

Chapter 5

A Systemic Perspective of Training Transfer

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5.1 Introduction

During the last two decades, the topic of learning transfer has drawn special attention among human resource development (HRD) scholars and practitioners. What triggered this strong emphasis on the learning transfer topic was its critical importance with regard to training program effectiveness as well as estimates indicating that only 10 to 15% of what is learned in training is actually transferred back to the job. Given the low learning transfer figures, the widely held belief has been that unless the training transfer process is maximized, the return of training investments, and thus the reputation of the training function, can be greatly compromised.

In the early years, training transfer practice, research, and thinking were significantly influenced by the seminal work of Broad and Newstrom (1992) and Baldwin and Ford (1988). Relying on Newstrom's (1986) study, Broad and Newstrom (1992) prioritized the main training transfer barriers as follows:

- Lack of reinforcement on the job
- Interference from immediate work environment (such as work and time pressure, insufficient authority, ineffective work processes, and inadequate equipment or facilities)
- Nonsupportive organizational culture
- Trainees' perception of impractical training programs
- Trainees' perception of irrelevant training content
- Trainees' discomfort with training change and associated effort
- Separation from inspiration or support of the trainer
- Trainees' perception of poorly designed/delivered training program
- Pressure from peers to resist change.

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5.2 Training Transfer Strategies

A close look at the above-described training transfer barriers will reveal that a sound instructional system design by itself is not enough when it comes to training program effectiveness. The success of the training program greatly depends on a number of work-environment factors which influence the extent to which the trainee will effectively transfer the newly learned skills and knowledge back to the workplace. To alleviate such training transfer constraints, Board and Newstrom (1992) recommended three types of training transfer strategies: transfer strategies before training, training transfer strategies during training, and training transfer strategies following training. A brief description of each set of strategies follows.

5.2.1 *Transfer Strategies Before Training*

Management support and endorsement of the training effort can greatly influence the success of any training intervention. According to Broad and Newstrom (1992),

support from the manager greatly strengthens the likelihood that trainees will apply the new learning effectively on the job. (p. 60)

It is imperative, therefore, that such support and commitment from management is gained before training takes place.

What can also facilitate the training transfer process is supervisory and trainee involvement in the needs-analysis phase of the training program. When trainees are involved in the needs-assessment procedures, they will be more likely to be receptive to training, since they will be able to associate it to their personal needs. At the same time, supervisory involvement in the needs-analysis process will assure that the training program will meet high-priority needs, as perceived by them and the projected participants. Broad and Newstrom (1992) further recommended that managers and supervisors should participate in sessions regarding the purpose and scope of the training programs to be attended by employees. By doing so not only will they familiarize themselves with the intended outcomes of the training program, it will also signal to the trainees that the new skills and knowledge to be learned are valued by the organization.

Involvement of prospective trainees during the design phase of the training program can also aid the training transfer process. Broad and Newstrom (1992) emphasize that employees who are given the opportunity to express what their concerns, expectations, and needs for additional skills are, will be more likely to be committed to the goals and objectives of the training program. Employees will also be more receptive and attentive to training if their managers or supervisors explain to them how training will assist them in improving their skills as well as their advancement potential. Aside from trainees, supervisors should also be involved in the instructional design process. By reviewing the training content before the program is finalized, supervisors can make sure that the content is based on the actual needs of the

organization. Moreover, Broad and Newstrom (1992) recommend that before training takes place the organization should conduct a supervisory coaching attitudes and skills assessment.

As Broad and Newstrom (1992) stated,

supervisors must be convinced that even the best off-the-job training for their employees generally requires that the supervisors engage in follow-up observation, emotional support and encouragement, discussions to review the highlights of what was learned and how to adapt it to their specific jobs, and frequent praise for progress made. (p. 64)

Other pretraining activities that can facilitate training transfer are the allocation of company time to trainees in order to complete precourse assignments, the development of a contract between the trainee and the supervisor in which each party's commitment to maximize the results of the training is specified, the pilot testing of the instructional system, as well as the establishment of a positive training environment in which the trainees can maximize their learning experience (Broad and Newstrom 1992).

5.2.2 Transfer Strategies During Training

Once the appropriate people are selected for training, certain strategies during the implementation phase of the training program can also have a positive impact on learning transfer. One such strategy is the prevention of work-related interruptions. According to Broad and Newstrom (1992), the training process should be free of disruptions and should not lose its sense of continuity, rhythm, and flow. Otherwise, the trainee may run the risk of missing important material, which in turn can inhibit learning, and thus learning transfer.

