



Transfer of Training: A Reorganized Review on Work Environment and Motivation to Transfer

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Effective application of skills & knowledge gained from a training program to a job situation, i.e. transfer of training, has become a great concern in training issues. Transfer of learned skills at the actual workplace is subject to a number of factors, with work environment being one of those factors. Research has shown a relatively profound role of the work environment in delineating the construct of transfer. However, some of the most important characteristics of the work environment have arguably remained under-researched and are still going empirical testing. So, in earnest, this paper is an attempt to make a holistic review of the literature and methodology by going through summative, formative and meta studies published from 1988–2014 on transfer. This paper proposes a conceptual framework by recognizing the influential role of two forms of work environments (i.e., support and climate) on transfer of training, taking into account the mediating role played by transfer motivation with recommended methodological standards.

Keywords: training, learning, transfer of training, work environment, motivation to transfer

Introduction

Training has been recognized as one of the most frequently encountered human capital development interventions (Chiaburu & Tekleab, 2005), and typically described as ‘that planned intervention which is designed to enhance the determinants of individual job performance’ (Campbell & Kuncel, 2001). Moreover, it has been emphasized that ‘the main goal of training is not only to provide, obtain and improve the necessary skills but also help organizations achieve their goals and create competitive advantage by adding value to their key resources’ (Nikandrou, Brinia, & Bereri, 2009). Research bears witness to the fact that organizations are spending billions of dollars on training (Holton, Rouna, & Leimbach, 1998) with the expectation that it will enhance employee’s performance, maximize quality and productivity

of work, increase profits, minimize staff turnover, improve customer satisfaction and improve motivation (Yamhill, 2001; Velada, Caetano, Michel, Lyons, & Kavanagh, 2007).

From the extant literature, it is evident that regardless of these large investments, organizations remain unsure about the extent to which employees perform differently once back on the job (see, for example, Blume, Ford, Baldwin, & Huang, 2009). In most cases it has been found that only a small proportion of learned skills are actually transferred back to the job (Pham, Segers, & Gijsselaers, 2010) and it is acknowledged to be the paramount concern of organizational training initiatives (Baldwin & Ford, 1988; Tannenbaum & Yukl, 1992). Unfortunately, estimates suggest that only 10 percent of the expenditures typically result in transfer of learned behaviors (Georgeson, 1982; Baldwin & Ford, 1988; Holton & Baldwin, 2003; Kupritz, 2002; Velada et al., 2007). In fact, researchers (see for example, Facticeau, Dobbins, Russell, Ladd, & Kudisch, 1995; Burke & Baldwin 1999; Wexley & Latham, 2002) have revealed that 40 percent of the skills learned by trainees from the training program is immediately transferred at work, while 25 percent remain for a time period of six months and only 15 percent for a year. Therefore, from the above estimates it is clearly evident that investments on learning continue to yield deficient results (Burke & Hutchins, 2007), thereby making transfer a critical issue for both practitioners and researchers (Holton, Bates, & Ruona, 2000; Burke & Hutchins, 2007).

Notably, the importance of the issue of transfer of training in work organizations can be seen by the scholarly interest shown in regular publication reviews (see for example, Baldwin & Ford, 1988; Ford & Weissbein, 1997; Cheng & Ho, 2001; Russ-Eft, 2002; Bates, 2003; Alvarez, Salas, & Garofano, 2004; Merriam & Leahy, 2005; Kopp, 2006; Burke & Hutchins, 2007; Cheng & Hampson, 2008; Blume et al., 2010; Grossman & Salas, 2011). As such, there is no doubt that these published research findings are of value to management, but it is argued that there is still a long way to go for it to reach the culmination (Cheng & Ho, 2001).

Generally, it has been established that the transfer problem is related to training design, trainee characteristics and the work environment (Baldwin & Ford, 1988; Ford & Weissbein, 1997; Alvarez et al., 2004; Pugh & Bergin, 2006; Salas, Cannon-Bowers, Rhodenizer, & Bowers, 1999; Cheng & Hampson, 2008; Brown & McCracken, 2009; Blume et al., 2010; Martin, 2010). Moreover, in the year 1994, Foxon (1994) conducted a study and revealed that, among these three inhibiting factors, learner characteristics and training design and delivery category accounts to 22 percent and 35 percent of variance, while organizational climate was the leading influencing factor accounting to almost 42 percent of the variance.

