12.6)	0.677	0.358		
TE4	0.57 (14.4)	0.674	0.291		
TE6	0.38 (16.6)	0.684	0.468		
TE7	0.4 (16.4)	0.692	0.404		
TE11	0.46 (15.8)	0.693	0.232		

### Fit statistics

**Absolute Indices** RMR = 0.031; GFI = 0.909; GFI = 0.893; RMSEA = 0.037

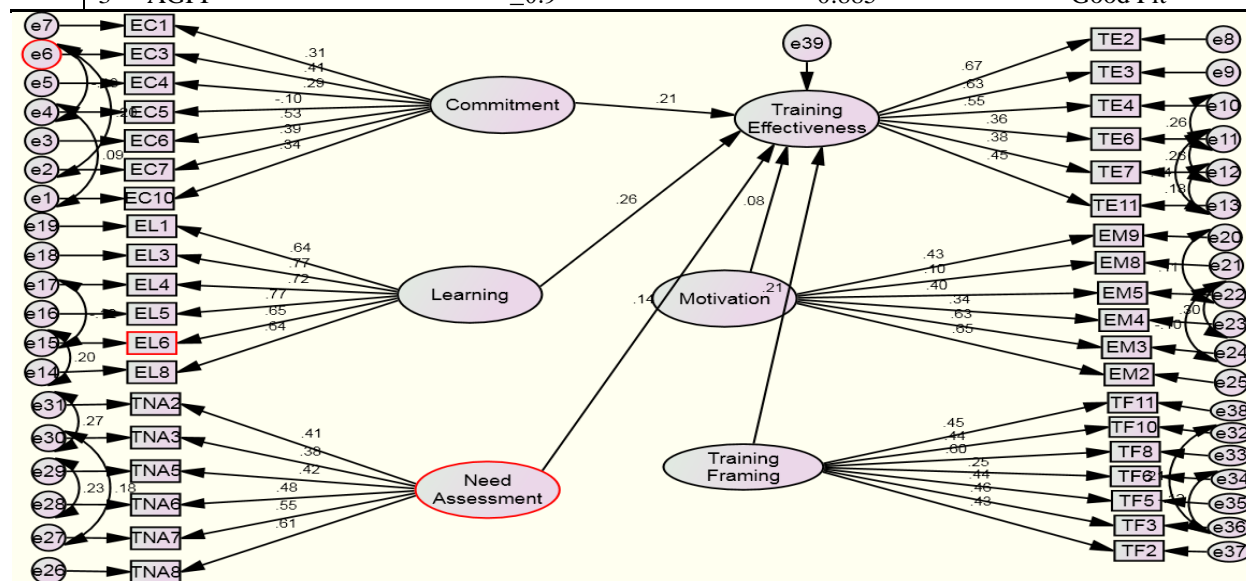
**Incremental Fit Indices** NFI = 0.850; CFI = 0.924

**Parsimonious Fit Indices** PNFI = .763; PCFI = .829; ECVI = 2.191

Regression analysis (table 6) was run once it was verified that data is normally distributed and having no multicollinearity or heteroscedasticity problems. All these aspects of the data are sufficient proof that the data are ready for path analysis for hypothesis testing.

**Table 6** Results of Fit Statistics of Structural Model

#	Goodness of Fit Measures	Level of Acceptable Fit	Calculation of measures	Acceptability
<b>I Absolute Fit Indices</b>				
1	Chi-square	Provides Statistical test of significance	Chi-square =1226.36 (631 df), p = 0.0	Sensitive to a large sample size (Hooper, Coughlan, & Mullen, 2008).
2	(GFI)	$\geq 0.9$	0.902	Good Fit
3	RMSEA	$0.08 \leq$	0.039	Good Fit
4	(RMR)	Poor fit 0 to 1 Perfect fit	0.029	Good Fit
<b>II Incremental Fit Indices</b>				
1	NFI	Poor fit 0 to 1 Perfect fit	0.767	Good Fit
2	TLI		.855	Acceptable
3	CFI	$\geq 0.9$	.870	Good Fit
<b>III Parsimony Fit Indices</b>				
1	PNFI	Relatively high values represent a relatively better fit	0.689	Good Fit
2	PCFI	Relatively high values represent a relatively better fit	0.781	Good Fit
3	AGFI	$\geq 0.9$	0.885	Good Fit

