

A COMPARISON OF TRAINEE AND SUPERVISOR PERCEPTIONS OF  
TRANSFER CLIMATE IN A UNION-BASED TRAINING PROGRAM

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A supportive work climate is critical for successful transfer of learning. Influences in the work environment affect the trainee's ability to apply new skills to the job. The supervisor can be a significant figure in the trainee's perception of a supportive transfer climate. Little is known of the effect of supervisor participation in the training on transfer climate. The purpose of this study was to identify differences in trainee and supervisor self-perceptions of the factors affecting transfer climate. Additionally, this study examined the effects of supervisor participation in the training program on perceptions of transfer climate. The participants in this study were trainees in a union-sponsored instructor training program and their supervisors.

The study found perception gaps between the overall perception of transfer climate and supervisor support. The level of supervisor participation in the training program was not to be a factor in the differences between the trainee and supervisor perceptions. No statistically significant difference exists in the perception of other transfer climate factors: supervisor sanctions, peer support, resistance/openness to change, and feedback/performance coaching. In addition, the study found that supervisor participation in the training made little difference in the perceptions of transfer climate by supervisors and trainees.

Studies comparing trainee and supervisor perceptions of transfer climate and the effect of supervisor participation in the training on these perceptions are needed from other organizations before extensive generalizations can be made.

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## CHAPTER 1

### INTRODUCTION

Training is an expensive endeavor that often fails to yield desired results. In 2003 the total training expenditures for U.S. companies with 100 or more employees were estimated at \$51.3 billion (Galvin, 2003). After including the indirect costs, costs incurred by small organizations and informal on-the-job training, total training expenditures have been estimated at \$200 billion per year or more (Holton, Bates, Ruona, & Leimback, 1998; Yamnill & McLean, 2001). Nearly 50 years ago, Mosel (1957) indicated that training frequently makes little or no difference in job performance.

Transfer of training has been defined as the application and maintenance of knowledge, skills, and attitudes learned from training to the job (Baldwin & Ford, 1988; Wexley & Lathan, 2002). Estimates of the level of transfer range from 5% to 35%, with much of the learning extinguished over time (Baldwin & Ford, 1988; Broad & Newstrom, 1992; Huczynski & Lewis, 1980; Tannenbaum & Yukl, 1992)

The importance of a supportive work environment has been well documented. Researchers contend that ensuring a supportive work climate may be the single most important requirement for successful transfer of learning (Lim & Johnson, 2002; Rouiller & Goldstein, 1993). Influences within the trainee's work environment may either promote or inhibit training transfer to the job (Broad & Newstrom, 1992; Mathieu, Tannenbaum, & Salas, 1992; Newstrom, 1986;

Thayer & Teachout, 1995). Foxon (1993) analyzed 30 journal articles citing factors believed to hinder the transfer process, finding that the negative effect of a nonsupportive climate on the transfer process accounts for 42% of all inhibiting factors.

Rouiller and Goldstein (1993) indicated that the importance of the trainee's perception of the transfer climate may be as important as the training itself. Rouiller and Goldstein randomly assigned manager trainees to 1 of 102 organizational units and found that those trainees assigned to units with a more positive transfer climate demonstrated significantly more trained behaviors, even after controlling for learning and unit performance.

Various influences in the work environment may facilitate or impede efforts of trainees to apply new skills to the job: supervisory and peer attitudes and support for the trainee and training,(Goldstein & Musicante, 1986), openness to change, pace of the work flow (Huczynski & Lewis, 1980); opportunity to perform trained tasks on the job and adequate resources (Baldwin & Magjuka, 1991; Ford, Quinones, Sego & Sorra, 1992).

The supervisor can be a significant figure in the trainee's perception of a supportive transfer climate (Rouiller & Goldstein, 1993) and may affect transfer through positive or negative behaviors (Noe, 1986). However, little is known of the effect of supervisor participation in the training on transfer climate. Additionally, no published studies were found that determine the similarity of perceptions of transfer climate between the trainee and the supervisor.

## Purpose

The purpose of this study was to extend the understanding of the training transfer process by investigating the relationship between trainee and supervisor perception of factors that influence the transfer climate. Results of this relationship revealed opportunities to improve the transfer climate and ultimately, job performance through training and organization development strategies. The second purpose was to provide evidence of the influence of supervisor participation in the training program on perceptions of transfer climate. It was assumed that supervisor participation could influence transfer of new skills to the job. Findings did not support this assertion through empirical evidence. A broader understanding of the dynamics of the supervisor's role in facilitating training transfer in the workplace may be gained, leading training professionals and organizations to determine the return-on-investment value of including supervisors in subordinate training and transfer interventions.

The study was be accomplished by assessing the transfer climate based on self-perceptions by the supervisor (prior to the onset of the training) and trainee, (prior to the end of the training).

## Research Questions

This research examined the following questions:

1. What is the relationship between trainee and supervisor overall perceptions of the transfer climate?

2. What is the relationship between trainee and supervisor perceptions of the transfer climate for each of these factors: (a) feedback/performance coaching; (b) supervisor support; (c) supervisor sanctions; (d) peer support; (e) resistance/openness to change.
3. Is this relationship affected by the supervisor's level of past participation in the training?

The hypotheses explored in this study (in null form) were the following:

1. No significant relationship exists between trainee and supervisor overall perceptions of the work environment.
2. No significant relationship exists between trainee and supervisor perceptions of the following transfer of training factors in the work environment: feedback/performance coaching, supervisor support, supervisor sanctions, peer support, resistance/openness to change.
3. No significant difference exists between the mean score of the perceptions of the work environment for trainees and supervisors where the supervisor has had no training, trainees and supervisors where the supervisor has been an observer, and trainees and supervisors where the supervisor has been a past participant in the training.

#### Significance of the Study

This study investigated the differences in trainee and supervisor perceptions of factors within the work environment identified through research related to the transfer of training. By comparing trainee and supervisor self-

perceptions of the transfer climate, the degree of similarity was identified. The results will add to the growing body of research on transfer of training, enriching the understanding of the connection between supervisors and trainees perceptions of the transfer climate. An understanding of the supervisor's prior experience with the training itself provided insight into the role of supervisor in the transfer process and the effect of including supervisors in training. As a result of the study, training and organization development practitioners may be encouraged to assess the transfer climate as criteria for training readiness and develop interventions to address gaps in perceived differences between training supervisors in transfer climate improvement strategies before, during, and after the training. The transfer climate initiatives may ultimately increase the rate of application and maintenance of new skills to the job and raise performance on the job.

#### Definition of Terms

The following terms are used in this study. In order to reduce individual interpretations of these terms, a brief definition and explanation is offered.

*Apprentice*-- The union uses this term to identify an individual who learns a skilled trade through planned, supervised work on-the-job while at the same time receiving related technical classroom instruction by an apprenticeship instructor.

*Apprenticeship Coordinator*—The title is used by the union to identify the supervisor of the apprentice training programs. This individual is responsible for supervising the apprenticeship instructors in the local.

*Apprenticeship Instructor*—The title used by the union to identify the individual responsible for providing technical classroom instruction to union apprentices. These individuals were the trainees in this study.

*Feedback/coaching*--The extent to which individuals receive constructive input, assistance, and feedback from people in their work environment (peers, other apprenticeship instructors, supervisors, etc.) when applying new abilities or attempting to improve work performance. Feedback may be formal or informal cues from the workplace (Seyler, Holton, Bates, Burnett, & Carvalho, 1998).