Another strategy that can facilitate transfer of learning is the practice of allocating work assignments to coworkers while the trainee is attending training. Thus, upon return from training, the employee will not have to face a mountain of work which in turn could force him or her to revert to old skills in order to expedite task completion (Broad and Newstrom 1992). Another strategy to be followed during the training implementation phase of training programs is to ask trainee supervisors to attend the training program. Such an act will communicate managerial support toward the training program.

5.2.3 Transfer Strategies Following Training

According to Broad and Newstrom (1992), supervisory support and involvement after the completion of training can significantly influence the success of the training transfer process. Broad and Newstrom (1992), therefore, recommend that the trainee's reentry to the workplace is accompanied by communicated support from the supervisor. The supervisors should also give the trainees the opportunity to

practice the newly learned skills and knowledge, as well as reduce job pressures initially. That way, the trainees can take their time to solidify the new patterns of behavior.

Systematic reinforcement of the desired work behaviors exhibited by trainees is another way with which supervisors can facilitate the transfer of training to the workplace (Broad and Newstrom 1992). Supervisors can also schedule trainee briefings for coworkers during which the trainees assume the role of the trainer. Such briefings will increase the trainee's likelihood of retention as well as his or her commitment to training transfer. Supervisors can further facilitate the training transfer process by setting mutually accepted measurable and specific performance goals with the trainees (Broad and Newstrom 1992). Supervisors can finally facilitate transfer of training by implementing a promotional policy and recognition system that reward the application of training knowledge.

5.3 Baldwin and Ford Training Transfer Comprehensive Review

While Broad and Newstrom addressed the practical aspect of training transfer by providing certain guidelines and training transfer strategies, a comprehensive research review by Baldwin and Ford (1988) contributed to the development of a conceptual framework which, still date, influences training transfer research. In their review, Baldwin and Ford (1988) defined positive transfer of training as

the degree to which trainees effectively apply the knowledge, skills, and attitudes gained in a training context to the job. (p. 63)

In reviewing research on training transfer, Baldwin and Ford (1988) utilized a framework which described the transfer process in terms of training-input factors, training outcomes, and conditions of transfer. According to the followed framework, training-input factors and training outcomes were considered to have direct and indirect effects on the conditions for transfer.

Training-input factors included the training design, trainee characteristics, and work-environment characteristics. Training design factors pertained to learning principles, the sequencing of training material, and the job relevance of training content. Trainee characteristics included trainee ability and skill, motivation, and personality attributes. The work-environment category included such factors as supervisory and peer support for training as well as constraints and opportunities to perform learned behaviors on the job. Training outcomes were defined as the amount of original learning that occurred during training and the retention of that material after the training program was completed. Lastly, the conditions of transfer included the generalization of material learned in training to the job environment, and the maintenance of the learned material over a period of time on the job. What follows is a brief description of the various factors comprising each category of the training transfer process.

5.3.1 Training Input Factors: Training Design

In examining the effects of training design on training outcomes and conditions of transfer, Baldwin and Ford (1988) relied on 38 empirical studies dating back to 1901. The authors stated that a large proportion of the empirical research on training transfer has concentrated on the improvement of training design through the incorporation of the following learning principles: identical elements, teaching of general principles, stimulus variability, and conditions of practice. The identical elements learning principle postulates that the training transfer process is maximized when there are identical stimulus and response elements in both the training and transfer settings. Empirical research has shown that identical elements can increase the retention of both motor and verbal behaviors (Baldwin and Ford 1988).

The teaching of general principles hypothesizes that training transfer occurs best when the trainees are taught general rules and theoretical principles in addition to applicable skills. Research in a variety of settings has demonstrated that the teaching of general principles can indeed facilitate transfer of training (Baldwin and Ford 1988). The principle of stimulus variety at the same time supports the notion that training transfer is maximized when the trainees are exposed to a variety of relevant training stimuli. In other words, if the trainees are exposed to several examples of a concept to be learned they are more likely to see its applicability in other situations as well (Baldwin and Ford 1988).

