AN EMPIRICAL EXAMINATION OF THE EFFECTS OF PERSONALITY TRAITS AND TRANSFER CLIMATE FACTORS ON TRANSFER OF TRAINING & MOTIVATION: A LONGITUDINAL STUDY

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Abstract:

Personality has been considered an important factor influencing trainee efficiency & organizational productivity. Similarly, work climate factors have been recognized as primary influencers in post training context influencing productivity. But research concerning the impact of personality and work climate on trainees' learning motivation has been very scant and mostly conducted in the western context. The present study was an attempt therefore, to extend this line of research in the Indian context involving educational sector of the State of Jammu & Kashmir. A sample of 517 teacher trainees was drawn for the present study using convenience sampling method. Results indicate that personality traits (i.e., conscientiousness, openness to experience, and internal locus of control) do not influence training transfer directly or indirectly, while, transfer climate factors do affect training transfer both directly as well as indirectly via learning motivation. The implications of the results are discussed and the limitations of the study are noted, along with suggested avenues for future research.

Key words: *Personality, Transfer climate, Motivation, Training Transfer*

1. Introduction

India being world's largest democracy is likely to overtake China in terms of population. Similarly, India will have the second largest graduate talent pipeline globally after China (Council, 2014). Unarguably, the quality of education provided to such a huge population can determine the economic prospectus of the nation. In this context, the Indian education system is facing an unprecedented transformation as pointed by Prof. Chandra, Director IIM-Bangalore, *"the change at the scale we will see*

in the next ten years in education in India is unprecedented in human history" (cited in – Council, 2014: p. 8).

Way back in 1964, similar concerns were echoed by the Education Commission when it professed that, *"the destiny of India is now being shaped in her classroom"* (cited in - Mondal, Saha & Baidaya, 2015: p. 776). But it is a fact that the quality of students depend on the quality of teachers, school infrastructure, support and knowledge provided. For instance, the National Policy on Education (1986) emphazised that teachers' personality and their professional development can be the core on transforming the very dynamics of education. As envisaged in one of the NCERT Reports the country *"has been slow to recognize, that education is a profession for which intensive preparation is necessary as it is in any other profession"* (cited in - NCERT, 2009: p. iii).

Teachers being the important pillars of the education system thus, in order to equip them with latest & necessary knowledge & skills, a number of educational training programs were being introduced throughout the country under the aegis of Ministry of HRD among others, these programs included - Sarva Sikhsha Abhiyan (SSA), Radhiya Madhmik Shiksha Abhiyan (RMSA) to name a few. As observed by Mondal et al. (2015), teacher education is fundamentally concerned with devising policies & programs to augment teachers' knowledge, skills and others (KSAo's). But, the knowledge and skills gained only help teachers to adjust to a system in which education is seen as transmission of information. The dismal performance of students has led to an intense debate on the very fruitfullness of these education/training programmes professing to improve the overall knowledge & skill base of teachers. And as highlighted in NCERT report of 2009, training in education has got a bad reputation (DeMonte, 2013): *"The programmes have come under severe criticism for not addressing the needs of contemporary Indian schools and not preparing teachers who can impart quality education in schools. Their design/practice is based on certain assumptions which impede the progress of ideas and professional and personal growth of the teacher. They train teachers to adjust to a system in which education is seen as transmission of information. They take the school curriculum and textbooks as 'given' and train teachers to adjust to the needs of the existing school system through fastidious planning of lessons in standardized formats and fulfilling the ritual of delivering the required number of lessons"* (p. 11).

In fact, *"teacher training is viewed an integral part of the consultation process in the schools"* (cited in – Elliot, Gresham & Witt, 2013: p. 291). However, various reports (see for example, NCERT, 2005; NCERT, 2009 & NCERT, 2014) criticizing teacher training programs have according to some (see for example, Goe, Biggers & Croft, 2012) led teacher evaluation subject as a major focus in educational policy debates and research.

Notably, various attributes for effective professional development in public education have emerged. For instance, practitioners and experts propose that training/learning should incorporate active learning (Garet, Porter, Desimore, Birman & Yoon, 2001) and should gain from needs assessment of training (Burke and Hutchins,

2007; Pritchard and Marshall, 2002). Even, few studies have focused on investigating attributes in a scientific manner (e.g., Garet et al. 2001; Prichard and Marshall, 2002). But, there is an over-reliance on literature reviews and expert opinions, and the ground realities beyond theoretical discussions that can improve and sustain teacher performance are largely neglected.

Generally, it is expected that professional development should exhibit a high degree of relevance to teachers/participants' actual work (Garet et al. 2001; Pritchard and Marshall, 2002) so that an improvement in teacher behavior is achieved. As a consequence of this line of thought, many researchers started finding solutions in broader training transfer literature (see for example, Burke and Hutchins, 2007). Moreover, in adult learning, the improvement in behavior i.e., "training transfer", is conceptualized as the extent to which KSA's acquired in a training program are applied, generalized, and maintained over some time in the job environment (Baldwin & Ford, 1988).