*Organizational climate*— Perceptions that evolve as a result of interactions with individuals in the organization. Quinones (1999) stated that “during these interactions, individuals attach meaning to organizational features and events as they engage in a process of sense-making” (p. 190).

*Peer* – A person who has standing equal to another, for this study, a co-worker.

*Peer support*—The extent to which peers reinforce and support use of learning on the job. Examples include setting goals to use learning, providing assistance, offering positive feedback, and having similar equipment as used in training (Bates, Holton & Seyler, 1996).

*Supervisor*— For the purpose of this study, this is the apprenticeship coordinator who is in charge of others within the apprenticeship training program. *Supervisor* will be used interchangeably with the term manager.

*Supervisor support*— For the purpose of this study, refers to the extent to which supervisors support and reinforce the use of learning on the job. This includes supervisor involvement in clarifying performance expectations after training, identifying opportunities to apply new skills and knowledge, setting realistic goals based on training, working with individuals on problems encountered while applying new skills, and providing feedback when successfully applying new abilities (Bates et al., 1996).

*Supervisor sanctions*--Negative responses of the supervisor if training is not used in apprenticeship training. These may include negative feedback, lack of support, no feedback at all, or job reassignment (Bates et al., 1996).

*Trainee*—For the purpose of this study, this individual is a participant of an apprentice instructor training program conducted by the union.

*Transfer climate*—A psychological interpretation of the work environment that affects job attitudes and behaviors and influences the extent to which a person utilizes learned skills on the job (Bates et al., 1996).

*Transfer of training*--From a theoretical point of view, transfer of training occurs when prior learned knowledge and skills affect the way in which new knowledge and skills are learned and performed. When later acquisition or performance is facilitated, transfer is positive. When later acquisition or

performance is impeded, transfer is negative. Transfer can be general or specific, affecting a wide range of new knowledge and skills or limited to a particular subject or task (Broad & Newstrom, 1992; Taylor, 1997).

*Work environment*—The work environment is “the way we do things around here” - the physical aspects of the training school, the requirements of the work itself, interactions with supervisors and between peers, and formal and informal rules and procedures.

*Work environment factors*—For purposes of this study, refers to factors in the workplace that may affect individual application and maintenance of new skills learned in training.

### Delimitations

The scope of this study was limited to a specific training program, the trainees of the training program, and the supervisors for each of the trainees participating in the training program. Therefore, the findings will not necessarily be applicable to other locations or other training programs. The use of a self-report survey questionnaire creates a potential for bias because respondents may be less than accurate or honest in answering questionnaire items.

### Limitations

The following limitations should be considered:

1. Data collected in the study relied on perceptions of trainees participating in a 1-week training program and perceptions of their supervisors.



2. The measurement of the dependent variable, transfer climate in the workplace, was based upon the report of trainees immediately following training.
3. The measurement of the dependent variable, transfer climate in the workplace, was based upon the report of the supervisors prior to the training.
4. The measurement of the dependent variable, transfer climate, was based upon five constructs in the Learning Transfer System Inventory (LTSI) (Holton & Bates, 1998).
5. Response options used in the rating scales were specific. Personal judgments as to the meaning of the item responses may differ.

## CHAPTER 2

### REVIEW OF THE LITERATURE

This chapter examines the research on the importance of the transfer of training, factors influencing the transfer climate, a theoretical framework of the transfer process, transfer climate, supporting and inhibiting factors in the workplace, transfer models, the importance of perception, supervisory participation in the training, and perception as a measure of the transfer climate.

#### Importance of Transfer

Despite enormous expenditures on training, little evidence exists to demonstrate that training programs transfer to the job and result in improved performance in the workplace (Baldwin & Ford, 1988; Gist, Bavetta, & Stevens, 1990). For learning to occur, trainees must have the capability and desire to gain new skills and subsequently transfer these new skills on the job (Baldwin & Magjuka, 1991; Ford et al., 1992). Transfer requires that trainees apply, generalize, and maintain new knowledge and skills across different settings (Baldwin & Ford, 1988; Ford & Weissbein, 1997). Transfer occurs when knowledge, skills or attitudes learned as a result of training yields improved performance in the workplace (Rouiller & Goldstein, 1993).

#### Theoretical Framework

Baldwin and Ford (1988) described the transfer process in terms of the influences that trainee characteristics, training design, and work environment may have on learning, retention, and subsequent generalization and

maintenance of new learning. Transfer of training research has been dominated by studies on instructional design and, to a lesser degree, trainee characteristics, with limited investigation on work environment factors (Baldwin & Ford, 1988; Baldwin & Magjuka, 1991; Holton, 1996; Kozlowski, 2000; Kraiger, Ford, & Salas, 1993; Mathieu, et al., 1992). The emerging perspective of training transfer recognizes training as a multifaceted, complex process that can be influenced by a number of factors within the organizational context and events surrounding training (Holton, 1996; Holton, Bates & Ruona, 2000). A more in-depth understanding of transfer climate is warranted.

The influence of the workplace in training transfer was brought to light in the 1950s and early 1960s when numerous studies designed to investigate the effectiveness of training activities showed disappointing results on the job; a minority of trainees showed any change in performance on the job despite successfully learning the skills in training (Baumgartel, Ingram-Reynolds, & Pathan, 1984). Subsequent research has supported the importance of the workplace on the trainee's ability to apply, generalize, and maintain new skills on the job (Baldwin & Ford, 1998; Holton, 1996; Holton et al., 2000; Mathieu et al., 1992; Rouiller & Goldstein, 1993; Tannenbaum & Yukl, 1992).

#### Transfer Climate

Baldwin and Ford (1988) identified a supportive organizational climate and the opportunity to use knowledge, skills, or attitudes in the workplace as factors that support transfer of training. Rouiller and Goldstein (1993) discussed the

transfer climate as “those situations and consequences that either inhibit or help facilitate the transfer of what has been learned in training into the job situation” (p. 379).

Baldwin and Magjuka (1991) pointed out that organizational training is not an isolated event, but rather “takes place amid individuals doing their jobs, functioning on teams, and being exposed to a host of other organizational activities unrelated to the training in questions. Participants have learned organizational rules that guide their behavior in that culture” (p. 101). Xiao (1996) suggested that training develops potential capacity in trainees only and that the transfer of training depends on factors in the workplace that aid the use of knowledge, skills, and attitudes gained in the training setting.

#### Supporting and Inhibiting Factors in the Workplace

Researchers have suggested that work environment factors are unique to each organization and play a significant role in promoting or prohibiting transfer. Tannenbaum and Yukl (1992) reported that “elements of the post-training environment can encourage (e.g. rewards, job aids), discourage (e.g. ridicule from peers), or actually prohibit the application of new skills and knowledge on the job (e.g. lack of necessary equipment)” (p. 420). According to Tannenbaum, Cannon-Bowers, Salas, and Mathieu (1993), trainees look for cues in the work environment to determine whether training matters and then shape their beliefs about the utility of the training. In a study of manager trainees, Baumgartel et al. (1984) found that trainees who reported a greater effort to apply their training

indicated that their work environment allowed them to set their own performance goals, encouraged performance of the learning, and encouraged risk taking. Rouiller and Goldstein (1993) investigated transfer climate with a group of manager trainees from a chain of fast-food restaurants. The researchers examined situations and consequences in the workplace that inhibit or facilitate transfer and found that more positive transfer climates, as rated by management coworkers at each restaurant, resulted in trainees demonstrating more new learning and performing better on the job. Tracey, Tannenbaum, and Kavanagh et al. (1995) replicated portions of the Rouiller and Goldstein (1993) study with 505 supermarket managers from 52 stores and found similar results. Ford et al.(1992) examined the effects of the trainees' opportunity to perform learned tasks and found differences in the number of trained tasks they performed on the job. Additionally, Burke and Baldwin (1999) indicated that formal policies and practices relating to the training have been shown to influence transfer.