The training-design issues considered with regard to conditions of practice mainly deal with decisions in relation to massed or distributed training, feedback, and degree of overlearning. Massed or distributed training is concerned with whether or not to divide training into segments. Research has shown that material learned under distributed practice is retained longer than material learned by massed practice. However, research has also shown that complex tasks are learned better when massed practice sessions precede distributed sessions (Baldwin and Ford 1988). In terms of feedback, which constitutes an important learning facilitator, its effectiveness critically depends on its timing and specificity (Baldwin and Ford 1988). Overlearning, or the process of providing the trainees the opportunity to practice beyond the mastery of task, has also been proven to facilitate greater retention of training material (Baldwin and Ford 1988).

5.3.2 Training Input Factors: Trainee Characteristics

The effects of trainee characteristics on training transfer were also investigated by Baldwin and Ford by relying on the results of 25 empirical studies. The trainee characteristics examined fell into the following two categories: individual-difference factors affecting training transfer, and motivational strategies affecting training transfer. With regard to the individual factors category, the reviewed empirical research identified need for achievement, locus of control, and general intelligence as personal attributes that could influence learning and training transfer capability.

In terms of learner motivation, Baldwin and Ford suggested that Vroom's expectancy model (Vroom 1964) could serve as a framework for understanding the motivational factors that could affect the training transfer process. Vroom's expectancy model suggests that an individual will make the effort to reach a certain level of performance if he or she expects that the effort will lead to the desired performance level, and at the same time the exhibited performance will in turn lead to a valued outcome or reward. According to expectancy theory, if the expectancies between effort and performance as well as performance and outcome are weak, then it is unlikely that the individual will make the effort to perform a certain task.

Thus, by utilizing the expectancy model, Baldwin and Ford (1988) assert that one can identify the environmental factors that can influence an individual's expectancies and subsequent motivation to transfer the newly learned skills back to the job.

5.3.3 *Work-Environment Characteristics*

In analyzing the effects of work-environment characteristics on training transfer Baldwin and Ford (1988) considered studies which took place between the years of 1953 and 1984. The work-environment characteristics that were cited as important contributors to training transfer were those of extrinsic rewards and promotion opportunities upon transfer of new attitudes back to the workplace, goal-setting involvement, as well as a supportive supervisor. With regard to supervisory support, what was found to contribute the most to training transfer was precourse discussion with one's superior and subsequent supervisor sponsorship of the training process.

As far as skill maintenance is concerned, Baldwin and Ford (1988) stated that decreases in the use of trained skills on the job could be attributed to constraints in the work environment or lack of rewards for using the new skills. Thus, keeping track of skill retention over a period of time can assist in identifying the problematic areas that cause skill decay. For instance, variability of skill retention within departments may indicate a problem attributed to trainee characteristics, whereas, variability of skill retention across departments may indicate a problem associated with the work environment.

5.4 Traditional Training Transfer Conceptual Frameworks

In many respects, the comprehensive research review by Baldwin and Ford has served as the foundation for much of the training transfer research that has followed. More specifically, the three training inputs identified in the Baldwin and Ford model still date drive much of the training transfer research and thinking (Burke and Hutchins 2008; Gilpin-Jackson and Bushe 2007; Liebermann and Hoff-

mann 2008; Velada et al. 2007). The newer training transfer models and research mainly focus on the individual and training-specific climate factors (Blume et al. 2010; Burke and Hutchins 2007; Chiaburu and Marinova 2005; Colquitt et al. 2000; Hawley and Barnard 2005; Kontoghiorghes 2004; Velada et al. 2007). The impact of work-environment factors on training transfer has been incorporated to a lesser degree in training transfer models and research designs (Ballesteros and De Saa 2012; Brown and McCracken 2009; Gilpin-Jackson and Bushe 2007; Kontoghiorghes 2002, 2004; Scaduto et al. 2008; Velada et al. 2007). An overview of traditional training transfer climate research follows.

In the training transfer literature, the training transfer climate is seen as a mediating variable in the relationship between the organizational context and an individual's job attitudes and work behavior. (Yamnill and McLean 2001, p. 203)

It is, therefore, considered a critical aspect of the training transfer process (Brown and McCracken 2009; Hatala and Fleming 2007; Machin and Fogarty 2004; Wright 2003). A number of researchers over the years have focused on identifying the distinguishing features of a positive transfer climate. Although the characteristics emphasized in each study may differ, in general, there is a consensus with regard to the main attributes of a supportive training transfer climate.