Researchers have studied various learner characteristics such as self-efficacy (Machin & Fogarty, 2004), locus of control (Noe & Schimtt, 1986) and need achievement (Baldwin & Ford, 1988; Blume et al., 2010), while other studies have included job involvement, motivation to learn, motivation to transfer and cognitive ability (Colquitt, LePine, & Noe, 2000). However, the present review does not focus on learner characteristics, as observed from the study of Foxon (1994) it accounted only to 22 percent of variance.

Similarly, the other influencing construct, i.e., the work environment, has been argued to be a main predictor of transfer of training (Blume et al., 2010; Holton, Chen, & Naquin, 2003) but has been investigated less often than training design or trainee characteristics (see for example, Cheng & Ho, 2001; Burke & Hutchins, 2007; Brown & McCracken, 2009; Alvarez et al., 2004; Baldwin & Ford, 1988; Holton et al., 1998). On one hand, researchers have accentuated the need to explore other hidden variables (Cheng & Hampson, 2008) while, on the other hand, there is a lack of empirical evidence concerning specific aspects of work environment (Clarke, 2002). Notably, in the year 1995, Facticeau et al. conducted a study on state government employees and found that constraints posed by work environment severely affect the transfer. The study also revealed that employees were not motivated to transfer knowledge & skills or were simply overwhelmed, if they perceive too many constraints in the work environment. Similar findings could be seen in the study of Quiñones (1997).

Rouiller & Goldstein (1993) proposed two factor structure of work environment constructs, i.e., situational cues and consequences. As second order formative constructs, situational cues possess first order reflective variables such as supervisor support, peer support, equipment availability, opportunity to use learned skills at work, etc. Similarly, as second order formative construct, consequences possess first order reflective variables such as punishment, positive feedback, negative feedback, to name a few. Although, Blume et al. (2010) classified work environment constructs were classified into three different categories: support (peer support, supervisor support), transfer climate, and organizational constraints (lack of autonomy, situational constraints). The majority of studies have, nonetheless, measured work environment constructs by two categories, i.e., support and climate (Abdullah & Suring, 2011). Moreover, a meta-analytic study is not an exploratory analysis which determines the factor structure of a construct and also Blume et al., (2010) acknowledged that organizational constraints' variables were studied only in two studies. Therefore, taking cue from the extant research, the study follows the precise definition given by Rouiller & Goldstein (1993) of work environment as 'situations and consequences that encourage or prevent the transfer of the learned in training process to the workplace.'

Among various work environment dimensions, researchers (see for example, Holton et al., 2000; Olsen, 1998; Xiao, 1996) have found significant relation between social support and transfer of training. While others (see for example, Rouiller & Goldstein, 1993; Tziner, Haccoun, and Kadish, 1991; Van der Klink, Gielen, & Nauta, 2001) have indicated insignificant relationships between a supportive environment and transfer of training. On the other hand, Yelon, Sheppard, Sleight, and Ford (2004) proposed that among transfer climate dimensions autonomy is more effective than any other variable. They argued that autonomous employees develop their own resources and support and may even perform well without feedback. But Hackman & Oldham's (1975) job characteristics model is a well authenticated work in research which emphasizes that the quality of work is determined by an autonomous environment and feedback in carrying out a work including a learned skill.

Similarly, among other antecedents of transfer, Baldwin & Ford (1988) stressed that a person's motivation is hypothesized to influence learning and retention as well as generalization and maintenance. Earlier in 1996, Holton (1996b) differentiated the motivational construct into motivation to learn and motivation to transfer, where the former is thought to be influenced by personality, job attitudes and intervention readiness, and the later by work environment variables. In fact, researchers (see for example, Egan, Yang, & Bartlett, 2004) studied the essential role of work environment in limiting or empowering the motivation to transfer but the mediating effect was not discussed in detail. Therefore, the inclusion of motivation to transfer as a mediator between work environment and transfer of training, which is by large neglected by researchers, assumes more relevance in the current scenario. Indeed, it is still unclear whether motivation to transfer influences relationship between work environment and transfer of training. Therefore, this review taking lead from work environment perspective in general and social support (i.e., supervisory support, perceived organizational support) and transfer climate (i.e., feedback and autonomy) in particular, might contribute to a better understanding of the environment aspects that affect motivation and transfer of training.