However, transfer of training in education field has been largely neglected from research sight (Analoui, 1993), to the effect that there has been a general tendency among researchers that the transfer (application of KSA's) was an automatic effect of learning process (Albanese, Snow, Skochelak, Hugget & Farrell, 2003). In other words, once learned from training, the knowledge would be applied anyway without an interruption. But in reality, design and management of adult education in the workplace being part of wide research field points that there exist multiple factors from individual to organizational that have a bearing on the training transfer (see for example, Baldwin and Ford 1988; Campbell 1988; Ford and Kraiger 1995; Goldstein and Ford 2002; Kirkpatrick 1975; Tannenbaum and Yukl 1992).

From the literature on design and management of adult education, researchers (see for example, Pisanu, Fraccaroli & Gentile, 2014) of late pointed out that there is a little direct research investigating the impact of learner characteristics on application of KSA's and most teacher training studies report that only student behavior measures are collected to evaluate the teacher training (Elliott, et al. 2013). Due to this anomaly, various studies of theoretical and empirical nature have examined the issue of training transfer over the past decade (Blume, Ford, Baldwin & Huang, 2010) and majority of these studies (see for example, Nazli, Sipon, Zumrah & Abdullah, 2015; Alim, Kawabata, Nakazawa, 2014; Bouzguenda, 2014) have indicated multiple factors acting as inhibitors as well as facilitators to training transfer. Baldwin & Ford (1988) identified trainee characteristics, training design, and work environment to have a influence on training transfer. And, among trainee characteristics, various attributes and traits of employees have been studied. But, in recent years, research has been stressing the complex role of dispositional characteristics on transfer primarily through motivation element (Yamkovenko & Holton, 2010).

2. Personality

In education system, teachers' are positioned as charismatic and caring subjects. For instance, the 'good' teacher is the one who has certain 'intrinsic' characteristics and dispositions. In context to this, personality is regarded as the best known example of dispositional characteristics. Many theories exist in literature on personality, but the Big Five Model is dominating in present times (Dashti & Habibi, 2011). Conscientiousness trait has been established to be the major factor predicting job performance, educational achievement, to name a few (Barrick & Mount, 1991). Primarily associated with achievement striving, planful, organized, careful, hardworking and persevering elements. Conscientiousness influence performance through goal setting and employees with such trait help organizations to achieve competitive advantage (Barrick, Mount & Strauss, 1993; Schippmann, 1999). The perseverance element (i.e., resolve to learn and transfer) and achievement element (i.e., desire to attain and enact training goals) has been advocated by researchers to be studied separately. Researchers (see for example, Cheng & Ho, 2001; Burke & Hutchins, 2007) noted that the achievement striving element may have a potential driving influence on transfer, because of its effect on motivation to learn (Colquitt et al. 2000). Barrick & Mount (1991) stressed that the important issue to address is that whether the effect of conscientiousness on job performance is direct, indirect or both. In training settings, conscientiousness has generally being found to be related to training outcomes. Therefore, with an adequate number of samples, the need to study conscientiousness direct influence on trainees learning and training transfer or indirectly through motivation is important area open for research.

Considering transfer as a series of stages through which the learner passes (Foxon, 1993), training task may be viewed as novel and complex, where trainees may need to adapt, because the task context changes as it introduces a new & different task environment (Herold et al. 2000). In fact, another trait i.e., openness to experience have been found to be related to "adaptability to changing task contexts" (cited in - Herold et al. 2000) while as adaptabity has been opertaionalized as" learning or performance in a task that is either complex, novel or just ill-defined"(p.566). Barrick & Mount (1991) found openness to experience to be a valid predictor of training proficiency as they adjust more rapidly to a radically different work environment (Bing & Lounsbury, 2000). Because of such an attitude towards learning (cited in - Wilma Koutstaal, 2012: p. 275) they always try to benefit from training that ultimately leads to training proficiency (Barrick & Mount, 1991). However, Colquitt et al. (2000) found only two dimensions of B5M influencing motivation to learn and moderately correlated to transfer (i.e., conscientiousness and neuroticism). Therefore, it is imperative to test openness to experience trait in post training context employing longitudinal design.

In training context, Colquitt et al. (2000) meta-analytic review covering 106 studies published from the period 1975 to 2000 found internal locus of control strongly related to motivation to learn but not with the skill acquisition. Anderson et al. (2007) argued that the relationship between locus of control and academic achievement has

been generally mediated by instructional environment. Similarly, Bandura (1986) proposed that a "sense of control over the significant outcomes of one's life is a key motivator of behavior" (cited in - Elliot & Dweck, 2013: p. 91). So, the belief of a person that he/she can manage will also regulate his/her motivation and actions (Bandura, 1986). Therefore, it can be argued that individuals who have an internal locus of control are more motivated to be successful in an intervention (i.e., training program) as they believe that they can control work related rewards (for instance, pay, promotion etc.,) by mastering the training skills. In this regard the inclusion of said variable in trainee characteristics construct assumes all the more relevance.