In many circumstances, situations in the workplace interfere or prevent the individual from performing a skill learned in training, and thus, limit the extent to which the individual can transfer learning to the job. Workplace constraints can alter the trainee's motivation to apply newly learned skills into frustration and discouragement and may even reduce the motivation to try (Noe, 1986).

Peters and O'Connor (1980) studied 62 managerial and nonmanagerial employees and found eight situational variables that, when lacking, adversely affected on the job performance: job-related information, tools and equipment

availability, availability of materials and supplies, adequate financial support needed to perform the job, required services and help from others, task preparation, time availability, and the physical work environment.

Newstrom (1986), in a study designed to uncover perceived barriers to successful transfer, surveyed a group of training professionals and found that the most significant barriers for trainees in applying training to their jobs occurred during the time period after the training, indicating the presence of negative influences to transfer during that time period. Newstrom averaged and rank-ordered the results and determined that the most significant barrier identified was the lack of reinforcement on the job, followed by interference by the immediate environment (work and time pressures, insufficient authority, ineffective work processes, inadequate equipment or facilities); lack of active support within the organizational climate for the transfer, trainee perception of utility; trainee discomfort with change; trainees separation from the transfer after training; poor training design and delivery; and negative pressure by peers to change (Broad & Newstrom, 1992).

Holton, Bates, Seyler and Carvalho (1997) and Holton et al. (2000) have classified transfer climate into the following influences: supervisor support, peer support, supervisory sanctions, resistance or openness to change, coaching/mentoring, and positive and negative personal outcomes. A description of each follows:

## Supervisor Support

Supervisor support for applying new skills has consistently been found to be a key factor affecting the transfer process (Baldwin & Ford, 1988; Baumgartel et al., 1984; Kozlowski, 2000; Rouiller & Goldstein, 1993; Tannenbaum & Yukl, 1992). Xiao (1996) suggested that to improve productivity, follow-up by the supervisor is critical. The supervisor can influence transfer before, during, and after the training through the use of verbal and nonverbal cues (Rouiller & Goldstein, 1993).

In a study conducted by Huczynski and Lewis (1980), participants completed pre-and post-course questionnaires to determine the intention of each participant to transfer the new learning. It was found that attempts to transfer were likely to be successful when the boss “sponsored” the new idea and was prepared to listen to new ideas.

Wexley and Lathan (2002) stated that “verbal and non-verbal cues exhibited by the supervisor should connote a positive expectation that the employee will constantly apply the newly acquired knowledge and skills. Moreover the supervisor should coach the employee to set specific difficult but attainable goals.” (p. 116)

## Peer Support

According to Wexley and Lathan (2002):

A potent force in the socialization process within an organization is the interactive dynamics between the individual and his or her peers. Such interaction can provide support and reinforcement for not only learning what is being taught but also in applying what was learned to the job.

Conversely, failure to secure such support can result in alienation during training or on the job. (p. 115)

Studies by Huczynski and Lewis (1980), Marx (1982), and Baldwin and

Ford (1988) indicated that positive reinforcement from the worker's peer group results in improved job performance over time. Trainees may feel more comfortable performing trained tasks in a supportive peer work group (Broad & Newstrom, 1992; Ford et al., 1992). If peers are not supportive, a trainee may perform only easy tasks or fail to perform trained tasks very often. The results of a study by Fecteau, Dobbins, Russell, Ladd, and Kudisch (1995) of 967 managers and supervisors designed to determine trainee's beliefs about pretraining motivation and transfer of training found that trainees who perceived their peers and subordinates as supportive were likely to perceive greater transfer of their training skills.

#### Supervisor Sanctions

Negative or inadequate responses from supervisors can diminish the trainee's attempts at applying new skills to the job. Types of responses include the supervisor's opposition or rejection of the use of new skills or failure to provide the trainee with opportunities to apply the new skills or knowledge (Bates et al., 1996). Supervisor expectations that a skill be used or indicating negative expectations can promote or hinder the transfer of new skills (Rouiller & Goldstein, 1993).



### Resistance/Openness to Change

Baldwin and Ford (1988) suggested that the supervisor's behavior toward the training objectives has a significant effect on trainee transfer of new learning to the job. Trainees will not be as likely to transfer training into climates that fail to support the use of the new skills (Goldstein & Musicante, 1986). According to Tracey et al.(1995), "Behaviors that send a message that learning is important and valued, and cues that suggest the organization is innovative and competitive, appear to encourage the application of newly trained behavior" (p. 249). This includes work group resistance to change, willingness to invest energy to change, and the degree of support provided to individuals who use techniques learned in training. Employees who receive no opportunity to practice what they have learned when they return to the job will be unable to transfer what they learned, and their new skills will be likely to deteriorate over time (Ford et al., 1992).

### Coaching/Mentoring

The mentoring literature recognizes that a supervisor's perception of an individual's likeability, skill, and career potential can influence the amount of guidance and opportunities provided to that individual (Noe, 1986). The supervisor's perceptions may have an effect on the individual's opportunities to perform new training. Positive attitudes toward the individual may result in opportunities to practice newly learned skills, whereas negative attitudes toward the individual may result in the supervisor's assigning unchallenging tasks that

fail to allow for the practice of newly learned skills. A trainee's supervisor may provide either more or fewer opportunities to perform newly learned skills (Ford et al., 1992).

### Performance Outcomes

According to Baldwin and Magjuka (1991), trainees often perceive that they share no real responsibility for learning and will not be held accountable for the application of newly acquired skills. The authors believe that "training success will be maximized when trainees perceive that desirable outcomes (or avoidance of undesirable outcomes) are attained as a result of completing a program satisfactorily and having their intellect, beliefs, and emotions engaged. There must be some risk of failure." (p. 120)

Examples of positive outcomes include rewards or salary increases, opportunities for advancement, and increased productivity. Negative outcomes may include too much new work, reprimands for applying the new learning, and a reduced likelihood of receiving a raise if the new skills are used (Holton & Bates, 1998).

### Transfer Models

Numerous researchers and authors have proposed models of the transfer of training process. The following is a description of transfer models most often cited in literature.

Noe's (1986) model of transfer categorized transfer climate factors as task constraints and social support. Task constraints may inhibit the application of

new skills to the workplace; social support provides support for the training through reinforcement for practicing skills and feedback.

Baldwin and Ford (1988) provided a framework for understanding transfer and a foundation for much of the subsequent research on transfer of training. The model attempts to explain the transfer process in terms of linkages between three stages of transfer: training input, training output, and conditions of transfer. Training inputs are identified as the trainee's characteristics, the training design and delivery, and work environment.