**Figure 2** CFA for Structural Model**Fit statistics**

**Absolute Indices** RMR = 0.032; GFI = 0.927; AGFI = 0.911; RMSEA = 0.037

**Incremental Fit Indices** NFI = 0.821; CFI = 0.906

**Parsimonious Fit Indices** PNFI = .725; PCFI = .801

Results of the path analysis (table 7) exhibit that H1, H2, H3, H4 and H8 are supported by the empirical data while H5, H6, and H7 were not supported.

**Table 7** Summary of the Hypothesis Results

<i>Hypothesis</i>	<i>Relationship</i>	<i>Result of t-value with significance (p-value)</i>	<i>Analysis</i>
H1	Training needs assessment is positively associated with training effectiveness.	t=4.005 (p=0.000)	Supported
H2	Training framing moderates the association between training needs assessment and training effectiveness.	t=4.126 (p=0.000)	Supported
H3	Employee's motivation has positive association with training effectiveness.	t=6.699 (p=0.000)	Supported
H4	Training framing moderates the association between employee's motivation and training effectiveness.	t=4.266 (p=0.000)	Supported
H5	Employee's learning has a positive association with training effectiveness.	t=1.194(p=0.233)	Not Supported
H6	Training framing moderates association between employees' learning and training effectiveness.	t=1.560(p=0.119)	Not Supported
H7	Employee's commitment has positive association with training effectiveness.	t=0.728(p=0.467)	Not Supported
H8	Training framing moderates the association between employee's commitment and training effectiveness.	t=2.606(p=0.009)	Supported

#### 4. CONCLUSION

Inferential and descriptive statistics were used for data analysis. The results of the underpin study illustrate positive association of TNA with training effectiveness, mean that inclusion of TNA in public sector training programs will certainly increase training effectiveness. Positive association of other independent variables in the underpin study i.e. employees' (learning, motivation, and commitment) with training effectiveness is also confirmed from the analysis. The logical justification of the aforesaid statement is that real identified gaps motivate trainees to learn new KSA to bridge the identified gaps which will certainly improve their commitment level. Employees equipped with market based KSA will produce positive results for personal career development and for organizational growth.

#### 5. DISCUSSION

##### 5.1 Prevailing approaches of TNA in Khyber Pakhtunkhwa public sector organizations

It is revealed from the information of these public sector organizations that in lieu of proper TNA, some traditional approaches like introduction of new process or procedure, suggested by the trainers of these public sector organizations, employees of the promotion zone or new induction etc. At the time of commencement an organization even use focus group discussion (FGD) for contents development.

Usually, departments working under the administrative umbrella are asked to nominate trainees for a specific training program in absence of any analysis. This illogical practice in public sector organization is strongly supported by the incompetency training theory, and rightly consider the core cause of training failure. While in reality, TNA provide foundation to the building blocks of training program i.e. trainees' readiness, learning objectives & environment, contents development, training delivery, evaluation plan, and training transfer. Considering training program in its holistic and interdependent nature is supported by training engagement theory.

Positive association of TNA and training effectiveness is evident from empirical results. This association explain that if real gaps in KSA are identified through proper TNA and were bridged through training program resultantly training effectiveness will increase. The research work of (Bowman & Wilson, 2008; Carlisle et al., 2011; Sahoo & Mishra, 2019) backing that TNA helps in placing the corner stone for the rest of the activities like trainer and trainee identification, setting training objectives, contents development, learning objectives, deliver and evaluation. Similarly,

the research work of (Iqbal & Khan, 2011; Iqbal, Malik, & Khan, 2012) patronage the undeniable contribution of TNA in training effectiveness. Unfortunately, these organization still use the traditional approaches instead of proper TNA either due to lack of capacity or interest to identify real gaps (Lee, 2019). This concept is beautifully explained in the incompetency theory of training in public sector organizations.