Need for the Present Review

The recognition of the importance of training has never been greater than it is today. Training programs can play a critical role in ensuring the quality of people through continuous learning efforts. The training initiatives are expected to improve and sharpen the human skills with an impact on the way of their thinking and doing, thus making the maximum utilization of this valuable resource possible. In 1985, the recognition of the importance of training activities led in India to create the Ministry of Human Resource De-

velopment (Rao, 2004). In India, the importance of training can be seen by the corporate spending amounting to the huge sum of 200 Crore annually, i.e. 30 million (Pareek & Lynton, 2011). Not only the Central Government but States also contribute in its progress. In this context, the HRD Ministry and States in India allocate every year a certain portion of their GDP & SGDP for employee development in general and training in particular.

Since huge financial and human resources are employed for imparting the training programs, therefore, it becomes mandatory to examine the factors particularly in work environment which influence its outcome. It is only by way of studying that the actual picture of inhibiting/facilitating factors can be brought to fore, so that an improvement can be made. Moreover, as the study on transfer of training in our State is scant, we suppose that certain contributions will be made, which will be of great use for State administrators as well as for future researchers.

Therefore, the present study is undertaken to gain an insight regarding the transfer of skills and knowledge at actual workplace by reviewing the major studies of the past decade, by also highlighting the Summative, Formative and Meta studies on transfer of training. The study makes an attempt to review the literature underlining the impact of work environment factors (i.e., social support and transfer climate) on transfer of training besides attempting to review the extent to which motivation to transfer mediates the relationship between work environment and transfer of training. Moreover, this study attempts to update the researchers to employ standard methodological principles and procedures particularly in transfer studies.

Review of Transfer of Training

In this dynamic era, 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. It is in view of this that the essence of any training program can be understood and sustained, which increases the knowledge, skills and abilities (KSA's) of the trainees. More importantly, the degree with which individuals effectively apply the skills and knowledge gained from a training program to a job situation, i.e., transfer of training, (Wexley & Latham, 1991) warrants the training, but unfortunately this is rare. From the last decade, training evaluation in general and transfer of training in particular has been an enduring problem for psychologists, HRD specialists, researchers and practitioners, to name a few. It is in light of this issue that several transfer models have been proposed by researchers (see for example, Huczynski & Lewis, 1980; Baldwin & Ford, 1988; Mathieu, Tannenbaum, & Salas 1992; Holton et al., 1998). Moreover, researchers (see for example, Mathieu & Martineau, 1997; Elangovan & Karakowsky, 1999; Colquitt et al., 2000) have proposed alternative training effective-

ness models that contain only individual, organizational and contextual factors as antecedents of learning and transfer of learning. However, among them the Baldwin & Ford's model is considered as one of the premier and most frequently cited framework in the transfer of training literature (Brown & Sitzmann, 2011).

Notably, Baldwin and Ford (1988), while examining transfer of training issues, stated that the transfer process consists of three components: training input factors, training outcomes, and conditions to transfer. Training input factors include: individual, design and environmental characteristics, while condition to transfer or transfer outcomes from Baldwin & Ford's (1988) argument does not remain confined to generalizing learned skills to the job but it includes maintaining learned skills over time in the job. In fact, Hamid, Saman & Saud (2012) reaffirmed transfer like far transfer, near transfer and creative transfer actually lead to generalization and maintenance of knowledge. Generally, from a layman's or novice researchers perspective, absence in maintaining knowledge and even generalizing the same can depict that either the intervention is not good enough, or trainees are not good learners or the model is not the correct one. But in 1996, Holton (1996b) totally re-conceptualized the transfer model and operationalized performance outcome, as well as training outcome into two different concepts. Performance outcome measures included motivation to transfer, the design of training and work environment, and training outcome measures were individual learning, individual performance and organizational results. Therefore, Holton's model did address specifically one of the biggest risks that arise when training outcomes from a training intervention are positive but on-the-job performance outcomes remain poor. In his opinion, any failure to achieve outcomes from an intervention would not be attributed to an intervention when it could be due to moderating/mediating variables and work environment variables, like the work climate may be not supportive for transferring skills. Thus, it can be derived from the Holton's model that training intervention needs not to be changed but rather organizational development would be needed. Therefore, the need of the hour is to address the transfer issue based on prominent models that have equally emphasized the importance of work environment and moderating/mediating variables.