According to the literature, the most important and frequently cited attributes of a positive training transfer climate are the following: *supervisory and peer support for new learning* (Ballesteros and De Saa 2012; Bartlett 2001; Blume et al. 2010; Brown and McCracken 2009; Burke and Baldwin 1999; Burke and Hutchins 2008; Clarke 2002; Fecteau et al. 1995; Kontoghiorghes 2001, 2004; Martin 2010; Scaduto et al. 2008; Tharenou 2001; Tracey et al. 1995; Wright 2003), *opportunity to practice new learning during training and on the job* (Brown and McCracken 2009; Burke and Hutchins 2008; Clarke 2002, 2005; Grossman and Salas 2011; Hawley and Barnard 2005; Kontoghiorghes 2004; Nijman et al. 2006; Wright 2003), *intrinsic and extrinsic rewards for using the newly learned skills and knowledge* (Rouiller and Goldstein 1993; Kontoghiorghes 2001, 2002, 2004; Tracey et al. 1995), *job and career utility of new learning* (Bartlett 2001; Chiaburu and Lindsay 2008; Clark et al. 1993; Giangreco et al. 2009; Grossman and Salas 2011; Liebermann and Hoffmann 2008; Lim and Johnson 2002; Kontoghiorghes 2004; Nikandrou et al. 2009; Yamnill and McLean 2001), *task cues, or the extent to which the content of the training program is similar to the actual tasks performed on the job* (Axtell et al. 1997; Kontoghiorghes 2002, 2004; Liebermann and Hoffmann 2008; Machin and Fogarty 2004; Rouiller and Goldstein 1993; Scaduto et al. 2008; Yamnill and McLean 2001), *the extent to which training is linked to identified personal training needs* (Bjornberg 2002; Lim and Morris 2006; Salas and Cannon-Bowers 2001), *training accountability* (Kontoghiorghes 2002, 2004; Kraiger et al. 2004), and a *continuous learning culture* (Ballesteros and De Saa 2012; Egan et al. 2004).

In addition to training transfer, the aforementioned training transfer climate attributes have also been linked to motivation to learn and motivation to transfer learning back to the job. Motivation to learn refers to

the desire to engage in training and development activities, to learn training content, and to embrace the training experience. (Major et al. 2006, p. 927)

Motivation to transfer refers to the “trainees desire to use the knowledge and skills mastered in the training program on the job” (Yamhill and McLean 2001, p. 197). The training transfer literature asserts that unless the trainees are motivated to learn during training and transfer what they learn back to the job, even the most sophisticated training programs will not be successful (Axtell et al. 1997; Burke and Hutchins 2007; Kontoghiorghes 2004). Hence, besides a supportive training transfer climate, motivation to learn and motivation to transfer have been extensively acknowledged as cornerstones in the training transfer process (Bartlett 2001; Chiaburu and Lindsay 2008; Fecteau et al. 1995; Gegenfurtner et al. 2009; Hesketh 1997; Hawley and Barnard 2005; Kirwan and Birchall 2006; Kontoghiorghes 2001, 2002, 2004; Lim and Johnson 2002; Tracey et al. 2001).

In terms of research, a review by Guerrero and Sire (2001) indicated that the vast majority of empirical studies reflected positive associations between training motivation, learning, posttraining satisfaction, and transfer of knowledge. A study by Chiaburu and Marinova (2005) suggested the existence of a positive relationship between individual pretraining motivation and skill transfer. Along the same lines, Bell and Kozlowski (2008) found learner motivational processes to be key predictors of knowledge transfer. A study by Park and Wentling (2007) found pretraining motivation to be positively related to the transfer of e-learning skills. Finally, the findings of the Gilpin-Jackson and Bushe (2007) study suggested that although a positive transfer climate was important for training transfer, the willingness of employees to use their skills actually explained skill utilization on the job.

The conceptual framework that has traditionally governed training transfer research is depicted in Fig. 5.1 (Kontoghiorghes 2002, 2004). A close look at the variables that researchers have investigated over the years will reveal that the thrust of training transfer research has mainly focused on training design, trainee, and work-environment characteristics which in turn are directly related to the training context or related-training outcomes (Kontoghiorghes 2002, 2004). In essence, the conceptual framework of traditional training transfer research has treated training “as a non-systemic phenomenon, independent of the variables that affect performance” (Kontoghiorghes 2002, p. 125). Important organizational variables that influence performance, and, hence, the trainee’s belief that training can actually result in enhanced performance, have been excluded from traditional training transfer research (Kontoghiorghes 2002, 2004).