Researchers argue that it *"has now become an almost universal template for understanding the structure of personality"* (Ferguson & Patterson, 1998: p. 789). It can be seen that there is an overarching importance given to teachers' personality. But this has led to a wrong notion to the extent that even *"the success and failure of the teacher is individualized instead of being connected to the complex social processes which constitute teachers' work"* (cited in – Sriprakash, 2012: p. 72). Therefore, to assess the teacher personality that can help protect them from criticism is an important area open to research.

3. Transfer Climate

Researchers (see for example, Tracey & Tews, 1995) suggested that job characteristics do influence the effectiveness of training to a large extent. Notably, the job characteristics model proposed by Hackman & Oldham (1976) recognizes that employees' performance is improved only when job contains certain characteristics like: autonomy, feedback, to name a few. And, as far as teaching profession is concerned, Darling-Hammond & Wise (1985) pointed that teaching is characterized by a control of one's destiny (i.e., autonomy) on which the success of any educational reform movement depends (Dondero, 1997). The importance of autonomy in public schools can be seen by the observation made in 1985 by Sergiovanni and Moore: *"The morale of public school teachers is only partially related to salary and welfare benefits. Three factors have greater effect on teacher morale: whether teachers are given a role in managing their professional functions; the extent to which they are helped to perform better; and the degree to which they are provided with information about what is expected of them and whether they meet these expectations"* (p. 5).

Infact, teachers' autonomous behavior has been found to maintain learners' intrinsic motivation (Grolnick, Ryan and Deci, 1991). Deci & Ryan (1985) argued that autonomy encourages individuals to perform work well. Recently, Cappetta & Paolino (2015) studying the differential effects of autonomy on training outcomes proposed that the positive impact of autonomy on training transfer in future studies can only be found when impact assessment is made some time after the training. Therefore, the importance of research design is one of the fundamental factors that have been taken into consideration in the present work.

Similarly, in post training context teachers' feel that feedback becomes very much crucial while practicing training skills (Thapa, 2013). There is a considerable debate among researchers regarding the type of feedback. Generally, "praise is considered as an incentive to continue correct behavior" (cited in - Aamodt, 2008: p. 309). Kohli & Jaworski (1994) argue that positive feedback helps employee to correctly perform task. On the other hand, observing poor performance, negative feedback should be provided only by reliable and informed supervisor or trainer of an employee (Roberts, 1994). For that reason, recognition of source which fosters transfer is more important, as there is a dearth of research on feedback in transfer of training literature (Bossche et al. 2010). Therefore, the study on said variable assumes more relevance which fosters motivation as well as increases transfer of learned behavior.

4. Learning Motivation

Motivation defined as "variability in behavior not attributable to stable individual differences (e.g. cognitive ability) or strong situational coercion" (cited in – Homklin, Takahashi & Techakanont; 2013: p. 4), is one of the most frequently examined variables in research on transfer of training. The view on learning motivation's mediating position in the transfer process is not highlighted by us only—this view already exists in the literature (Baldwin & Ford, 1988; Holton et al., 2000; Kontoghiorghes, 2004; Noe & Schmitt, 1986; Pugh & Bergin, 2006; Warr et al., 1999). However, empirical analyses examining the mediating position are lacking. Particularly focusing through expectancy theory as a theoretical approach for learning motivation, Salas and Canon-Bowers (2011) highlighted that "the need to continue gaining a deeper understanding of training motivation because it is crucial for learning and has direct implications for the design and delivery of training. In fact, the authors argued that, "Longitudinal studies are also needed" (p. 480).

5. Teacher Education in State

The domain of the study was the education sector of the State of J&K. At the National level, the recognition of the importance of training activities led India in 1985 to become the first nation in the Asia-Pacific region to create the Ministry of Human Resource Development (Rao, 2004). Therefore, it can be seen that training & developing the human resource has been the priority of the Government for long now. However, significant portion of investment in organizational training and development is wasted as much of the knowledge and skills gained from training programs are not applied by employees on the job (Homklin, Takahashi & Techakanont, 2013).

Table 1. Number of In-service Teachers at BRC Level and Resource Persons Trained in Jammu & Kashmir Division During 2007-12

Districts	Number of Teachers	Financial (Lac's)
Kathua	8423	159.13
Samba	2525	47.32
Jammu	10264	182.21
Rajouri	10864	183.17
Poonch	11344	205.01
Reasi	2876	57.25
Udhampur	9022	138.32
Doda	6184	95.03
Kishtwar	2920	58.40
Ramban	3888	77.76
Srinagar	13323	179.21
Budgam	6237	127.32
Anantnag	9346	146.27
Pulwama	7122	97.01
Baramulla	11712	172.13
Kupwara	3677	44.14
Leh	2913	58.45
Kargil	1877	37.21
Source: State Project Director, SSA (5/5/2013).		

Although lots of initiatives have been taken over the past several years but there doesn't seem to be any substantial improvement in the overall performance of Government schools in terms of the results of the students especially at the high school level. As advocated by NCTE (2009) in its report, "the training of teachers is a major area of concern at present as both pre-service and in-service training of school teachers are extremely inadequate and poorly managed in most states" (NCTE, 2009: p.6).