Analysis of the collected data, disclosed positive association between employee learning and training effectiveness. Simply mean, target the required knowledge and skills in the training program certainly will enhance performance of both employees and organization. The research work of (Davids et al., 2014; M.Dachner et al., 2021) strongly supports, that learning the required level of knowledge and skill and its transfer to work setting, enhance in training effectiveness. Similarly, the work of Rowland, Hall, and Altarawneh (2016) also support finding of the underpin study.

In the extant literature a number of researchers (Davids et al., 2014; Iqbal & Khan, 2011; Mielniczuk & Laguna, 2017; Muduli & Raval, 2018; Tsai & Tai, 2003) not only brace the positive association of employees' motivation and training effectiveness, but further added that it has multifold impact on training effectiveness. The results also evidenced positive association of employees' commitment and training effectiveness, (Rowland et al., 2016) work not only back the results of the current study, but further added that high commitment is main contributor in the attainment of sustainable competitive advantage. Empirical results confirm that training framing moderates the association between employees' commitment and training effectiveness.

Empirical results of the underpin study raising serious questions on the training and development process of public sector organizations. Heavy expenditures on training process without any improvement in competency of public sector organizations is itself a question of million dollar on the training system of these organizations.

## **6. PRACTICAL IMPLICATION THE STUDY**

The study with these variables i.e. trainees' behaviors (motivation, employees' commitment and learning) and organizational interventions (training needs assessment and training framing) in public sector organization of Khyber Pakhtunkhwa is unique, it will help the decision maker to understand the training process, and induct emerging concept in the field of employees training and development. The finding of the underpin study will help policy makers, administrators and trainers that how training effectiveness may be increase and the overall performance of these organizations may be enhanced.

### **6.1 Limitations and Future Recommendations**

Cross sectional nature of data, quantitative study, respondent was only of government department working in bps 17 and above, personal administrative questionnaire was some of the major constraints for the underpin study. In future qualitative study with longitudinal nature having pre and post training tests along with how these trainees transfer that learning to working environment may increase general understanding.

## **REFERENCES**

- Adamson, P., & Caple, J. (1996). The training and development audit evolves: is your training and development budget wasted? . *Journal of European Industrial Training*, 20(5), 3-12.
- Al-Sada, M., Al-Esmael, B., & Faisal, M. N. (2017). Influence of organizational culture and leadership style on employee satisfaction, commitment and motivation in the educational sector in Qatar. *EuroMed Journal of Business*, 12(2), 163-188.
- Alexander, Thanacoody, R., & Hui, W. (2011). The impact of employee perceptions of training on organizational commitment and turnover intentions: A study of multinationals in the Chinese service sector. *The International Journal of Human Resource Management*, 22(8), 1765-1787.
- Algabbani, F. M. (1989). *In-Service Training Needs Assessment in Saudi Arabia: Present and Future* (PhD), The Florida State University USA.