5.5 Systemic Model of Training Transfer

Although scarce, a number of studies have provided empirical evidence linking broader work environment factors with motivation to learn, motivation to transfer, and learning transfer (Ballesteros and De Saa 2012; Burke and Baldwin 1999; Clarke 2002; Kontoghiorghes 2002, 2004; Velada et al. 2007). According to Velada

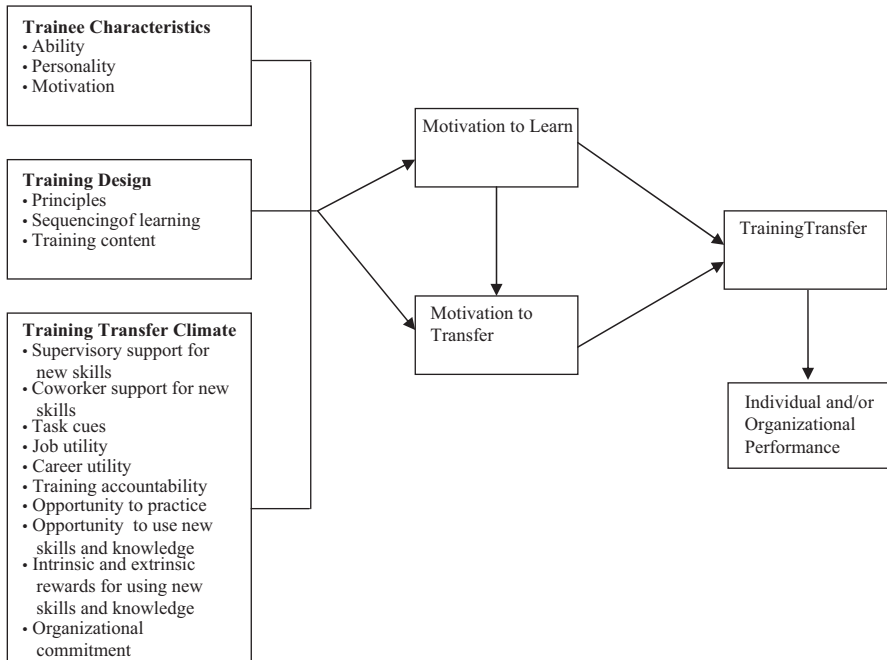


Fig. 5.1 Conceptual framework of traditional training transfer research. (Kontoghiorghes 2002, 2004)

et al. (2007), there are two work-environment aspects that are relevant to learning transfer: organizational culture and training transfer climate. A study by Clarke (2002) indicated that both organizational culture and transfer of training climate have direct effects on posttraining behaviors and particularly on the application of newly trained behaviors on the job. A more recent study by Ballesteros and De Saa (2012) found an indirect effect of a continuous learning culture on training success. In addition to the training transfer climate, as shown in Fig. 5.2, a study by Kontoghiorghes (2004) empirically linked successful learning transfer to high-performance system characteristics, which in turn stemmed from the socio-technical, quality management, and learning organization theories.

Given the strong association between the examined socio-technical, quality management, and organizational learning characteristics with motivation to learn, motivation to transfer, and learning transfer, the Kontoghiorghes' (2004) study concluded that expectancy theory could be better utilized in the training transfer domain if applied at two different levels: the training context and the individual and/or organizational performance level. At the training context level, one is concerned with the degree to which the trainee believes that (a) his or her efforts will result in actual learning; (b) learning can indeed be transferred back to job, given the realities of the training transfer climate; and (c) application of new skills and knowledge is directly linked to intrinsic and extrinsic rewards (Kontoghiorghes 2004).