Work Environment Influencing Transfer

Transfer Climate

From a recent review Blume et al., (2010) identified that, among the work environment constructs, transfer climate was found to have the highest relationship with transfer (i.e., effect size of 0.27 followed closely by support 0.21). Actually, transfer climate is one of the most intensively studied and discussed situational characteristics in transfer research (Yamnill &

McLellan, 2001; Burke & Hutchins, 2007; Gegenfurtner, Veermans, Festner, & Gruber 2009; Grossman & Salas, 2011), and typically described as those aspects of the work environment that influence training transfer (Rouiller & Goldstein, 1993). It refers to salient organizational characteristics that are an integral part of the work environment like: positive feedback, negative feedback, autonomy, to name a few. Notably, the job characteristic model proposed by Hackman & Oldham (1976) encompassing feedback, autonomy, skill variety, task identity and task significance is said to be in line with the transfer climate framework (Rouiller & Goldstein, 1993). These salient organization and work characteristics are said to be critical to work- and training-related attitudes as well as motivation (Weisweiler, Nikitopoulos, Netzel, & Frey, 2013). Moreover, researchers (see for example, DeVaro, Li, & Brookshire, 2007; Fried & Ferris, 1987; Harvey, Billings, & Nilan, 1985) argued that people who work high on core job dimensions are more motivated, satisfied and productive than those who do not. Within these job characteristics dimensions, autonomy and feedback have been found to have a strong effect on job motivation in general (Hackman & Oldham, 1976) and transfer motivation in particular (Rouiller & Goldstein, 1993). Autonomy given to trainee back at job provides an opportunity to perform freely in order to achieve and improve working results (Hackman & Oldham, 1976), and the higher this opportunity, the more responsible the person feels, the more the person is satisfied and motivated. In a similar vein, researchers (see for example, Colquitt et al., 2000; Egan et al., 2004; Leitl & Zempel-Dohmen, 2006) found that training as well as transfer motivation can be fostered by the feeling of autonomy at the workplace. For that reason, autonomy can be said to be the critical post-training condition, as trainees feel free to outperform newly learned behavior, thereby making it an integral part of learning and training motivation (Weisweiler et al., 2013). Even, Blume et al., (2010) echoed autonomy and feedback as the most important transfer climate constructs influencing transfer, where autonomy makes trainees feel responsible for their work and training results respectively, and feedback supplies them with knowledge about their performance.

Taking cue from the feedback intervention theory (FIT) proposed by Kluger & DeNisi (1996), what it holds regarding transfer of training is that feedback provided on the application of newly learned knowledge and skills is helpful, as it helps to reduce the gap between the current performance and the desired goal of full application. Researchers (see for example, DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004) found the positive impact of feedback on goal setting and positive training outcomes. However, from the social network perspective, what is usually taken into consideration is from how many different sources a person receives feedback, because of its impact on transfer. As recommended in literature, the large number of

people giving diverse feedback fosters transfer rather than only few people giving frequent feedback (Van den Bossche, Segers, & Jansen, 2010). But it has been found that increasing feedback can even be detrimental for learning (see for example, Schimdt, 1991; Russ-Eft, 2002).

No doubt, feedback seems to be more helpful in transfer of skills, but due care should be taken for its maintenance when trainees transfer the learned knowledge and skills, as its inappropriateness may turn out to be counterproductive. However, the recognition of source that fosters transfer is more important, as there is a dearth of research on feedback in transfer of training process (Van den Bossche et al., 2010). Therefore, the study on said variable assumes more relevance in outlining the source (i.e., peer, supervisor), which fosters motivation as well as increases transfer of learned behavior especially following a longitudinal approach.

Based upon the meta-analytic reviews and previous empirical studies, the authors formulate the following proposition:

P1 Transfer climate will be significantly related to transfer of training.