- Alvelos, R., Ferreira, A. I., & Bates, R. (2015). The mediating role of social support in the evaluation of training effectiveness. *European Journal of Training and Development*, 39(6), 484-503.
- Analoui, F. (1994). Training and Development: The Role of Trainers. *Journal of Management Development*, 13(9), 61-72.
- Ayres, H. W. (2005). *Factors Related to Motivation to Learn and Motivation to Transfer Learning in a Nursing Population* (PhD), North Carolina State University USA.
- Aziz, S. F. A., & Ahmad, S. (2011). Stimulating training motivation using the right training characteristic. *Industrial and Commercial Training*, 43(1), 53-61.
- Azmawani, A. R., Siew, I. N., Murali, S., & Florence, W. (2013). Training and organizational effectiveness: moderating role of knowledge management process. *European Journal of Training and Development*, 37(5), 472-488.
- Barrett, B. (2011). *Developing and Implementing Strategies to Enhance Intellectual Capital in the Online Learning Environment* Paper presented at the Proceedings of the 3rd European Conference on Intellectual Capital University of Nicosia, Cyprus.
- Bashir, N., & Long, C. S. (2015). The relationship between training and organizational commitment among academicians in Malaysia. *Journal of Management Development*, 34(10), 1227-1245.
- Bhatti, M. A., Battour, M. M., Sundram, V. P. K., & Othman, A. A. (2013). Transfer of training: does it truly happen?: An examination of support, instrumentality, retention and learner readiness on the transfer motivation and transfer of training. *European Journal of Training and Development*, 37(3), 273-297.
- Boukamcha, F. (2015). Impact of training on entrepreneurial intention: an interactive cognitive perspective. *European Business Review*, 27(6), 593-616.
- Bowman, J., & Wilson, J. P. (2008). Different roles, different perspectives: perceptions about the purpose of training needs analysis. *Industrial and Commercial Training*, 40(1), 38-41.
- Bresnahan, M. M., & Johnson, A. M. (2013). Assessing scholarly communication and research data training needs. *Reference Services Review*, 41(3), 413-433.
- Brown, T. C., & McCracken, M. (2009). Building a bridge of understanding: How barriers to training participation become barriers to training transfer. *Journal of European Industrial Training*, 33(6), 492-512.
- Buckley, R., & Caple, J. (2009). *The Theory and Practice of Training* (6th ed.). London and Philadelphia: Kogan Page.
- Campisi, D., & Costa, R. (2008). A DEA-based method to enhance intellectual capital management. *Knowledge and Process Management The Journal of Corporate Transformation*, 15(3), 170-183.
- Carlisle, J., Bhanugopan, R., & Fish, A. (2011). Training needs of nurses in public hospitals in Australia: Review of current practices and future research agenda. *Journal of European Industrial Training*, 35(7), 687-701.
- Chauhan, R., Ghosh, P., Rai, A., & Kapoor, S. (2017). Improving Transfer of Training with Transfer Design: Does Supervisor Support Moderate the Relationship? *Journal of Workplace Learning*, 29(4), 231-247.
- Chaurasia, S. (2017). An empirical investigation on factors affecting perceived learning by training through simulations. *Industrial and Commercial Training*, 49(1), 22-32.
- Chen, C. Y., Sok, P., & Sok, K. (2007). Exploring potential factors leading to effective training: An exclusive study on commercial banks in Cambodia. *Journal of Management Development*, 26(9), 843-856.
- Cherame, R. A., & Simmering, M. J. (2008). Improving individual learning for trainees with low conscientiousness. *Journal of Managerial Psychology*, 25(1), 44-57.