As shown in Figure 1, training inputs have direct (Linkage 4 and Linkage 5) and indirect (Linkage 1 and Linkage 6) influences on the training output (learning and retention) and conditions for transfer (the ability to generalize and maintain learning over time). According to Baldwin and Ford (1998), trainee characteristics and work environment characteristics "have direct effects on transfer regardless of initial learning during the training program or retention of the training material" (p. 65)

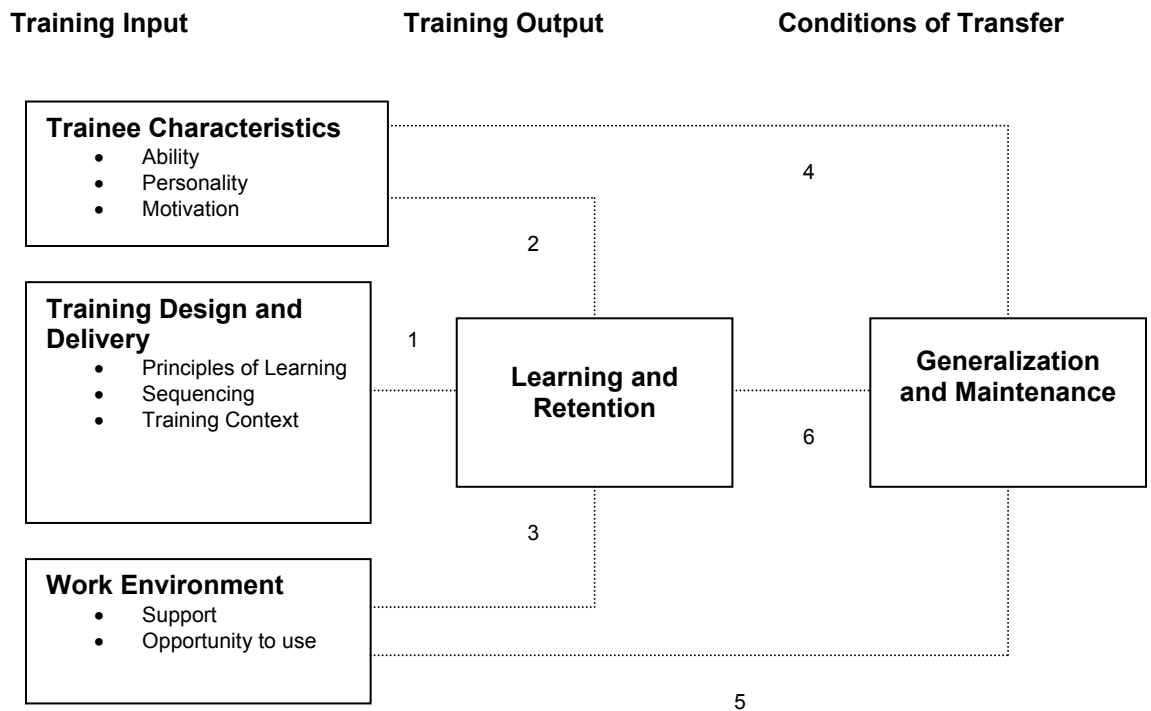


Figure 1. Baldwin and Ford (1988) transfer process model.

Broad and Newstrom (1992) proposed that numerous factors in the workplace affecting transfer exist before, during, and after training. The authors proposed a transfer management model that includes a collaborative effort within the organization (trainers, supervisors, employees) to support positive influences and remove or reduce negative influences (barriers) in the transfer process.

Rouiller and Goldstein's (1993) framework for transfer climate clustered influences on training transfer into two types of workplace cues: situation cues and consequence cues. Situation cues refer to cues that remind trainees of their training or provide opportunities for them to use new learning on the job. Four

dimensions of situation cues were identified: goal cues, social cues, task cues, and self-control cues. Consequence cues refer to consequences for trainees when they return from training and attempt to apply new learning on the job, including positive feedback, negative feedback, punishment, and no feedback.

Most recently, Holton et al. (1997) and Holton et al. (2000) provided research on a transfer instrument, incorporating aspects of Rouiller and Goldstein's (1993) earlier efforts. The model is comprised of seven variables in the work environment influencing the transfer of learning: supervisor support, peer support, supervisor sanctions, opportunity to use the learning, resistance/openness to change, coaching/mentoring, and performance outcomes.

#### Supervisor Participation in the Training

Although no studies have been found that investigate the influence of supervisor participation with the training on the transfer climate, it seems likely that transfer climate may be influenced by supervisor participation in the training for the subordinates. Several authors have suggested a possible relationship.

Wexley and Lathan (2002) wrote:

It is imperative that this individual [the supervisor] understand and endorse the objectives of the training in order to reward training efforts which can result in increased outcome expectancies on the part of trainee because demonstrating the learned skills will be valued by the organization (p. 116)

Further, according to Wexley and Lathan, the supervisor should:

adopt the same strategies as those used by the trainers in the classroom. Continual modeling and verbal and nonverbal cues signify the importance

applying the newly acquired skills. The supervisor can model the skills and coach the trainee toward attainable goals. (p.116)

Mention of supervisory participation is included in a study by Baldwin and Magjuka (1991), who conducted a survey of 98 full-time working master of business administration (MBA) students. Participants indicated that supervisors would be perceived as more supportive of training if they were more involved in the program as attendees for all or some of the sessions or agreed to lead some of the sessions. Further, in a study of nurse trainees and transfer, Gaudine and Saks (2004) noted that the director of nursing was a recent graduate of the training and provided a great deal of support for the training, resulting in a very positive transfer climate.

#### Perception as an Indicator of the Transfer Climate

Ensuring a supportive work climate may be the single most important requirement for successful transfer of learning (Lim & Johnson, 2002); the *perception* of support, rather than the reality, is the critical factor (Foxon, 1994). Individuals respond to particular climates based on how they perceive them (James & McIntyre, 1996, cited by Holton et al., 2000 ).

According to Holton et al.(2000), “Because transfer of learning refers to individual behaviors resulting from learning, it is most appropriate to assess individual perceptions of transfer climate because it is those perceptions that will shape the individual’s behavior” (p. 340). Tziner, Haccoun, and Kadish (1991) indicated that the trainee’s perception of support by the work environment for the use of a new skill could determine the extent of transfer. Ruona, Leimback,

Holton, and Bates (2002) found that utility reaction items were correlated with transfer of training. Alliger, Tannenbaum, Bennett, Traver, and Shotland (1997) found that trainees' reactions to the utility of the training were stronger correlates of transfer than were measures determining acquisition of new skills.

### Summary

A growing body of empirical work supports the belief that a positive work environment is a crucial facet of the transfer of training process. The transfer climate, as perceived by the trainee, can influence whether the new skills are applied to the job. Research has not examined the differences between the trainee's and the supervisor's perceptions of the work environment and whether the supervisor's direct experience with the training has an influence on this difference. This study will further the research on training transfer.

## CHAPTER 3

### METHODOLOGY

This chapter presents the design and methodology proposed for this study. The chapter includes the research design, data collection procedures, instrumentation, population, data analysis procedures, and data reporting.

This research study was designed to examine the perceptions of the transfer climate as perceived by trainees participating in a union-sponsored professional development training program for apprenticeship instructors and their supervisors, apprenticeship coordinators.

#### Research Design

A comparative research design was used to examine the extent to which trainees and apprenticeship coordinators differ in their perceptions of the work environment. Participants were asked to provide demographic information about their age, gender, and highest educational attainment. The union provided a list of trainees enrolled in the instructor training program, a list of apprenticeship coordinators that includes addresses and telephone numbers, and data on the supervisor's level of direct experience with the training.

#### Population

The population selected for this study included trainees participating in a 5-day union sponsored apprentice instructor training program conducted from July 19 to 23, 2004, and the trainee's apprenticeship coordinator. The apprenticeship coordinators were surveyed between June 4, 2004, and July 19,



2004. This population was chosen for two reasons: First, trainees attend the training program voluntarily to gain knowledge and skills on instructional skills for teaching apprentices in their local unions; secondly, union training has received little attention regarding training transfer. The population included 140 trainees and 73 apprenticeship coordinators from local unions throughout the United States and Canada. All trainees participating in the 2004 apprenticeship instructor training program and their supervisors were studied.