The aim of this paper is to find out the impact of factors regarding training transfer process of Public school teachers. To find out this impact on training transfer, we examined the relationship of training transfer, personality motivation and transfer climate. This research is concerned with public sector schools of J&K, covering 15 districts of India. The importance of the research is to find out the new ways of training transfer process in Public Sector Schools.

H1. *Personality traits & transfer climate factors will be positively related to the transfer of training.*
H2. *Motivation to learn will be predicted by personality traits & transfer climate factors.*
H3. *The degree of relationship between personality traits, transfer climate & transfer of training will be mediated by Motivation to learn.*

6. Means & Methods

Researchers (see for example, MacCullum, 1996) have developed advanced methods to determine minimum sample size in order to achieve a given level of power for tests of model fit. Muthen & Muthen (2002) proposed that four interrelated concepts (i.e., sample size, type I error, type II error & effect size) as an input are needed in MPlus software to determine adequate sample size for Structure equation models (see for example, Kelly & Maxwell, 2003).

Therefore, following the recommendations of Muthen & Muthen (2002), the effect size determined by Null Hypothesis Significance Testing-power approach for the present study = 0.50; with power of 0.80 and alpha level of 0.05. Taking these as inputs the minimum sample determined for each construct arrived to be 400 statistically significant. Moreover, sensitivity analysis with different seed numbers, i.e., 1 and 500 with 10000 replications performed, the output of which is not different:

Table 2. Sensitivity Analysis

Parameter	B	Relative Pb	SEb	Cover age	$1-\beta$	95%CI	Relative Pb	SEb	Cover age	$1-\beta$	95% CI
Conscientiousness	0.86	-.01	-.01	.95	1	0.20	-.01	-.02	.94	1	20
O. T. Experience	-0.16	-.01	-.01	.94	.99	0.13	-.01	-.02	.94	.99	0.13
I. L. Control	0.74	-.01	-.01	.94	1	0.17	-.01	-.02	.94	1	0.17
Feedback	0.26	-.01	-.01	.94	1	.13	.01	-.01	.94	1	0.13
Autonomy	0.29	-.01	-.02	.94	1	0.15	.01	-.01	.94	1	0.15
Motivation to learn	0.16	-.01	.01	.95	.93	.18	.01	-.01	.95	.93	0.18

Note: Pb = Parameter bias; SEb = Standard Error bias; 95% confidence interval/2 = 95% confidence interval half width recommended by Maxwell & Kelly, (2010).

From the Table 2, it can be observed that the simulations with 10000 replications with different seed numbers show that estimates remain same while performing sensitivity test on 400 sample size (see for example, Muthen & Muthen, 2002).

7. Measures

Conscientiousness and openness to experience were measured using John Naumann & Soto (2008) Big Five Inventory. The 10 items measuring conscientiousness assess individuals tendency to be dependable, organized, self-disciplined, preserving, hardworking, & deliberate (α = 0.86) with sample items reading as: '*I am someone who does a thorough job*' and another 9 items measuring openness to experience, assess individuals' intellectual, curiosity, and imagination (0.88) with sample items as '*I am someone who is original, comes up with new ideas*'. Internal locus of control was measured by using 4 item inventory developed by Levenson (1974). Sample item included: '*I am almost certain to make my plans work.*'

Feedback (α = 0.78) was measured with Holton's (1996) learning transfer systems inventory. A sample item of the scale reads, '*After training, I get feedback*

from people on how well I am applying what I learn'. Autonomy was operationalized with Oldham, Hackman & Stepina (1978) items, a sample item reads as, *'My job permits me to decide on Amy own how to go about doing the work.'*

Motivation to learn ($\alpha = 0.81$) was measured with the Noe & Schmitt's (1986) 5 item scale. Sample item included: *'Generally, I am enthusiastic about learning new things.'*

Transfer of Training was measured with variables like declarative knowledge, maintenance of knowledge and generalization of knowledge. Declarative knowledge consisted of 5 objective type questions related to content domain for which the trainee is prepared for. Maintenance of knowledge ($\alpha = 0.71$) was measured with the scale developed by McDonald (2001). Generalization of knowledge ($\alpha = 0.73$) was measured using Facteau et al., (1995) scale. Sample items include, *'The improvement in students when I use new skills makes me interested to maintain those newly learned skills'* (maintenance), *'Based on the formal skills training received from DIET, I am able to use the newly learned skills wherever it is needed'* (generalization).

Pilot Testing

In the present study, a sample of 100 teachers was contacted to conduct a pilot test. In fact, Lewis et al., (2005) recommended that 50 participants for pilot testing are adequate to determine the quality of instrument. The pilot survey was conducted in the month of December-2013.

The deletion of some items belonging to certain constructs was made because the loadings were below 0.70, and deletion helped to attain standard loadings, standard item weights, reliability etc. Infact, the items deleted from conscientiousness include: *C1, C2, C4, C5, C6, C9, C10;* on openness to experience these include: *OE2, OE5, OE6, OE7, OE8, OE9, OE10, OE11;* on internal locus of control it include *ILOC3;* on motivation to learn: *ML2, ML3;* on generalization and maintenance these include *G4* and *M4.*

Data collection

For the present study, the data were collected from Districts of Jammu & Kashmir at three points of time i.e., T1-immediately after training: T2- after a week from T1; T3-after 3 months from T2. From the districts of Jammu division, the data collection were collected within a period of 14 weeks from March – June 2014, while from the districts of Kashmir division, the data were collected between the period of March and May-2014. Data from Ladakh region were collected in the month of August 2014 to starting November 2014. The list of schools was obtained from the Directorate of School Education, Jammu as well as Kashmir.