Social Support

Support provided by the organizational environment has been found to be the main antecedent of transfer of training (Holton et al., 2003). Particularly, supervisors support has been recognized as the most influencing but the least examined factor in training transfer processes (Blume et al., 2010). In the year 1992, Broad & Newstrom confirmed that, among the three identified major role players in training, managers and supervisors of the trainees acted as a crucial element in the transfer process. Perhaps various researchers (see for example, Birdi, Allan, & Warr, 1997; Burke & Hutchins, 2007; Martin, 2010) maintain that the supervisors support is vital to transfer climate, because they encourage their employees to transfer skills and even help them by removing any obstacles that inhibit skills application (Lancaster, Di Milia, & Cameron, 2013). Among social support a recent study by Blume et al., (2010) indicated that supervisor support has a moderate relationship (0.31) than peer support (0.14), but a word of caution should be taken here as these relationships were based on small sample sizes.

Notwithstanding research arguments supporting the managers' role, there continues to be no unanimity among researchers regarding supervisor behaviors that facilitate transfer (Clarke, 2002; Hawley & Barnard, 2005). Researchers (see for example, Ford, Quiñones, Segó, & Sorra, 1992; Brinkerhoff & Montesino, 1995; Seyler, Holton, Bates, Burnett, & Carvalho, 1998; Bates, Holton, & Burnett, 1999; Cromwell & Kolb, 2004; Hawley & Barnard, 2005) confirmed supervisors support as a significant factor in the training transfer. But recent studies of Van der Klink et al.

(2001), Chiaburu & Marinova (2005), and Blume et al. (2010) revealed moderate or insignificant relationship between supervisors support and training transfer. The reasons for these divergent findings can be attributed to the fact that the managers' role as a boss, mentor and guide actually starts from pre-training, during training and continues in a post training context. Supervisors support is equal to parental support, so organizations should adequately guide supervisors through proper channels to take trainees into confidence from pre-, during and postintervention time.

Recently, an emergent aspect of social support which has received more attention among researchers is trainees' perceived organizational support (POS). Perceived organizational support (POS) is defined as an employee's belief about how much an organization cares about them and their contributions to the organization (Rhoades & Eisenberger, 2002; Aselage & Eisenberger, 2003). Notably, it has been seen that organizational support boosts employee's self-esteem, increases satisfaction and commitment (Ng & Sorenson, 2008), it makes employees feel obligated towards the organization, which, in turn, increases work engagement (Salanova, Agut, & Peiro, 2005). Therefore, employees who observe that their organization supports and values them will exhibit their commitment by being more motivated in training situations and by applying the newly learned behavior (Russell, Terborg, & Powers, 1985; Tansky & Cohen, 2001; Pidd, 2004). In a similar vein, researchers have mainly examined the role of peer support, supervisor support (see for example, Rodgers & Hunters, 1991; Russell et al., 1985), while least attention has been given to perceived organizational support stemming from organization (Chiaburu, Van Dam, & Hutchins, 2010). McCraine (2006) found a positive significant relationship between organizational support and training transfer. However, recently Chiaburu et al., (2010) found that supervisors support positively influences motivation to transfer than organizational support.

Despite any learning from the training program, an unsupportive climate may block the transfer of new learned behavior back to the job. So, the need to examine ways in which organizations may influence perceptions of organizational support among their employees has more relevance in training transfer processes. If supervisors support is equal to parental support, the organizational support then can be equaled to societal support. Therefore, it is evident that trainees who perceive support from both distal (POS) and proximal sources (supervisor support) will be more motivated (to transfer), which, in turn, will be depicted by a generalization and maintenance of training knowledge.

Based on the considerable support emanating from the foregoing literature, the authors propose as under:

P2 Social support will be significantly related to transfer of training.

Motivation to Transfer

Motivation is one of the most frequently examined variables in research particularly vis-à-vis transfer of training. Notably, in training situations, motivation has been found to have a significant impact on acquisition of knowledge and skills (Quiñones, 1997; Tracey, Hinkin, Tannenbaum, & Mathieu, 2001), motivation to transfer (Facteau et al., 1995; Tai, 2006) and transfer outcomes (Scaduto, Lindsay, & Chiaburu, 2008). Motivation is defined as ‘a variability in behavior not attributable to stable individual differences (e.g. cognitive ability) or strong situational coercion’ (Quiñones, 1997). It is perhaps in this view that motivation effects cognitive engagement, which subsequently affects the transfer of training (Pugh & Bergin, 2006).