- Chiaburu, D. S., & Tekleab, A. G. (2005). Individual and contextual influences on multiple dimensions of training effectiveness. *Journal of European Industrial Training*, 29(8), 604-626.
- Clarke, N. (2003). The politics of training needs analysis. *Journal of Workplace Learning*, 15(4), 141-153.
- Cole, N. (2008). How long should a training program be? A field study of "rules-of-thumb". *Journal of Workplace Learning*, 20(1), 54-70.
- Craig, C. A., & Allen, M. W. (2013). Sustainability information sources: employee knowledge, perceptions, and learning. *Journal of Communication Management*, 17(4), 292-307.
- Curado, C., & Teixeira, S. M. (2014). Training evaluation levels and ROI: the case of a small logistics company. *European Journal of Training and Development*, 38(9), 845-870.
- Daniels, S. (2003). Employee training: a strategic approach to better return on investment. *Journal of Business Strategy*, 24(5), 39-42.
- Davids, A.-I. R., Gonzalez, J.-M. J., Garrido, M. F., & Soto, A.-P. G. (2014). Transfer of learning: Motivation, training design and learning-conducive work effects. *European Journal of Training and Development*, 38(8), 728-744.
- Denby, S. (2010). The importance of training needs analysis. *Industrial and Commercial Training*, 42(3), 147-150.
- Di'xon, N. M. (2000). Common knowledge: How Companies Th&e by Sharing What They Know. *Long Range Planning*, 34(2).
- Durra, A. B. (1990). Assessment of Training Needs within the Context of Administrative Reform in Jordan. *International Journal of Manpower*, 11(7), 3-10.
- Eddie W.L. Cheng, & Danny C.K. Ho. (2001). A review of transfer of training studies in the past decade. *Personnel Review*, 30(1), 102-118.
- Fazio, J., Gong, B., Sims, R., & Yurova, Y. (2017). The role of affective commitment in the relationship between social support and turnover intention. *Management Decision*, 55(3), 512-525.
- Ford, L. (2009). Improving training transfer. *Industrial and Commercial Training*, 41(2), 92-96.
- Freeman, E. W. (2009). *Training Effectiveness: The Influence of Personal Achievement Goals on Post-Training Self-Efficacy*. (PhD), North Carolina State University.
- Ghosh, P., Joshi, J. P., Satyawadi, R., Mukherjee, U., & Ranjan, R. (2011). Evaluating effectiveness of a training programme with trainee reaction. *Industrial and Commercial Training*, 43(4), 247-255.
- Ghosh, P., Satyawadi, R., Joshi, J. P., Ranjan, R., & Singh, P. (2012). Towards more effective training programmes: a study of trainer attributes. *Industrial and Commercial Training*, 44(4), 194-202.
- Glen, C. (2006). Key skills retention and motivation: the war for talent still rages and retention is the high ground. *Industrial and Commercial Training*, 38(1), 37-45.
- Gloster, R., Buzzeo, J., Cox, A., Bertram, C., Tassinari, A., Ann, K., . . . Vlaev, I. (2018). Behavioural insights into benefits claimants' training. *Education + Training for Quality*, 60(1), 54-68.
- Griffin, R. P. (2010). Means and ends: effective training evaluation. *Industrial and Commercial Training*, 42(4), 220-225.
- Hansen, T. (2001). *A Study Examining the Factors Affecting Training Motivation*. (PhD), Bowling Green State University USA.
- Hasson, H., Schwarz, U. v. T., Holmstrom, S., Karanika-Murray, M., & Tafvelin, S. (2016). Improving organizational learning through leadership training. *Journal of Workplace Learning*, 28(3), 115-129.