Demographic Attribute		T1		T2		T3	
		Frequency	Percentage (%)	Frequency	Percentage (%)	Frequency	Percentage (%)
Region	Jammu	389	54	367	54	307	59
	Kashmir	176	24	157	24	103	20
	Ladakh	158	22	152	22	107	21
Gender	Male	201	28	197	29	168	32
	Female	522	72	479	71	349	68
Age Distribution	20-29	322	45	292	43	233	45
	30-39	202	28	198	29	156	30
	40-49	153	21	144	22	90	17
	50 & Above	46	6	42	6	38	8
Teaching Experience	0-4	343	47	327	48	283	55
	5-9	155	22	132	20	100	19
	10-14	147	20	141	21	61	12
	15 & Above	78	11	76	11	73	14
		723		**676**		**517**	

T1= Data collected at Time 1; T2= Data collected at Time 2; T3= Data collected at Time 3

Given the peculiar nature of the study, the respondents belonging to a particular division, region, and district were codified in order to locate and approach to same respondent at T2 & T3.

Although, a target of 700 sample respondents to be contacted at time1 was thought to be feasible, because taking note from the previous similar longitudinal study on teacher training, an appropriate level i.e., 10% was considered to be feasible in case for attrition.

From the total of 723 questionnaires received at T1, 676 were received at T2 and 534 at T3. But out of 534 final questionnaires received, 17 (i.e., 6 – Kashmir, 7 Jammu & 4- Ladakh) cases were suspicious i.e., responding in a sequential way which is most common because sometimes respondents choose to make a quick completion of questionnaire without focusing the contents of the questionnaire. Therefore, the said questionnaires were not processed further for data analysis.

Measurement Model Analysis

Measurement model testing was performed in order to assess reliability and uni-dimensionality. The estimates are tabulated as under.

Table 3. Instrument Psychometrics

LV's	MV's	α	D-G's rho (CR)	Block Uni-dimensionality [Ist Eigen - 2nd Eigen]	Average Variance Extracted Convergent Validity
Conscientiousness	3	0.82	0.89	[2.38 - 0.86]	0.50
Openness to experience	3	0.74	0.85	[2.00 - 0.55]	0.55
Internal locus of control	3	0.55	0.74	[1.60 - 0..81]	0.53
Feedback	4	0.76	0.85	[2.38 - 0.84]	0.54
Autonomy	3	0.74	0.85	[2.00 - 0.63]	0.54
Motivation to learn	3	0.67	0.82	[1.81 - 0.76]	0.50
Declarative Knowledge	1	1.00	1.00	[1.00 - 0.00]	1.00
Generalization	3	0.81	0.88	[2.18 - 0.47]	0.63
Maintenance	3	0.66	0.82	[1.85 - 0.88]	0.55

*Note: * LV's = Latent Variables;   MV's = Manifest variables; D-G rho = Dhillion Goldesteins rho*

From the Table 3, internal consistency of the constructs were measured by two facets of reliability i.e., Cronbach's alpha and composite reliability. It can be observed from the above that CR of all factors was above 0.70. Moreover, none of the items were further deleted as they all established standard psychometrics.

For convergent validity, Average Variance Extracted (AVE) values were examined. Constructs having AVE value greater than 0.5 indicate convergent validity (see for example, Anderson & Gerbing, 1988).

From the Table 4, discriminant validity was measured by observing the cross loadings. It can be observed that items load higher on their respective construct as compared its loading on other constructs.

Structural Model Analysis

The analysis of structural model is the essence of study, however the inclusion of mediation in the preset study was confirmed following the recommendations of Baron & Kenny (1986) as well as Preacher & Hayes (2008). For instance, in order to test mediation model, these conditions need to be met:
   a. The independent variable should be a significant predictor of the dependent variable.
   b. The independent variable should be a significant predictor of the mediator.
   c. The mediator and the independent variable are used simultaneously to predict the dependent variable.
Therefore, in the present study step wise analysis was performed to test direct, indirect and total effect. In Ist step, the effect of individual traits & transfer climate factors on transfer of training was assessed and analyzed and thoughtfully aligned with the results on the grounds that whether previous studies confirmed or rejected the impact of specific variables on dependent variable. Notably, studies which include education sector part of their study and teacher trainees as part of their sample study were focused.