Among the relevant motivation dimension, motivation to learn was found to be a key variable linking pre-training characteristics and training outcomes (Quiñones, 1995), while motivation to transfer was found to be a strong predictor of positive transfer after one year by Axtell, Maitlis, and Yearta (1997). In the year 2002, Naquin & Holton completely re-conceptualized both constructs (i.e., motivation to learn and motivation to transfer) by creating construct motivation to improve work through learning (MTIWL). However, Scaduto et al. (2008) maintained that both constructs are important for transfer of training, and again demarcated them as two distinct constructs. The concept of motivation to transfer was given by Noe (1986), who stated it as ‘the trainees intended effort to utilize skills and knowledge learned in training settings to a real world work situation.’ Researchers (see for example Axtell et al., 1997; Nijman, Nijhof, Wognum, & Veldkamp, 2006; Scaduto et al., 2008) have found the direct influence of motivation to transfer on transfer outcomes. Unfortunately, the direct influence of motivation to transfer with transfer outcomes in research has been somewhat limited (Seyler et al., 1998; Kontorghiorghes, 2002; Machin & Fogarty, 2004). Although Colquitt et al., (2000) advocated motivation as a multifaceted variable primarily influenced by many variables, however, in the post intervention context, it is the motivation to transfer that has been shown to be primarily influenced by transfer climate factors. In fact, work environment variables have been found to motivate trainees to transfer their skills to the job, or discourage trainees to transfer what they learned (Tannenbaum & Yukl, 1992).

Therefore, the present study suggests the inclusion of the motivation to transfer construct in future studies to explore its role on transfer outcomes directly (Burke & Hutchins, 2007), as well as its mediation effect between work environment and transfer outcomes but using a longitudinal design.

Therefore, taking note of the evidences from the extant literature, the authors propose as under:

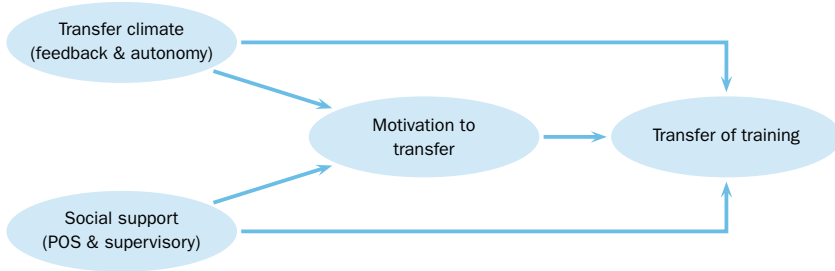


Figure 1 Conceptual Framework

P3 *Motivation to transfer will significantly mediate the relationship between work environment variables (i.e., transfer climate; Social support) and the transfer of training.*

Conceptual Framework

The transfer framework is built after studying various formative, summative and meta-studies on transfer of training from 1988-2014. In fact, the proposed framework delineates the motivation construct in terms of transfer rather than a function of learning plus transfer. The reason for this proposed framework is to gauge the impact of work environment variables on individuals transfer motivation in a post intervention context situation.

The proposed framework in Figure 1 is built after considerable evidences, emanating from the empirical surveys asserting the impact of work-related characteristics most on transfer motivation that on learning motivation. Therefore, the distinction between motivation constructs (in terms of learning and transfer) is necessitated by the present framework in the post-intervention context and it also supports that, under different considerations (see for example, sample, design and context), results can be varied.

Proposed Methodological Standards

Although there are some empirical research studies capturing the predicted role of social support and transfer climate on transfer of training directly as well as indirectly, but, it is quite unfortunate that standard methodological principles and procedures have been largely neglected. For instance, studies on transfer of training has been well documented in the last ten year period but most studies have ignored to determine the statistical power of the study before collecting data, determination of adequate sample size for regression or causal analysis, data collection techniques, i.e., cross-sectional or longitudinal, to name a few.