- Holladay, C. L., Knight, J. L., Paige, D. L., & Quiñones, M. A. (2003). The influence of training on attitudes toward diversity training. *Human Resource Development Quarterly*, 14(3), 245-263.
- Hooper, D., Coughlan, J., & Mullen, M. R. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *Journal of Business Research Methods*, 6(1), 53-60.
- Hoppe, D. (2017). Multiple commitments and behaviors: a mixed concept approach. *Journal of Product & Brand Management Decision*, 26(2), 411-432.
- Hughey, A. W., & Mussnug, K. J. (1997). Designing effective employee training programmes. *Training for Quality*, 5(2), 52-57.
- Iqbal, M. Z., & Khan, R. A. (2011). The growing concept and uses of training needs assessment: A review with proposed model. *Journal of European Industrial Training*, 35(5), 439-466.
- Iqbal, M. Z., Malik, S. A., & Khan, R. A. (2012). Answering the journalistic six on the training needs assessment of pharmaceutical sales representatives Comparative perspectives of trainers and trainees. *International Journal of Pharmaceutical and Healthcare Marketing*, 6(1), 71-96.
- Judith Brown. (2002). Training needs assessment: A must for developing an effective training program. *public personnel management*, 31(4), 569-571.
- Kapoor, S., D.S.Chaubey, & Negi, A. (2015). Analysis of training need identification process and perceived training outcome. *Midas Touch International Journal of Commerce, Management and Technology*, 03(10), 1-12.
- Khan, A., & Masrek, M. N. (2017). Training needs analysis based on mismatch between the acquired and required levels of collection management skills of academic librarians. *Collection Building*, 36(1), 20-28.
- Khan, A., Masrek, M. N., & Nadzar, F. M. (2015). An investigation of the training needs on emotional intelligence of academic librarians. *Library Review*, 64(8/9), 597-613.
- Khawaja Fawad Latif. (2012). An integrated model of training effectiveness and satisfaction with employee development interventions. *Industrial and Commercial Training*, 44(4), 211-222.
- Kirkpatrick, D. (1967). *Evaluation of Training*. New York NY: T McGraw-Hill.
- Kodwani, A. D. (2017). Decoding training effectiveness: the role of organisational factors. *Journal of Workplace Learning*, 29(3), 200-216.
- Kuchеров, D., & Manokhina, D. (2017). Evaluation of training programs in Russian manufacturing companies. *European Journal of Training and Development*, 41(2), 119-143.
- Kyndt, E., Vermeire, E., & Cabus, S. (2016). Informal workplace learning among nurses: Organisational learning conditions and personal characteristics that predict learning outcomes. *Journal of Workplace Learning*, 28(7), 435-450.
- Latif, K. F. (2012). An integrated model of training effectiveness and satisfaction with employee development interventions. *Industrial and Commercial Training*, 44(4), 211-222.
- Lee, J. (2019). Rapid needs assessment: an evidence-based model. *European Journal of Training and Development*, 43(1/2), 61-75.
- Loehlin, J. C. (1998). *Latent Variable Models: An Introduction to Factor, Path, and Structural Analysis*: : Lawrence Erlbaum Associates Publishers.
- Loomba, A. P. S., & Karsten, R. (2019). Self-efficacy's role in success of quality training programmes. *Industrial and Commercial Training*, 51(1), 24-39.

- Luo, Z., Marnburg, E., & Law, R. (2017). Linking leadership and justice to organizational commitment: The mediating role of collective identity in the hotel industry. *International Journal of Contemporary Hospitality Management*, 29(4), 1167-1184.
- M.Dachner, A., E.Ellingson, J., A.Noë, R., & M.Saxton, B. (2021). The future of employee development. *Human Resource Management Review*, 31(2), 311-332.
- Marcus, T., & Shoham, S. (2014). Knowledge assimilation by employees in learning organizations: The case of safety training in a day camp. *The Learning Organization*, 21(6), 350-368.
- Mark N.K Saunders, Lewis, P., & Thornhill, A. (2012). *Research Methods for Business Students* (6<sup>th</sup> ed.). Essex, England Pearson Education Limited.
- Mazareanu, E. (2019). *Spending in the Training Industry in U.S. 2012-2018*.
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the Workplace: Theory, Research and Application*. Thousand Oaks, CA: Sage Publication.
- Mielniczuk, E., & Laguna, M. (2017). Motivation and training initiation: evidence from Poland. *Journal of Workplace Learning*, 29(1), 24-36.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *The Journal of Political Economy*, 66, 281-302.
- Muduli, A., & Raval, D. (2018). Examining the role of work context, transfer design and transfer motivation on training transfer: Perspective from an Indian insurance industry. *European Journal of Training and Development*, 42(3/4), 266-282.
- Nazli, N. N. N. N., & Khairudin, S. M. H. S. (2018). The factors that influence transfer of training and its effect on organizational citizenship behaviour: Evidence from Malaysia civil defence force. *Journal of Workplace Learning*, 30(2), 121-146.
- Park, S., Kang, H.-S. T., & Kim, E.-J. (2018). The role of supervisor support on employees' training and job performance: an empirical study. *European Journal of Training and Development*, 42(1/2), 57-74.
- Pineda-Herrero, P., Belvis, E., Moreno, V., Duran-Bellonch, M. M., & Úcar, X. (2011). Evaluation of training effectiveness in the Spanish health sector. *Journal of Workplace Learning*, 23(5), 315-330.
- Roberson, L., Kulik, C. T., & Pepper, M. B. (2003). Using Needs Assessment to Resolve Controversies in Diversity Training Design. *Group & Organization Management*, 28(1), 148-174.
- Robotham, D. (2003). Learning and training: developing the competent learner. *Journal of European Industrial Training*, 27(9), 473-480.
- Roscoe, J. T. (1975). *Fundamental Research Statistics for the Behavioral Sciences* (2<sup>nd</sup> ed.): New York, Holt, Rinehart and Winston
- Rowland, C. A., Hall, R. D., & Altarawneh, I. (2016). Training and development Challenges of strategy and managing performance in Jordanian banking. *EuroMed Journal of Business*, 12(1), 36-51.
- Sahinidis, A. G., & Bouris, J. (2008). Employee perceived training effectiveness relationship to employee attitudes. *Journal of European Industrial Training*, 32(1), 63-76.
- Sahoo, M., & Mishra, S. (2019). Effects of trainee characteristics, training attitudes and training need analysis on motivation to transfer training. *Management Research Review*, 42(2), 215-238.
- Sekaran, U. (2003). *Research Methods for Business: A Skill-Building Approach* (fourth ed.).