Table 4. Discriminant validity of items

ITEMS	Autonomy	Conscientiousness	Feedback	Internal locus of control	Motivation to learn	Open to experience	Transfer of training
Autonomy1	**0.82**	-0.06	0.79	0.08	0.62	0.07	0.49
Autonomy2	**0.87**	-0.08	0.67	0.03	0.66	0.03	0.37
Autonomy3	**0.73**	-0.07	0.44	-0.03	0.59	-0.04	0.17
Conscientiousness3	-0.06	**0.80**	-0.04	0.39	-0.07	0.40	0.03
Conscientiousness7	-0.04	**0.88**	-0.04	0.36	-0.06	0.40	0.05
Conscientiousness8	-0.11	**0.89**	-0.10	0.28	-0.12	0.26	0.03
Feedback1	0.44	-0.09	**0.58**	-0.04	0.45	-0.05	0.24
Feedback2	0.58	-0.07	**0.73**	-0.04	0.46	-0.08	0.24
Feedback3	0.72	-0.04	**0.87**	0.03	0.59	0.05	0.48
Feedback4	0.67	-0.05	**0.85**	0.08	0.54	0.11	0.55
Internal Locus Of Control1	0.03	0.32	0.02	**0.89**	-0.04	0.76	0.09
Internal Locus Of Control13	0.06	0.28	-0.01	**0.53**	-0.01	0.39	0.02
Internal Locus Of Control14	0.01	0.27	0.03	**0.66**	-0.05	0.34	0.04
Motivation to Learn1	0.62	-0.06	0.47	0.01	**0.71**	-0.01	0.19
Motivation to Learn4	0.67	-0.07	0.57	-0.01	**0.86**	-0.01	0.30
Motivation to Learn5	0.47	-0.12	0.51	-0.14	**0.74**	-0.06	0.19
Openness to Experience1	0.03	0.34	0.01	0.65	-0.04	**0.86**	0.07
Openness to Experience3	0.01	0.26	0.01	0.50	-0.01	**0.75**	0.06
Openness to Experience4	0.04	0.36	0.04	0.65	-0.02	**0.81**	0.07
Declarative Knowledge	0.36	0.06	0.46	0.10	0.28	0.07	**0.88**
Generalization1	0.34	0.07	0.43	0.10	0.25	0.08	**0.84**
Generalization2	0.37	-0.01	0.43	0.06	0.23	0.07	**0.83**
Generalization3	0.28	0.03	0.29	0.01	0.23	0.01	**0.71**
Maintenance1	0.32	0.04	0.39	0.08	0.21	0.08	**0.87**
Maintenance2	0.38	-0.01	0.38	0.05	0.23	0.09	**0.47**
Maintenance3	0.31	0.02	0.37	0.05	0.19	0.02	**0.78**

Note: Cross loadings

From the Table 5, step 1 depict structural model not as strong as desired explaining only 30 percent of variance. Several paths were nonsignificant ($t < 1.96$), including from conscientiousness to transfer of training ($t = 1.02$); from openness to experience to transfer of training ($t = 0.01$); from internal locus of control to transfer of training ($t = 0.63$); and from autonomy to training transfer ($t = 1.28$). Only feedback was statistically significant construct influencing transfer of training ($t = 5.89$).

From the Table 5, Step 2 shows structural model explaining 61 percent of variance. Parameter estimates indicated all nonsignificant but two paths. Non significant variable, including from conscientiousness to motivation to learn ($t = 12.10$); from openness to experience to motivation to learn ($t = 12.10$); and from internal locus to control to motivation to learn ($t = 12.10$). Two paths were significant, including from feedback to motivation to learn ($t = 3.21$); and from autonomy to motivation to learn ($t =

12.10). From step 1 and step 2 only climate was found to be significant at and therefore tested for mediation analysis.

Step 3 shows the mediation results, learning motivation was partially mediating the relationship between transfer climate and training transfer. The standardized coefficients for the total effects on training transfer show that transfer climate had the strongest (β = .51) even though it occurred indirectly through learning motivation. Although, it seems that indirect effect acts as suppressor but the direct positive and indirect negative sign do not cancel each other, rather the path remains significant.

Table 5.

Step 2 Path Estimates between Independent & dependent variable (PLS path model without mediator)				
Endogenous Construct				R^2
Transfer of training				*0.306*
Independent variable > Dependent variable	β	t	*Bias corrected 95% confidence interval*	*Effect size* f^2
Conscientiousness to transfer of training	0.06	1.02	[-0.09 - 0.15]	0.009
Openness to experience to transfer of training	0.01	0.01	[-0.10 - 0.19]	0.000
Internal locus of control to transfer of training	0.04	0.63	[-0.09 - 0.21]	0.005
Feedback to transfer of training	0.46	5.89	[0.22 – 0.48]	0.235
Autonomy to transfer of training	0.10	1.28	[-0.04 – 0.19]	0.014
Step 2 Path Estimates between Independent variables & Mediator				
Endogenous Construct				R^2
Motivation to learn				*0.614*
Independent variable > Dependent variable	β	t	*Bias corrected 95% confidence interval*	*Effect size* $f2$
Conscientiousness to Motivation to learn	-0.01	0.03	[-0.10 - 0.07]	0.00
Openness to experience to Motivation to learn	-0.01	0.21	[-0.20 - 0.04]	0.00
Internal locus of control to Motivation to learn	-.07	1.53	[-0.18 - 0.08]	0.05
Feedback to Motivation to learn	0.18	3.21	[0.03 - 0.32]	0.11
Autonomy to Motivation to learn	0.63	12.10	[0.29 - 0.58]	0.30
Step 3 Mediation Assessment between IV-DV				
Independent > Mediator > Dependent	*Direct Effect*	*Indirect Effect*	*Total Effect*	*VAF*
Personality traits to Transfer of training		*Insignificant direct path*		
Transfer climate to Transfer of training	0.64**	-.13**	.51**	.20 (Partial mediation)