For a quick glance on those issues, the empirical studies of the last 5 years (i.e., 2010–2014) on transfer of training are listed in Table 1. It can be

Table 1 Prior Studies Examining Similar Variables

Author	Sample size	Design	Technique	Results
Lee, Lee, Lee, and Park (2014)	365	Cross sectional	Maximum Likelihood	Supervisory support was significantly related to MTT and TOT. Motivation to transfer was significantly related to TOT.
Maung and Chemsripong (2014)	350	Cross sectional	Maximum Likelihood	Supervisory support was not significantly related to TOT.
Madagamage, Warnakulasooriya, and Wickramasuriya (2014)	152	Cross sectional	Maximum Likelihood	Supervisory support was not significantly related to TOT.
Homklin, Takahashi, and Techakanont (2013)	228	Cross sectional	Maximum Likelihood	Motivation to transfer was not significantly related to TOT. Social support was significantly related to TOT.
Pham et al. (2013)	126	Longitudinal	Maximum Likelihood	Supervisor support and job autonomy were significantly related to TOT.
Shariff and Al-Makhadmah (2012)	263	Cross sectional	Ordinary least squares	Social support was significantly related to TOT.
Ascher (2012)	272	Cross sectional	Ordinary least squares	Work environment were variables were not significantly related to TOT. Motivation to transfer was significantly related to TOT.
Hussain (2011)	89	Cross sectional	Ordinary least squares	POS and SS were significantly related to TOT.
Manju and Suresh (2011)	201	Cross sectional	Ordinary least squares	Supervisory support was not significantly related to TOT.
Chiaburu et al. (2010)	111	Longitudinal	Maximum Likelihood	POS and SS were significantly related to TOT.
Ismail, Mohamed, Sulaiman, and Sabhi (2010)	110	Cross sectional	Ordinary least squares	Supervisor support was not significantly related to Motivation. Supervisory support was significantly related to TOT.

Notes SS – supervisory support, MTT – motivation to transfer, TOT – transfer of training, POS – perceived organizational support.

observed that recent studies from 2010 to 2014 vary in their results section. Although each and every study is a quality in itself on transfer, there exists large discrepancies in most studies. Firstly, sample sizes are varying, researchers (see for example, Kelley & Maxwell, 2003) argued that sample sizes should be adequate enough to reach significant results, which also

supports the calculated power of the study. Moreover, with large number of published meta-analytic studies on transfer, it is easy to determine sample and power. Unfortunately this is rare. Secondly, the data collection design is also varied in the studies, i.e., cross sectional/longitudinal. Researchers (see for example, Pearl, 2000; Mulaik, 2009) argued that in order to examine causal influences, a temporal precedence condition between exogenous and endogenous should be upheld. In fact, the assessment of variables at different times (i.e., longitudinal design) provides a measurement framework that is consistent with aforementioned condition (Kline, 2010). But longitudinal design is mostly not employed. Thirdly, with the advent of various statistical softwares, well-known techniques can be performed (see for example, ordinary least squares/partial least squares/maximum likelihood/ weighted least squares) to analyze the data. However, each technique has its own advantages as well as limitations. For instance, maximum likelihood techniques work on large sample sizes, whereas least squares can work on small samples. Although, there are other things that need to be considered like: the number of parameters to be estimated, the number of observed variables as well as latent variables, but unfortunately this is rare and researchers neglect to report the reason or rationale behind the use of a specific technique. Lastly, there are mixed results like on some occasions work environment variables and motivation act as a strong antecedent, while on other occasions it is not. The reason for these mixed and inconclusive results is because researchers neglect the mediating influences that can result in a highly biased estimate of the effect of independent variables on dependent variables (Gollob & Reichardt, 1991). Moreover, research has accentuated the need to include target population as employees rather than students in management research (Sears, 1986).