#### Procedures for Collecting Data

The data were collected as follows:

*Apprenticeship Coordinators*--On Tuesday, June 1, 2004, a letter signed by the executive director of the union's apprenticeship training programs was sent to each apprenticeship coordinator who was supervising apprenticeship instructors registered for the 2004 instructor training program (Appendix A).

On Friday, June 4, 2004, a cover letter (Appendix A), informed consent notice (Appendix B), apprenticeship information form (Appendix C), and the apprenticeship coordinator version of the adapted Learning Transfer System Inventory (LTSI) survey and postage-paid return envelope were mailed to each of the 149 apprenticeship coordinator. The cover letter instructed the apprenticeship coordinator to return the completed survey to the researcher's home address by Friday, June 18, 2004. Money for postage (US \$2.00) was included for postage for the 11 apprenticeship coordinators residing in Canada.

Between Wednesday, June 16, 2004, and Tuesday, June 22, 2004, telephone contact was made to the apprenticeship coordinators who had not returned a completed survey to remind them to complete the survey. A copy of the survey was faxed to apprenticeship coordinators unable to locate the survey sent by mail.

On Friday, June 25, 2004, a follow-up letter, another copy of the informed consent notice, and an adapted LTSI survey were sent to each apprenticeship coordinator (or other individual designated to coordinate the apprenticeship program in the local) who had not returned a completed survey.

On Tuesday, July 6, 2004, I again contacted, by telephone, each apprenticeship coordinator not yet returning a completed survey.

*Trainees*—Five professional development instructors at the 2004 instructor training program were briefed by me on instructions for administering the adapted LTSI surveys and administering the trainee version of the adapted LTSI survey. The trainee surveys were administered to students in each of the 18 professional development classes on the last 2 days in the training program. Each trainee was asked to complete an informed consent notice (Appendix B), trainee information form (Appendix C) and a trainee version of the adapted Learning Transfer System Inventory (LTSI) survey.

Completed surveys of apprenticeship coordinators were matched to trainees from the local union completing the LTSI survey to determine the subjects for this study.

## Instrument

The instrument selected to measure the transfer climate was version 2 of the LTSI developed by Holton and Bates (1998). The first version of the LTSI was the foundation of version 2.

Holton et al.(2000) conducted an exploratory common factor analysis on the constructs of the LTSI (v.2), revealing a clean interpretable factor structure of instruments constructs.

This analysis provides a high level of confidence that the instrument will work well across many types of training and in most organizations. In addition instrument constructs were developed from sound theory and research (Holton, 1996). Finally, this instrument builds on the results of several previous research efforts and followed generally accepted instrument development processes. (p. 355)

The complete instrument contains 89 items and is designed to provide a comprehensive self-assessment of three scales that have been found to influence transfer: trainee characteristics, motivation, and work environment. The instrument is divided into two sections, one measuring factors affecting the specific training program, the other measuring factors affecting training in general in the trainees' organization.

The work environment scale includes survey items intended to measure each of the following work environment factors: feedback/performance coaching (4 items); supervisor support (6 items); supervisor sanctions (3 items); peer

support (4 items); resistance/openness to change (6 items), and personal outcomes, both positive (3 items) and negative (4 items). This study utilized 23 items of the work environment scale -- all items except those that address personal outcomes. These items were not applicable to the population of this study. The survey took approximately 10 to 15 minutes to complete.

Modifications were made to adapt the instrument to terminology used within the organization (e.g., apprenticeship coordinator vs. supervisor). Two versions of the instrument were developed to provide word usage appropriate for trainees and apprenticeship coordinators. Responses were made on a Likert-type scale: 1 (*Strongly Disagree*); 2 (*Disagree*); 3 (*Neither agree nor disagree*); 4 (*Agree*); 5 (*Strongly Disagree*). Appendix D contains a list of the panel of experts who reviewed the items on the modified LTSI for trainees and the modified LTSI for apprenticeship coordinators to confirm the accuracy of terminology. The panel was chosen based on their (a) knowledge of the terminology used within the union training program, (b) experience working in and with the union, (c) expertise in the education field, and (d) willingness to participate on the panel. It is understood that any change in a previously developed instrument could potentially constitute a change in both validity and reliability. As Thompson and Vacha-Haase (2000) noted, reliability and validity are properties of data, not instruments. In order to combat this potential problem, both validity and reliability coefficients were computed for the new instrument to ensure instrument stability.

#### Procedures for the Analysis of Data

Survey data were analyzed using SPSS statistical software. As suggested by Franc (1976) cited by Stevens (1996), imputation methods were used to replace missing data by using the mean of the scores on the variable as an estimate. The data gathered from the survey were reported through the use of descriptive statistics (frequencies, percentages, mean and standard deviation). Reverse coding was used on items requiring a negative response. Frequencies and percentages were utilized to report the frequency of responses to each level of the Likert-type scale and the percentage of total number of responses. Independent sample *t*-tests were used to determine the level of statistical significance of an observed difference between the perception of factors in the work environment of the trainees and supervisors. Effect size was used to determine practical significance if the results were found to be statistically significant.

Each of the following hypotheses were examined through the responses to the modified LTSI mentioned earlier:

Hypothesis 1: No significant relationship exists between trainee and supervisor overall perceptions of the work environment. A sum of trainee scores for the entire modified LTSI and a sum of supervisor scores for the entire modified LTSI were computed. The means of these two sums were compared via an independent sample *t*-test.

Hypothesis 2: No significant relationship exists between trainee and supervisor perceptions of the following factors in the work environment: supervisor support, peer support, supervisor sanctions, resistance/openness to change, and feedback/performance coaching. A sum of trainee scores for each of the factors in the work environment on the modified LTSI and a sum of supervisor scores for each of the factors in the work environment on the modified LTSI were calculated. Five independent sample *t*-tests were conducted, one independent samples *t*-test for each factor.

Hypothesis 3: No significant difference exists between the mean score of the perceptions of the work environment for trainees and supervisors where the supervisor has had no training, trainees and supervisors where the supervisor has been an observer, and trainees and supervisors where the supervisor has been a past participant in the training. A one-way three level ANOVA was used to determine the differences between each of these divisions.

### Summary

The intent of this investigation was to measure the extent to which trainees and supervisors differ in their perception of work environment factors that influence transfer of training.

## CHAPTER 4

### DATA ANALYSIS AND RESULTS

This chapter provides a summary of the participant demographics, a descriptive overview of the data, and the resulting statistical analysis. The purpose of this study was to investigate the relationship between trainee and supervisor perceptions of factors that influence the transfer climate in the workplace and the effect of supervisor participation in the training on trainee and supervisor perception. Factors considered were feedback/performance coaching, supervisor support, supervisor sanctions, peer support, and resistance/openness to change. Supervisor participation was studied in terms of no participation, observer, or past participant of the program.

#### Participants in the Study

This study was conducted using data collected from a modified version of the Holton and Bates (1998) Learning Transfer System Inventory (LTSI). The demographic information sheet completed by participants indicated a local union number which was used to match supervisors to trainees to determine participants of this study. Surveys from participants failing to indicate a local number were not included in this study.

Participant response rate and demographic information are summarized in Tables 1, 2, and 3. A total of 143 trainees and 74 supervisors completed the

survey. Surveys from three trainees and one supervisor were not included in the study due to a failure to indicate a name or local number.