8. Discussion

The purpose of this study was to resolve the discrepancies in previous studies in order to clearly understand the relationship between personality-motivation-transfer and climate-motivation-transfer. Personality considered as trait oriented motivation variable have occupied a central role in predicting job performance. Three dispositional traits assessed in this study were not found to be antecedents of training transfer. Conscientiousness, openness to experience and internal locus of control didn't influence learning motivation and transfer. The effects of feedback were mediated by learning motivation, which positively influenced the dependent construct. More

specifically, 34 percent of variance in training transfer was explained by feedback, whereas 64 percent of variance via mediator construct i.e., learning motivation, was explained by feedback and autonomy. This indicates that climate effects are in fact important considerations in predicting transfer of training.

The significance of the path from feedback to training transfer, the strongest path found in this study, supports previous research. Kluger & DeNisi (1996) found that among dimensions of feedback, element of helpfulness dimension is more effective for the learner. Feedback at task motivation level or task learning level parallel with proper information helps to improve behavior. Creating attention at the appropriate level is helpful for trainees to reduce gap between the current performance and the desired goal of full application.

The finding with regard to feedback is in line with the expectations. The helpfulness component of feedback partially mediated by an increased learning motivation, leads that a supportive climate provides right information and also the drive to implement the skills & knowledge that are needed. Van den Bossche, Segers & Jansen (2010) exploring social network perspective found that "the amount of people providing feedback and the helpfulness of feedback are positively related to the motivation for and actual transfer of training."

Autonomy was the second strongest predictor, influencing motivation to learn but not transfer. Findings of this study on autonomy are consistent with previous research that suggests a relationship between autonomy and learning motivation. The relation between autonomy and job performance reduces to zero correlation where the work is routine or predictable (Latham & Pinder, 2005). So, professionals appreciate autonomy in environments that is directed towards learning/training which can be seen in enhanced learning motivation whereas routine work reduces its role in application of skills.

Somewhat unexpectedly, conscientiousness was not a significant predictor of the dependent variable, nor did it significantly influence learning motivation. The results are not consistent with the previous research (Barrick & Mount, 1991; Herold et.al., 2002; Lepine, Colquitt and Erez, 2000; Naquin & Holton, 2002). Despite the familiar contention that conscientious individuals, who display traits such as perseverance and diligence, invest greater efforts in training programs and therefore achieve greater success (McCrae & Costa, 1987). One explanation may lie in the fact that the achievement oriented facet of conscientiousness aligns more with the number of promotions and salary increase, so the link between specific FFM facet with specific criterion measures could have resulted in increased correlation.

Openness to experience being nonsignificant in the present study, contradicts with the previous research. For instance, Driskell, Hogan, Salas, and Hoskin (1994), Gough (1987), McCrae, Costa, and Piedmont (1992), Salgado (1997), have found a positive relationship between openness to experience and learning. The fact that one facet of the openness to experience is intellectual curiosity i.e., "an active pursuit of intellectual interests for their own sake" (Costa and McRae, 1991, p. 17). Because the

dependent construct was more application-focused, it may have created an outcome orientation element within the construct rather than just a learning orientation.