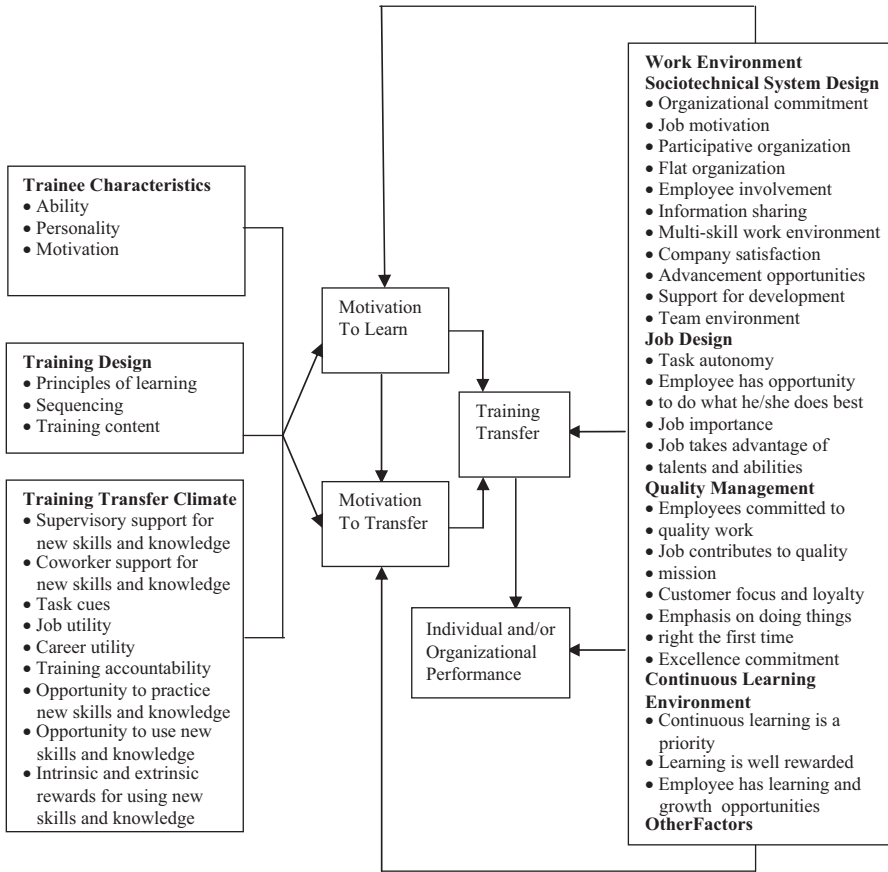


Fig. 5.2 Systemic model of training transfer. (Kontoghiorghes 2002, 2004)

At the employee/organizational performance level, one is concerned with the degree to which the employee believes that (a) application of new skills and knowledge can indeed lead to enhanced individual and/or organizational performance, given the realities of the work environment and organizational culture; and (b) enhanced individual and/or organizational performance can lead to desired and valued outcomes (Kontoghiorghes 2004).

Building on the findings of the Kontoghiorghes’ 2004 and 2002 studies, which linked training transfer outcome variables to a high-performance organizational context, a new comprehensive training transfer model is presented (Fig. 5.3). As shown, the new training transfer model encompasses validated attributes comprising a positive training transfer climate, as well as the relationship between the training transfer climate and a high-performance culture. The proposed model further depicts the interrelationships among the most significant training transfer outcome variables of motivation to learn, motivation to transfer, and training transfer. Finally,