Table 1

*Trainee/Supervisor Response Rate Summary*

Group	<i>n</i>	Participants	%
Trainees <sup>a</sup>	143	140	97.9
Supervisors <sup>b</sup>	74	73	98.6
Total	217	213	98.1

<sup>a</sup> Trainees completing the LTSI.

<sup>b</sup> Supervisors of trainees attending the training only.

Table 2

*Participant Education Level*

Education	Trainee		Supervisor	
	<i>n</i>	%	<i>n</i>	%
Did not graduate HS	6	4.3	55	75.3
HS graduate or GED	98	70.0	7	9.6
Associate's degree	18	12.9	9	12.3
Bachelor's degree	15	10.7	1	1.4
Master's degree	2	1.4	1	1.4
Doctorate	0	--	0	--
Missing	1	.7	1	1.4
Total	140	100.0	73	100.0



Table 3

*Participant Demographics*

	<i>n</i>	Age		Time in position	
		Mean	<i>SD</i>	Mean	<i>SD</i>
Trainee	140	44.4	10.6	3.7	3.9
Supervisor	73	48.9	7.1	5.8	5.8
Total	213				

Data Assessment and Analysis

Hypothesis 1 states: No significant relationship exists between trainee and supervisor overall perceptions of the work environment.

An independent sample *t*-test was performed to determine the level of statistical significance in the difference between the means of the sum of the two groups' scores (Table 4). A Levene's test for homogeneity of variance assumption resulted in a value less than the level of significance ( $p < .05$ ). Therefore, using a correction factor, it was found that the means of the two groups were statistically significantly different; thus, the null hypothesis was rejected.

According to Cohen (as cited in Hinkle, Wiersma, & Jurs, 2003), effect size is the "degree to which a phenomenon exist" (p. 247-248). Statistically,

effect size hypothesizes the magnitude of the difference between two population means and is measured in standard deviation units. Cohen’s guidelines for interpreting effect size based on the standard deviation units are small = .25, medium = .50, large = 1.0 or greater. Cohen’s D measure of effect size on this factor was .29, indicating that the difference between trainee and supervisor perceptions of the transfer climate was of a small magnitude.

Table 4

*Independent t-test: Sum of Scores*

Group	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Trainees	90.36	13.60	2.36	198.04	.02	.29
Supervisors	94.06	9.11				

<sup>a</sup> Levene’s Test of Homogeneity (significance). *df* based on correction factor.

\**p* < .05

Hypothesis 2 states: No significant relationship exists between trainee and supervisor perceptions of the following factors in the work environment: supervisor support, peer support, supervisor sanctions, resistance/openness to change, and feedback/performance coaching.

This was examined using five independent sample *t*-tests to explore variables contributing to the difference between the two groups: supervisor support, resistance/openness to change, peer support, supervisor sanctions, and feedback/performance coaching (Table 5).

### Supervisor Support

The results of the independent *t*-test for the supervisor support variable failed to meet the Levene's homogeneity of variance assumption (*Sig.* = .00,  $p < .05$ ). Use of a correction factor found that the means of the two groups were statistically significantly different on this variable, resulting in the rejection of the null hypothesis. The effect size (.46) indicates a medium magnitude level for the difference between trainee and supervisor perceptions on the supervisor support.

### Resistance/Openness to Change

The results of the independent *t*-test for this variable failed to meet Levene's homogeneity of variance assumption (*Sig.* = .01,  $p < .05$ ). The use of a correction factor found that the means of the two groups were not statistically significantly different on this variable (*Sig.* = .23,  $p < .05$ ), therefore failing to reject the null hypothesis.

### Peer Support, Supervisor Sanctions, and Feedback/Performance Coaching

The results of the independent *t*-test for each of these variables indicated that the assumption of homogeneity of variance was met: peer support (.49), supervisor sanctions (.12), and feedback/performance coaching (.20). The observed significance ( $p$ ) indicates that the two groups (trainees/supervisors) are not statistically significantly different at the  $p < .05$  level for the variables peer support, supervisor sanctions, and feedback/performance coaching variables. This results in a failure to reject the null hypothesis for these variables.

Table 5

*Independent t-test: Transfer Climate Variables*

Variable	Group	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Supervisor Support	T	22.47	5.70	4.3	210.0	.00	.46
	S	25.11	3.18				
Resist/Open to Change	T	23.87	4.35	1.2	185.3	.23	--
	S	24.51	3.25				
Peer Support	T	17.11	2.80	.48	211	.63	--
	S	16.93	2.38				
Supervisor Sanctions	T	12.22	2.08	1.99	211	.05	--
	S	12.78	1.76				
Feedback/ Coaching	T	14.69	2.94	.11	211	.91	--
	S	14.74	2.30				

Note. T = Trainees, S = Supervisors.

<sup>a</sup> Levene's Test of Homogeneity (significance), *df* based on correction factor

\* *p* < .05

Hypothesis 3 states: No significant difference exists between the mean score of the perceptions of the work environment for trainees and supervisors where the supervisor has had no training, trainees and supervisors where the supervisor has been an observer, and trainees and supervisors where the supervisor has been a past participant in the training.

Descriptive statistics were used to identify the level of supervisor participation in the training. A visual scan of the mean scores for each of the levels indicated similarity in the scores. A one-way analysis of variance (ANOVA) compared the means of the three levels of supervisor participation in the training (Table 6). A test for homogeneity resulted in a significance of .915. The results of the ANOVA indicated no statistically significant difference between the level of participation in the training on supervisor perceptions of the work environment and a failure to reject the null hypothesis.

Table 6

*One-Way ANOVA: Supervisor Participation*

	Sum of squares	df	Mean square	F	Sig	Eta <sup>2</sup>
Between groups	6.45	2	4.336	.044	.957	.001
Within groups	4697.13	64	73.39			
Total	4703.58	66				

\* $p < .05$

## Instrument Validity

Although the original instrument produced scores that tended to yield both reliable and valid results, Onwuegbuzie, Roberts, and Daniel (in press) have cautioned against “inducting” original reliability coefficients from previous administrations of an instrument. This caution, coupled with the fact that a few of the items were modified to better accommodate organizational terminology, led to running reliability estimates from the 213 examinees on the 23 items from the Work Environment Scale of the LTSI. The results of this analysis yielded a coefficient alpha equal to 0.905, which is a large value, leading to the conclusion that this administration of the modified instrument yielded reliable results.

## Summary

This chapter described the participants in the study, gave a description of the assessment of the data, and presented an analysis of the data for each hypothesis. The next chapter will discuss the findings and recommendations for each of the research questions in this study.

## CHAPTER 5

### DISCUSSION OF FINDINGS

The purpose of this chapter is to discuss the findings of the study. The chapter provides a summary of the study and addresses limitations, followed by a discussion on the implications for training organizations. It concludes with recommendations for further research and final comments.

The purpose of this study was twofold: (a) to extend the understanding of the transfer of training process by investigating the relationship between trainee and supervisor perception of factors that influence the transfer climate, and (b) to provide evidence of the influence of supervisor participation in the training program on perceptions of transfer climate.

There were several limitations to this study. Researchers recognize that training transfer is a multifaceted, complex process that can be influenced by a number of factors within the organizational context and events surrounding training (Holton, 1996; Holton et al., 2000). The focus of this study was on an important area of interest, the work environment, which affects the trainee's ability to apply, generalize, and maintain new skills on the job (Baldwin & Ford, 1988).