Similarly, the effect for internal locus of control on the transfer of training being non-significant, in some ways contradicts previous research. Generally, individuals high on internal-LOC interpret reinforcements which they receive from their surroundings as contingent upon their own actions, and are always more motivated to learn (Noe, 1986). So, if the training or work climate is controlled by trainer or supervisor, the trainees may depict lower levels of learning motivation and internal locus of control. For instance, Miller, et al (1982) found that business executives that possessed an internal locus of control were more innovative, risk oriented in entering new markets, and overall more dynamic in approach to business strategy and achievement of higher levels of organizational performance.
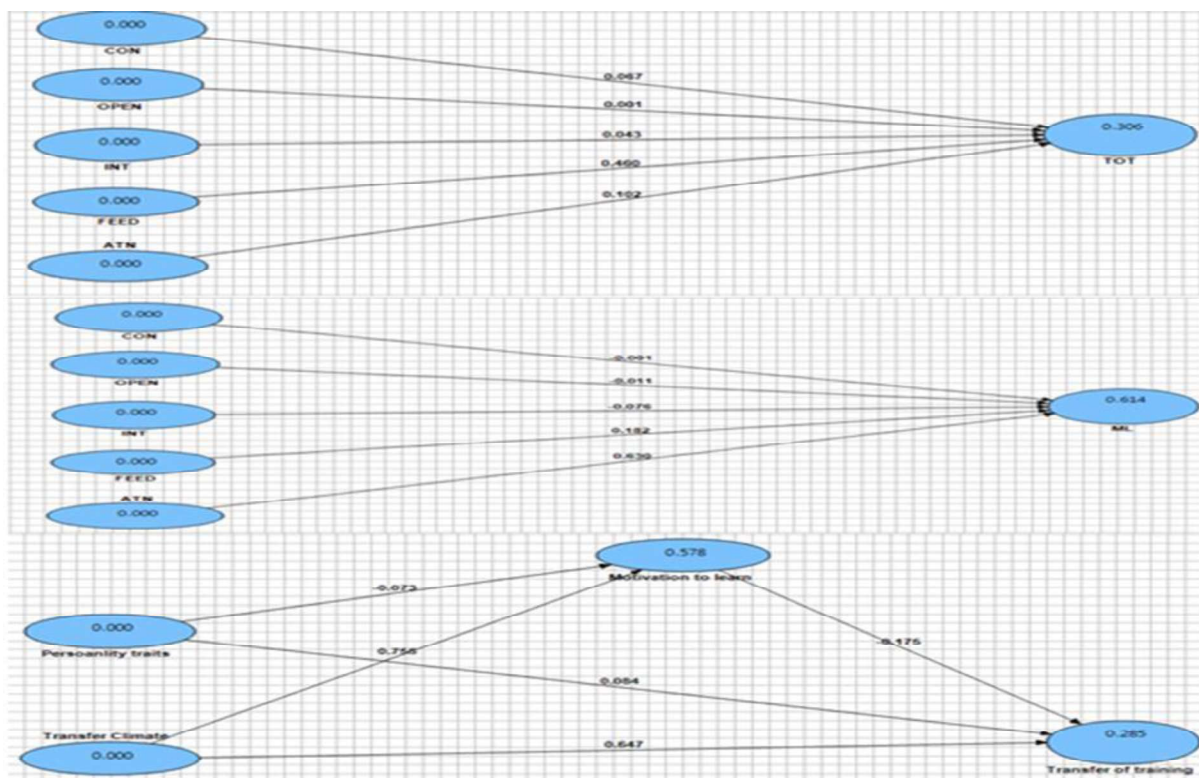
9. Implications

HRD studies have found situational factors influence motivation and behavior, and they act in conjunction with dispositional factors. In fact, dispositional characteristics being emphasized by the research to include in the future transfer research. But, the present findings suggest that transfer of training is significantly affected by transfer climate factors and not by dispositional factors. The results have been found to be contradicting with previous research. Organizations whose performance depends on their employees' eagerness to learn continually and use their learning to make changes in the workplace must be concerned with the work

environment factors. Organizations must be prepared to respond to the learning motivation of current employees. The findings suggest that each employees training transfer is influenced by motivation and each employees has a motivational profile affected by work climate.

The notion that training motivation and training effectiveness is determined by personality variables was not explicitly taken into account by the majority of prior empirical research. For instance, only conscientiousness is explicitly included in one model of training effectiveness (Colquitt et al., 2000), whereas openness to experience in two models of training motivation(Naquin & Holton, 2002; Rowold, 2007) so results of the present study highlight the need to include other Big Five traits (extraversion, emotional stability, and agreeableness) in future research.

It has been rightly said that *"the fate of a business does not depend on how much credit and debit it creates, but how much commitment, compassion and competence its workforce shows"* (cited in, Imran et al., 2015; p. 5). Training programs are considered interventions that do not fall in the category of development. However, the State Education Department considers training as developmental aspect for teachers i.e., teachers in future are promoted on the basis of how many training programs they have attended, which should be avoided. Rather benefits should be provided for teachers in the same year or session in which training is conducted and performance appraisal of teachers should be made in the same session in order to award outperformers. This will not only sustain motivation but can also lead to effective evaluation of training.

Similarly, the meta-analytic results based on the study on transfer of training can be somewhat biased due to low sample sizes. Infact, it has been pointed that *"differences in correlations across primary studies are often more a function of small sample sizes than meaningful differences in the nature of the relationship between two variables across settings"* (cited in, Barrick & Mount, 2001; p. 2). Therefore, it can be observed that meta analytic studies lack methodological facet in terms of sample size, so the relationships existing between variables need to understood well.

10. Limitations & Future research suggestions

This study has several limitations. For instance, items on conscientiousness, openness to experience and motivation scale performed poorly in this study. In future studies researchers need to explore whether after deleting items the factor structure represents construct operationalization. Another limitation of the study is that effect size of .50 was determined based on the estimates size of two meta analytic and 10 empirical research studies. However, the correlation estimates of 10 empirical studies cannot be compared with the correlation size of meta-analytic studies. The study not considering demographic variables as moderators can lead to biased estimates.

As compared to cross-sequential design to unearthen the facts whether time elapses change transfer nature from near transfer to far transfer (Barnett & Ceci, 2002) longitudinal design with repeated measures need to be used. Besides that the focus in

the present study was on transfer studies being well documented in the last ten year period, but most studies have ignored to determine the effect size of transfer of training. Therefore, it is necessary that the effect size of transfer need to established so that it help researchers to determine other facets of the study. Also, the personality and climate related factors that can protect teachers from the criticism need to be identified.

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