Therefore, taking these principles and procedures into consideration, the authors put forth the following proposition:

- P4 *The significant relation between endogenous and exogenous variables will be influenced by the research design.*

Limitations & Future Research Directions

The proposed framework conceptualized from literature is not a model in essence. There is an accepted fact that. To be considered as a model, it should fulfill the standard criteria set by Klimoski (1991) and Dubin (1996). Unfortunately, the majority of research papers actually conceptualize the framework and later claim them as a model. Although Kirkpatrick argued that it is not necessary that a framework should meet the all the criteria listed by Klimoski, it is acceptable whatever you call as long as it helps researchers to clarify, understand and offer guidelines and sugges-

tions to study the transfer. Notably the model considers all antecedents, mediation-moderation factors as well as multi-dimensionality of the outcome. But the proposed framework did not study that part, rather the focus was only on work environment and single mediation (i.e., motivation to transfer) that too in the post training context. Therefore, the present review framework is limited to the extent in which empirically tested antecedents, like trainee characteristics, training design as well as multiple-mediation, multiple-moderation and multi-dimensionality of outcomes, have not being studied. It is pertinent to mention here that researchers believe what Passmore (1983) has rightly stated that 'there is nothing so practical as good research.' Therefore, it is an obligation from our part to freely exchange information on objectives, methods and criteria regarding training evaluation in general (Holton, 1996a) and transfer of training in particular.

The current review is expected to open up new avenues of investigation, while trying to make a small contribution in the immense field of training transfer. A brief contribution is cited for ready reference as: Firstly, the study of Van den Bossche et al. (2010) questioned the role of transfer climate and social support fostering motivation to transfer learned skills, but the combined impact of both environment dimensions, quantitatively in particular and qualitatively in general, is mostly neglected by researchers. Secondly, various authors have empirically tested transfer strategy (see for example, Gollwitzer, 1999; Latham, 1997; Pham, Segers, & Gijsselaers, 2010; Pham et al., 2013) and trainee cognitions (Chaiburu et al., 2010) as the key mediators between training inputs and training transfer, but the mediating role of motivation to transfer is mostly neglected (Van den Bossche et al., 2010). Thirdly, researchers have largely neglected the methodological aspect in terms of sample sizes, power of the study, data collection techniques (cross-sectional/longitudinal), statistical analysis techniques (Maximum likelihood/Weighted least squares/Partial least squares) in training literature in general and transfer of training in particular. Lastly, in training research, employees should be used as a target population in future studies, because college students have been found to behave differently than non academic samples (Aamodt, 2012). In addition, there is a lack of empirical evidence on these concerned aspects, which is required to be urgently addressed.

Conclusions

Research on transfer is not the latest concern of researchers and practitioners; in fact much has been already known from the studies of Thorndike & Woodworth (1901), but it still remains an unresolved issue for organizations. Where research has identified factors at individual, methodological and organizational levels, the importance given to work environment vari-

ables should not be overseen, which actually justifies the training program efforts. This holistic review focused on work environment defined in terms of climate and support is directly as well as indirectly related to the transfer of trained behaviors. Notably, the present review helps to focus more on why training works rather than sticking to the old adage on training, i.e., whether training works, because the need to study the impact of work environment variables on post-training behaviors is all the more important. Therefore, the present review includes not only theoretical contributions but also practical implications.

In addition, what we observe is that there remains a controversy in identifying the main variables that will help in not only justifying training efforts but that will also enhance the transfer of skills. Notably, our review based on previous qualitative and quantitative studies helped to deduce that social support as well as transfer climate have a profound relevance in the environment, because trainees perceive it supportive in the work setting and it continues to be a consistent predictor of training transfer. Similarly, what we observed is that the majority of studies stress that the support emanating from organization, as well as from supervisors and peers, directly influence trainees' transfer of skills. However, transfer climate variables, i.e., feedback and autonomy, indirectly influences transfer through motivation constructs. In addition, the present review stresses the role of motivation constructs not only in pre-training but also in a post-training context, which may be helpful in training transfer by reaching high performance levels in intermediate stages of transfer, i.e., after 1 month, 3 months, or 6 months (Chiaburu et al., 2010). Therefore, the central role played by climate and support in facilitating the transfer of training will help to go beyond the question of whether training works to a more valid one, i.e., why training work.

Notably, the justified causation argument will hold more relevance when the methodology and design of the study is as per recommended principles, which include temporal precedence, association, isolation, correct effect priority and distributional form. Otherwise, the measurement error will remain a mystery for a researcher and transfer studies will be written infinitely with no concrete results.

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