The intent of the study was to determine whether trainee and supervisor participants differed in their perceptions of factors known to influence the transfer climate. The intent was not to analyze the degree to which each of the factors was present in the workplace.

The participants in the study were apprenticeship instructors and apprenticeship coordinators from an international union. Trainees and supervisors from other types of organizations may garner different results. The study participants were 140 trainees from local unions throughout the United States and Canada who participated in a 5-day union-sponsored apprentice instructor training program conducted from July 19 to 23, 2004, and each trainee's apprenticeship coordinator ( $n=73$ ).

This study used a comparative research design. The instrument used in the study was adapted from the work environment scale items of the Learning Transfer System Inventory (Holton & Bates, 1998). An independent  $t$ -test was performed on the sum of responses to the items. Five independent  $t$ -tests were performed on factors in the work environment: feedback/performance coaching, supervisor support, supervisor sanctions, peer support, and resistance/openness to change. A one-way three-level ANOVA tested the differences in supervisor participation in training as either no participation, an observer of the training, or a participant.

An analysis of the data revealed a statistically significant and small effect size difference between trainee and supervisor overall perceptions of the transfer climate in the workplace. The analysis of the five independent sample  $t$ -tests evaluating differences in perceptions of work environment factors between the two groups indicated a statistically significant difference of a medium magnitude



between trainee and supervisor perceptions of supervisor support. The remaining work environment factors were not found to be statistically significant.

An analysis of the results of the ANOVA, testing perception differences between trainee and supervisor responses based on supervisor participation level, revealed no statistically significant differences.

The following findings answer the research questions for this study:

1. What is the relationship between trainee and supervisor overall perceptions of the transfer climate?

The results of this study indicated that a statistical difference exists in trainee and supervisor overall perceptions of the transfer climate. Earlier research has indicated the importance of a positive transfer climate. The results of this study provide further insight, and suggest that the supervisor and trainee may not share the same view of the transfer climate. This gap in transfer climate perceptions may create barriers for trainees that hinder the successful transfer of new skills. When a gap exists, the supervisor may be unaware of these barriers as well as the supervisor's role in promoting a positive transfer climate.

The organization may seek to eliminate or diminish forces in the workplace that inhibit the transfer of new skills and increase those forces that encourage transfer. This process includes involvement by supervisors and potential trainees. Use of surveys, interviews, and focus groups may be used to identify transfer climate factors. According to Broad and Newstrom (1992),

barriers to transfer should be examined first. “The probability of transfer in any organization can be dramatically increased if the forces *for* change are increased and if the forces *against* change are diminished or removed” (p. 28). Because supervisors hold the primary responsibility for reinforcement on the job for newly acquired skills and ability, they may hold the most significant keys to resolving transfer problems and should be considered a primary target for change.

Supervisor training designed to improve trainee transfer may help supervisors bridge the gap in perceptions of the transfer climate. Brinkerhoff and Montesino (1995) found that transfer was increased when supervisors discussed the training with trainees before and after the training program. Supervisor interventions found to improve transfer include pre- and posttraining conferences with trainees.

In addition to the development of supervisor knowledge and skills, providing trainees with simple transfer strategies to use after the training are likely to improve skill maintenance in the workplace. Studies indicate that when learners are given goal setting and self management instruction as part of their training, they demonstrate a significantly higher level of transfer (Gist, Bavetta, & Stevens, 1990, as cited by Foxon, 1994). According to Foxon (1994), “such strategies increase the likelihood of transfer because they acknowledge the impact of organizational system factors while at the same time assisting the individual to focus on potential applications and to ‘make plans’ for using the training” (p. 2).

Relapse prevention strategies have a potential for enhancing transfer of training (Marx, 1982). Relapse prevention teaches trainees coping skills to inhibit the loss of newly learned skills. Originally developed for the treatment of drug and alcohol rehabilitation programs, this technique is based on the premise that a skill has been learned but is not yet habitual, thus the trainee may be confronted with a number of factors that may cause the trainee to return to previous behavior. According to Tziner, Haccoun and Kadish (1991), “trainees are taught to recognize signals within the work environment (e.g. time pressure) which are likely to sabotage the trained skills” (p. 168).

2. What is the relationship between trainee and supervisor perceptions of the transfer climate for each of these factors: feedback/performance coaching, supervisor support, supervisor sanctions, peer support, resistance/openness to change?

The results indicated there was a statistically significant difference in supervisor and trainee perceptions regarding supervisor support. Supervisor and trainee perceptions were the same for each of remaining factors tested. As noted earlier, research has shown that the *perception* of support is critical for successful transfer (Foxon, 1994) and that a supportive transfer climate may be the single most important factor for successful learning (Lim & Johnson, 2002). Helping supervisors improve their support efforts and the transfer climate may be just as important as training the trainees in the skills needed for the job.

Supervisors may not appreciate the magnitude of their role in the transfer process. They may not understand the importance of providing support, or may not have received support themselves. They may lack the knowledge and skills to effectively provide coaching and support to employees. Broad and Newstrom (1992) indicate:

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 [the learning] to their specific jobs, and frequent praise for progress made (p. 64).

Organizations may consider a number of strategies to improve supervisory support in the workplace. Supervisor training may be necessary to bridge the gap between trainee and supervisor perceptions. Supervisory support skills include encouragement of trainees to attend training, goal-setting activities, reinforcement activities, and modeling of behaviors (Baumgartel et al., 1984; Huczynski & Lewis, 1980).

Supervisor efforts to support transfer may be further enhanced by building expectations into supervisor performance standards. The organization may include an expectation that supervisors will actively support the transfer of training. Such an action cues the supervisor to the importance of engaging transfer support efforts and accountability for transfer results.

Broad and Newstrom (1992) suggest that organizations provide an orientation of the training program to supervisors in advance of the sending trainees to training programs. This can highlight the training so supervisors can “cue their employees of what to expect, provide a proper role model for them in terms of desirable behavior, and properly reinforce behaviors following training” (p. 62) The orientations can serve as refreshers for supervisors and send a message that supervisors care enough to become familiar with the program.

In addition to the analysis of barriers mentioned earlier, supervisors and trainees should participate in discussions of training needs. Supervisors may be more supportive if they have been a part of identifying the high-priority needs they perceive.

3. Is this relationship affected by the supervisor’s level of past participation in the training?

The results indicate that the supervisor’s level of past participation had no statistically significant effect on perceptions of the transfer climate. This finding was unexpected and is not supported by other researchers. One explanation for this finding concerns the length of time elapsed between the supervisor’s participation in the training and the completion of the study. As noted by Baldwin and Ford (1988), the level of trained knowledge, skills, or behavior changes over time. With the exception of supervisors participating in the training during this study, the time span between the supervisor participation in the training and this

study was a minimum of 1 year. For these supervisors, a “booster” session might be warranted.

Another plausible explanation for the results is that there may exist a lack of supervisor awareness of the challenges that learners face in trying to apply new skills. Even though supervisors had differing levels of participation in the training, the results suggest a lack of understanding of the transfer support process and a lack of understanding of the importance of the supervisor role in this process. Research by Broad (1997) supports this explanation, suggesting that supervisors “do not realize the impact their demonstrated support can have on improving and maintaining learner performance. Developing their awareness and buy-in to the transfer support process is essential” (p. 4).

Helping supervisors shift their perspectives of training is paramount. Training must not be seen as an isolated event, but rather part of an ongoing improvement process. As noted by Broad (1997), “Educating supervisors about the barriers to transfer and helping them develop tailored support strategies will make a significant difference” (p. 32).