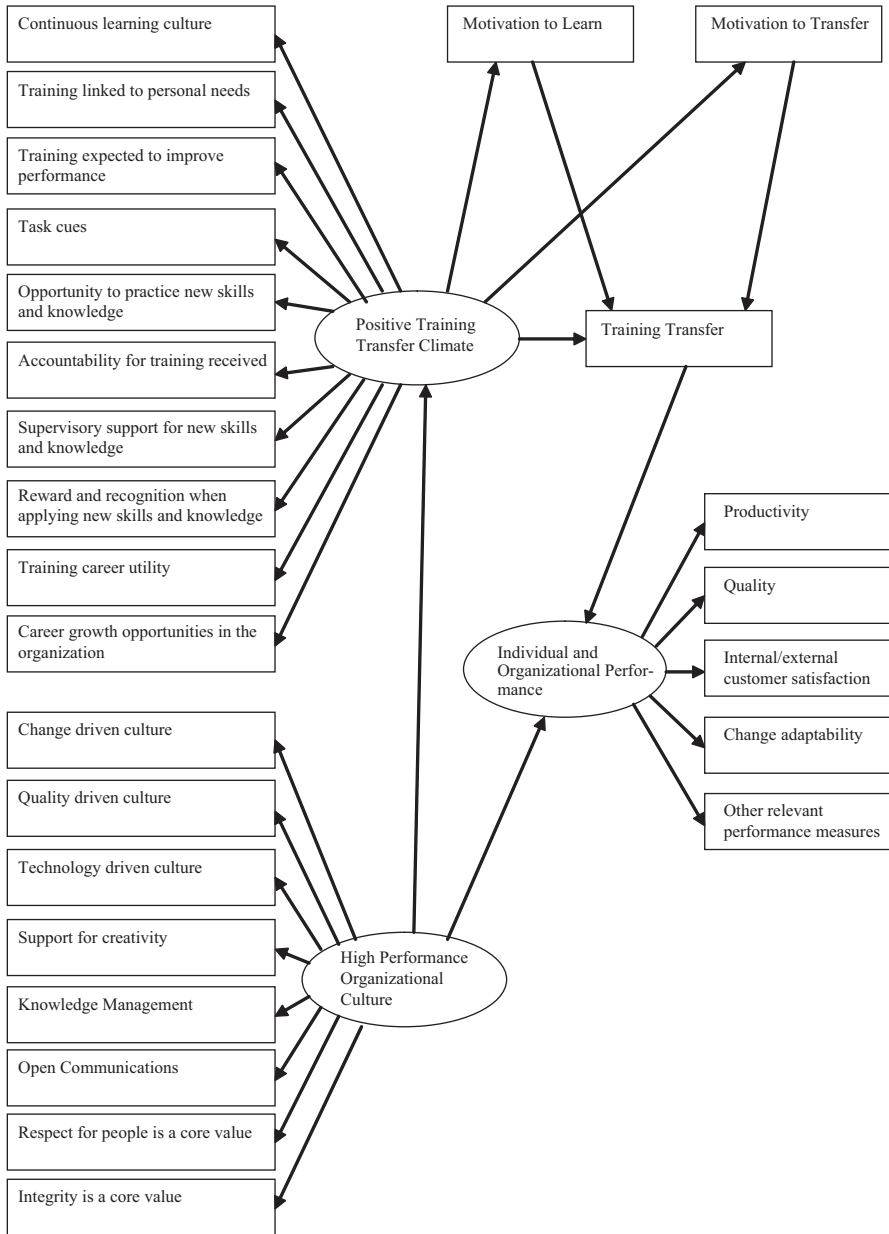


Fig. 5.3 Kontoghiorghes systemic training transfer model

the new model also illustrates how the effects of successful training transfer on performance are mediated by the prevailing organizational culture.

As shown in Fig. 5.3, the high-performance organization construct is defined in terms of core socio-technical, quality management, and learning organization cultural characteristics, which at the same time reflect the key roles assumed by today's strategic HRM function. Collectively, the aforementioned cultural characteristics and strategic HRM roles describe the extent to which the organization is designed to function as an open and optimized system capable of responding to today's turbulent external environments. The high-performance organization construct is expected to have a direct effect on individual and organizational performance and, hence, influence trainee's perception that successful training transfer can, indeed, result in enhanced performance.

Preliminary *structural equation modeling* (SEM) results in two culturally diverse industry settings exemplified the validity of the presented model and demonstrated the existence of a strong association between a positive learning transfer climate and a high-performance culture. The analysis further reflected the existence of a strong association between the training transfer climate construct and motivation to learn, motivation to transfer, and training transfer. Lastly, the SEM analysis further indicated that the impact of training transfer on performance is significantly mediated by the high-performance organizational construct. The latter constitutes an important finding because it statistically explains why some training interventions can be successful in certain organizational settings and not in others. The empirical findings further suggest that the realities of the organizational context will ultimately determine the impact of training on performance, even when the trainee is willing and able to transfer new skills and knowledge back to the job.

5.6 Summary

In summary, over the years, training transfer has been a topic that has been extensively researched by HR scholars. Several models, instruments, and strategies have been developed attempting to explain or facilitate the training transfer process. Despite the vast amount of research, the important effects of organizational culture have largely been missing from training transfer studies. Given that the organizational culture has significant influence on employee behavior and performance, the exclusion of cultural dimensions can be considered a limitation of training transfer research designs.

One of the main objectives of the presented comprehensive training transfer model was to address aforementioned research limitation and, thus, help develop more holistic frameworks addressing the training transfer phenomenon. The preliminary results validate the newly developed framework and suggest that a positive and supportive training transfer climate is more likely to exist in optimized high-performance cultures. Thus, one may conclude that training transfer and corresponding-training initiatives will be likely to be successful if introduced in organizational settings characterized by a high-performance culture.

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