- Shah, H., & Gopal, R. (2012). Training needs analysis for bus depot managers at GSRTC. *European Journal of Training and Development*, 36(5), 527-543.
- Simpson, J., Schraeder, M., & Borowski, M. (2015). Enhancing the value of training: creating closer time linkages between training acquisition, application and compensation. *Development and Learning in Organizations: An International Journal of Business and Psychology*, 29(5), 16-18.
- Sitzmann, T., & Weinhardt, J. M. (2015). Training engagement theory: A multilevel perspective on the effectiveness of work-related training. *Journal of Management*, 20(10), 1-25.
- Sleezer, C. M. (1993). Training needs assessment at work: A dynamic process. *Human Resource Development*, 4, 247-265.
- Steensma, H., & Groeneveld, K. (2010). Evaluating a training using the "four levels model". *Journal of Workplace Learning*, 22(5), 319-331.
- Tai, W.-T. (2006). Effects of training framing, general self-efficacy and training motivation on trainees' training effectiveness. *Personnel Review*, 35, 51-65.
- Tao, Y.-H., Yeh, C. R., & Sun, S.-I. (2006). Improving training needs assessment processes via the Internet: system design and qualitative study. *Journal of Organizational Change Management*, 19, 393-407.
- Theriou, N. G., Aggelidis, V., & Theriou, G. N. (2009). A theoretical framework contrasting the resource-based perspective and the knowledge-based view. *European Research Studies*, 12(3), 145-165.
- Tsai, W.-C., & Tai, W.-T. (2003). Perceived importance as a mediator of the relationship between training assignment and training motivation. *Personnel Review*, 32(2), 151-163.
- Valaski, J., Reinehr, S., & Malucelli, A. (2017). An ontology to support the classification of learning material in an organizational learning environment An evaluation. *Interactive Technology and Smart Education*, 14(1), 67-87.
- Velada, R., & Caetano, A. (2007). Training transfer: the mediating role of perception of learning. *Journal of European Industrial Training*, 31(4), 187-203.
- Vishwakarma, S., & Tyagi, R. (2017). Post-reforms training needs of frontline managers in Indian power distribution companies: A top managers' perspective. *International Journal of Energy Sector Management*, 11(3), 416-425.
- Wills, L. B. (2013). *The Relationship between Organizational Commitment and Work Effectiveness among Pharmaceutical Sales Representatives* (PhD), Northcentral University, USA
- Yaqub, Y., Singh, A. K., & Dutta, T. (2021). An empirical study of factors influencing training transfer in the management training intervention. *Journal of Workplace Learning*, 33(5).
- Zwick, T. (2015). Training older employees: what is effective. *International Journal of Manpower*, 36(2), 136-150.