### Conclusion

The results of this study suggested that a perception gap existed between the supervisor and the trainee regarding the overall transfer climate. The study indicated that the supervisor and the trainee did not share the same views of supervisor transfer support. Additionally, the study examined the effect of the level of supervisor participation in the training on transfer climate perceptions.

Contrary to earlier literature that suggests a relationship exists between supervisor participation and transfer climate, this study found that the level of supervisory participation in the training program made no statistically significant difference in perceptions of the transfer climate between the supervisor and trainee. The results of this study may be explained by the recency of supervisor participation in the training. It was also surmised that supervisors may not be aware of factors in the workplace that can influence the transfer process, including their role in creating a positive transfer climate. Since the supervisor may not be aware of the importance of factors in the workplace that can influence the transfer process, participation in the training would likely have no effect on the supervisor's behaviors regarding the transfer climate.

#### Recommendations

This is the first study the researcher is aware of that compares supervisor and trainee perceptions of the transfer climate. Thus, it provides a foundation for future research that may help an organization improve training transfer. Because this study was limited to apprenticeship coordinators and trainees in a union-sponsored training program, I suggest that the study be repeated with other types of organizations before generalizations of differences in transfer climate perceptions can be made.

The researcher found no other studies that examined supervisor and trainee perceptions of the transfer climate based on the supervisor's level of participation in the training program, although several researchers have

suggested the importance of such a relationship (Broad & Newstrom, 1992; Baldwin & Magjuka, 1991; Wexley & Lathan, 2002). Statistical significance was not found concerning this question; however, in retrospect, I would have included the recency of supervisor participation in the training as an additional factor that may have affected the results. In addition, had the supervisors participating in this study completed any training on the transfer process, importance of the supervisor's role in the transfer process and strategies to improve the transfer climate, the results of this study may have been different. Research is needed to determine the effect of supervisor support training on perceptions of the transfer climate. Additional research is needed to determine the effect of supervisor participation in the training program.

#### Summary

The intent of this study was to broaden the theoretical and practical understanding of the transfer climate in the workplace. Of interest were transfer climate perceptions as viewed by the trainee and the supervisor and the effect of the supervisor's participation in the training on these perceptions. This study adds to a growing body of research on the transfer of training process and provides insight into the transfer climate in the workplace as perceived by the supervisor and the trainee.



APPENDIX A  
LETTERS TO APPRENTICESHIP COORDINATORS

June 1, 2004

«AddressBlock»

Dear «GreetingLine»,

Gayle Dodson is one of our professional development course instructors at the Ironworker Instructors Program in San Diego. She is completing her dissertation for a Ph.D. in training and development and will be conducting a study of our instructor training program.

Within the next few days, you will receive a survey and consent form to participate in the study from Gayle Dodson.

I encourage you to complete the survey and return it to her as soon as possible.

Sincerely,

Michael White  
Executive Director  
Apprenticeship and National Training Fund

June 4, 2004

«AddressBlock»

Dear «GreetingLine»

By now, you should have received a letter from Michael White of the Iron Workers International Union in Washington, D.C. informing you of a study I am conducting for my dissertation from the University of North Texas. **I need your assistance.**

Enclosed is a form that indicates your willingness to participate in the study, an information sheet and a 23 item survey. I would appreciate your doing the following:

1. Read the consent form.
2. Fill out the information sheet.
3. Complete the survey.
4. Return all the documents in the postage paid envelope provided **before June 18**. All of this should take you approximately 10 – 15 minutes.

**Your name will not be disclosed or connected to any information in the study.** Your help is much appreciated!

Sincerely,

Gayle Dodson

June , 2004

<Address Block>

Dear \_\_\_\_\_ :

Several weeks ago you received a letter from me asking for your assistance by completing a brief survey.

I haven't received your survey and am sending along another copy.

**I need the completed information as soon as possible** and would greatly appreciate your help with this. Please do the following:

1. Read the consent statement.
2. Fill out the information sheet.
3. Complete the survey.
4. Return the information sheet and survey in the postage paid envelope provided.

*All of this should take you approximately 10 – 15 minutes.*

**Your name will not be disclosed or connected to any information in the study.**

If you have any questions, please contact me by phone or email.

Thank you for your help!

Sincerely,

Gayle Dodson

APPENDIX B  
INFORMED CONSENT NOTICE

## Informed Consent Notice

The purpose of this research study is to compare the views of participants attending the Ironworkers' 2004 instructor training program and apprenticeship coordinators on factors in the workplace that affect how new skills are used back in the classroom and if the coordinator participating in the training makes a difference in the perceptions.

You are being asked to complete a survey that will take about 10 – 15 minutes to complete. Completion of the survey involves no foreseeable risks. Participation is voluntary and you may stop at any time without any penalty. No individual responses will be seen by anyone other than the researchers. Any data will be reported only on a group basis. You give consent to participating in the study by completing the survey.

If you have any questions regarding this study, please contact Gayle Dodson, Doctoral Candidate, Applied Technology, Training and Development department or Dr. Jerry Wircenski. This project has been reviewed and approved by the University of North Texas Institutional Review Board (940) 565-3940. You may keep a copy of this Notice for your records.

APPENDIX C

APPRENTICESHIP COORDINATOR/ TRAINEE INFORMATION FORMS

## Apprenticeship Coordinator Information

Name: \_\_\_\_\_

Local #: \_\_\_\_\_

**What is your current position in your local's apprentice training program?**  
(Please place a mark (X) in the box next to the title that best describes your role – mark only one)

- Apprenticeship Coordinator
- Apprenticeship Coordinator and Instructor
- Other (please indicate): \_\_\_\_\_

If "Other", are you responsible for coordinating the apprenticeship training program in your local? \_\_\_\_\_ yes \_\_\_\_\_ no

*Please write or circle the appropriate response to each question:*

How long have you been an Apprenticeship Coordinator? \_\_\_\_\_ years  
\_\_\_\_\_ months

Your age in years? \_\_\_\_\_ years

Your gender?      1 Male      2 Female

Your highest level of formal education?

- 1 Did not graduate high school
- 2 High school diploma or GED
- 3 Associates degree
- 4 Bachelor's degree
- 5 Master's degree
- 6 Doctorate



# Learning Transfer System Inventory

**Participant**

**Name:** \_\_\_\_\_

**Local #:** \_\_\_\_\_

**What is your current position in your local's apprenticeship training program?**

*(Please place a mark (X) in the box next to the title that best describes your role)*

- Instructor
- Apprenticeship Coordinator
- Other (please indicate): \_\_\_\_\_

How long have you held this position?

\_\_\_\_\_ Years \_\_\_\_\_ Months

APPENDIX D  
PANEL OF EXPERTS

## PANEL OF EXPERTS

The following is an alphabetical list of the panel of experts chosen to review modifications to the Holton and Bates (1998) Learning Transfer System

### Inventory:

Jeff Allen, Ph.D.  
Associate Professor  
University of North Texas  
Department of Technology and Cognition

Kyle Roberts, Ph.D.  
Associate Professor  
University of North Texas  
Department of Technology and Cognition

Richard Sullivan, Ph.D.  
Director  
JHPIEGO Learning and Performance Support

Michael White  
Executive Director  
Apprenticeship and National Training Fund

Jerry Wircenski, Ph.D.  
Professor  
University of North Texas  
Department of Technology and Cognition

Mickey Wircenski, Ed.D.  
Professor  
University of North Texas  
Department of Technology and Cognition

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